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3 HEARING ON THE AMERICAN CLEAN ENERGY & SECURITY ACT OF 2009

4 WEDNESDAY, APRIL 22, 2009

5 House of Representatives,

6 Subcommittee on Energy and Environment

7 Committee on Energy and Commerce

8 Washington, D.C.

9           The committee met, pursuant to call, at 9:40 a.m., in  
10 Room 2123 of the Rayburn House Office Building, Hon. Henry A.  
11 Waxman (chairman) presiding.

12           Present: Representatives Waxman, Dingell, Markey, Rush,  
13 Eshoo, Stupak, Green, DeGette, Capps, Doyle, Harman,  
14 Gonzalez, Inslee, Ross, Matheson, Melacon, Barrow, Matsui,  
15 Christensen, Castor, Sarbanes, Murphy of Connecticut, Space,  
16 McNerney, Sutton, Braley, Welch, Barton, Hall, Upton,  
17 Stearns, Whitfield, Shimkus, Blunt, Radanovich, Pitts, Bono  
18 Mack, Walden, Terry, Rogers, Myrick, Sullivan, Murphy of

19 Pennsylvania, Burgess, Blackburn, Scalise, and Gingrey.

20       Staff present: Phil Barnett, Staff Director; Kristin  
21 Amerling, Chief Counsel; Karen Lightfoot, Communications  
22 Director, Senior Policy Advisor; Bruce Wolpe, Senior Advisor;  
23 Earley Green, Chief Clerk; Greg Dotson, Chief Counsel, Energy  
24 and Environment; Alexandra Teitz, Senior Counsel, Energy and  
25 Environment; Michal Goo, Counsel; Alex Barron, Professional  
26 Staff Member; Melissa Bez, Professional Staff Member; Ben  
27 Hengst, EPA Detailee; Jen Berenholz, Deputy Clerk; Caren  
28 Auchman, Communications Associate; Matt Weiner, Special  
29 Assistant; Mitchell Smiley, Special Assistant, Matt  
30 Eisenberg, Staff Assistant; Peter Spencer, Minority  
31 Professional Staff; William Corty, Minority Professional  
32 Staff; and Garrett Golding, Minority Legislative Analyst.

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33           The {Chairman.} The committee will please come to order.  
34 This week we begin our consideration of comprehensive energy  
35 legislation, the American Clean Energy and Security Act of  
36 2009. Since the beginning of last Congress, this committee  
37 has been working hard on energy legislation. We held 41 days  
38 of hearings since January. We received testimony from 61  
39 witnesses. This week alone, we will hear from 67 more  
40 witnesses. And I want to thank all the members of the  
41 committee on both sides of the aisle for their intensive  
42 involvement on energy reform. You have made a major  
43 commitment of your time, your staff's time, and this is  
44 crucially important to our success. I also want to warn the  
45 members that as hard as we have been working, the pace is  
46 going to accelerate over the next 4 weeks. There are many  
47 issues that we need to discuss and resolve between now and  
48 Memorial Day. We will be working hard because the goals are  
49 so important. The energy legislation we are considering will  
50 create millions of jobs, revive our economy and secure our  
51 energy independence. It will also protect our environment.

52           In February, President Obama spoke to Congress and the  
53 nation about the need for comprehensive energy reform. He  
54 called on Congress to pass legislation that would transform  
55 our economy, protect our security, and preserve our planet.

56 Our job on this committee is to meet those goals. We are  
57 fortunate today to have 3 cabinet level officials testifying  
58 to our committee for the first time, Energy Secretary Steven  
59 Chu, EPA Administrator Lisa Jackson, and Transportation  
60 Secretary Ray LaHood. They will explain the President's  
61 objectives and how we can ensure our legislation meets them.

62 As Chairman Markey and I worked on the draft legislation  
63 our blue print was a plan proposed by the U.S. Climate Action  
64 Partnership, a coalition of industry CEOs and environmental  
65 organizations. We will hear today from 6 leaders of USCAP,  
66 DuPont, ConocoPhillips, Duke Energy, Alcoa, NRG, and the  
67 Natural Resources Defense Counsel. They will tell us how  
68 well we did translating their blue print into legislative  
69 language. I want to thank them and all our witnesses for  
70 their participation in this hearing. Some have said that  
71 true energy reform will undermine our economy. They argue  
72 that there is a fundamental conflict between economic growth  
73 and clean energy. This is a false choice.

74 Our economic future and clean energy were inextricably  
75 intertwined. The economy that will grow the fastest in this  
76 century will be the one that makes the greatest investments  
77 in new energy technologies. Nearly 40 years ago this  
78 committee passed the original Clean Air Act. Since then, we  
79 have reduced dangerous air pollutants by 60 percent or more.

80 During the same period, our population has grown by 50  
81 percent, and our economy by over 200 percent. Twenty years  
82 ago under the leadership of John Dingell this committee  
83 passed the 1990 amendments to the Clean Air Act. Opponents  
84 of the legislation said that stopping acid rain would  
85 bankrupt the utility industry. In fact, we cut emissions in  
86 half at a fraction of the cost the naysayers predicted.

87 We have a similar opportunity and responsibility this  
88 year. The legislation we will be considering today has 4  
89 titles. The clean energy title will spur investment in the  
90 technologies of the future, clean renewable energy, electric  
91 utilities, electric vehicles, and the smart grid. The energy  
92 efficiency title will reduce our dependence on foreign oil  
93 and save consumers billions of dollars by making our homes,  
94 our appliances, and our transportation system more energy  
95 efficient. The global warming title will create a market-  
96 based system for reducing carbon emissions to safe levels,  
97 and the final title will provide our industries, our workers  
98 and American families with the support they need during the  
99 transition to a clean energy economy.

100 It is no longer a question whether we will act to reduce  
101 CO2 emissions. The endangerment finding released by EPA last  
102 week answers that issue. The real question is whether we  
103 will do so in a way that strengthens our economy, creates new

104 jobs, and ends our dangerous dependence on foreign oil.  
105 These are achievable goals but to reach them Congress needs  
106 to act, and we on this committee need to lead the way. We  
107 can succeed, but we will need to work together to forge  
108 consensus and a workable solution. And I look forward to  
109 working with all the members of the committee as we embark on  
110 this process. I want to recognize Mr. Barton now for opening  
111 comments he wishes to make.

112 [The prepared statement of Mr. Waxman follows:]

113 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|

114           Mr. {Barton.} Thank you, Mr. Chairman. I want to  
115 welcome our distinguished panel of Administration officials,  
116 especially Mr. LaHood, a former colleague. Of course, Dr.  
117 Chu, who I had some dealings with in the laboratories, and  
118 the Honorable Ms. Jackson, we appreciate you being here. I  
119 think it is interesting, Mr. Chairman, that we are trying to  
120 go ahead and move a bill that will reduce CO2 emissions in  
121 the United States to below 83 percent of their base line of  
122 2005. If you want an idea of what that is like in terms of  
123 carbon foot print, you might try living in Nigeria today  
124 because that is the emission level that they have right now.  
125 If you have a time machine, you might dial your time machine  
126 to 1875, and feel what it is like to live in America back in  
127 1875 with a carbon foot print of approximately 2-1/2 tons per  
128 person.

129           I don't think most of the today citizenry in the United  
130 States would enjoy that type of a lifestyle too much. I also  
131 think that it is interesting that a lot of people seem very  
132 determined to raise energy prices in this country. Our  
133 current President, President Obama, has said during the  
134 campaign that capping carbon and trading emissions would make  
135 electricity bills necessarily skyrocket, and that is his  
136 quote, necessarily skyrocket. The people that global warming

137 is religion believe that carbon dioxide, CO<sub>2</sub>, which is  
138 naturally occurring in nature, is the devil's brew and they  
139 apparently think that we can only achieve salvation by  
140 putting our faith in the United States Federal Government.  
141 Our government will offer indulgences in the form of emission  
142 permits and we all atone for our past sins and our economy's  
143 past sins by paying through the nose with these expensive new  
144 energy carbon taxes.

145       It is no secret that I am a skeptic. I don't believe  
146 that mankind is the primary cause of climate change. I do  
147 accept that CO<sub>2</sub> levels are rising. I think it is a debatable  
148 proposition, whether that is a good thing or a bad thing, but  
149 in any event to put some sort of blind faith in a cap and  
150 trade system that hasn't worked anywhere in the world in  
151 terms of CO<sub>2</sub>, won't work here in the United States, and if we  
152 take it to the level that the draft bill that Mr. Waxman and  
153 Mr. Markey have put out. It will de-industrialize the United  
154 States of America in the next 40 years. I am not going to be  
155 a part of that. I am just not going to do it. The dark side  
156 of economic opportunity will always be that somebody thinks  
157 they can benefit from it, and I believe that that is one  
158 reason so many U.S. companies, some of which are going to be  
159 before us later this afternoon, support the cap and trade  
160 because they think they can benefit economically, either

161 having allowances to sell or by trading in the allowance  
162 market. And I understand the need to make a dollar, but I  
163 think it is a terrible thing if we are going to set up a  
164 system where the only people that benefit are the people that  
165 are in the trading system and the people that get these free  
166 allowances because of what they have done in the past.

167 Now I understand that your draft is silent on that. My  
168 understanding is that you and Mr. Markey have decided at  
169 least so far to not have free allowances. You are going to  
170 have an auction system. I hope you stick with that. I was  
171 here in the Clean Air Act amendments when we did SO2 back in  
172 the early 1990s and I remember the fights we had on base  
173 line, and I remember the fights we had on allowances for  
174 particular plants and things like that. That will be a  
175 picnic compared to what we will have if we go down where we  
176 start trying to--we, not me, but you and Mr. Markey start  
177 trying to buy votes by giving allowances to this group or  
178 that group or whatever. I think it is interesting that we  
179 don't have a score from CBO because you have not put anything  
180 out that CBO can score so apparently if and when we go to  
181 markup, we are going to have this miracle draft that comes  
182 forward in terms of a manager's amendment, and lo and behold  
183 there will be something to score, but CBO won't have time to  
184 score it.

185           If it is anything close to what we had last year in the  
186 Senate with the Warner-Lieberman bill, it is going to be  
187 very, very expensive. If it close to what the Obama  
188 Administration put in their budget, according to the CBO  
189 director it is probably going to be score in the neighborhood  
190 of \$2 trillion negatively over an 8-year period. That is a  
191 pretty expensive package, Mr. Chairman. If you look at where  
192 our economy is today, what the unemployment rate is today,  
193 where the stock market is today, I don't think that is a cost  
194 that we can bear. As long as we are talking about cost, let  
195 us talk about just the straight increases in energy costs.  
196 Every estimate that I have seen, Mr. Chairman, says that  
197 energy costs are going to go up across the board. The  
198 electricity cost could go up somewhere between 44 to 125  
199 percent, gasoline costs could go up. You name the cost. It  
200 is going to go up.

201           How does that affect the unemployment rate? Michigan  
202 right now has an unemployment rate of 12 percent. Indiana  
203 has an unemployment rate of 10 percent. Ohio is at 9.7.  
204 California and Georgia are at 9.2 percent. Even my great  
205 State of Texas where the economy is relatively better off has  
206 got an employment rate over 6 percent. I mean if energy  
207 prices go up lots and lots of Americans are going to lose  
208 their jobs and then that in turn is going to cause even more

209 deficit spending on behalf of the federal government. How is  
210 that costed into this draft? However, you cost it, it is  
211 going to be a negative cost. I could go on and on, Mr.  
212 Chairman, but I have already gone over almost 2 minutes, and  
213 I appreciate your indulgence. Put me down as undecided on  
214 your bill and I look forward to hearing from our panel, and  
215 then trying to work with you and Mr. Markey and members of  
216 the committee to do something that is positive.

217 [The prepared statement of Mr. Barton follows:]

218 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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219           The {Chairman.} Thank you, Mr. Barton. I now want to  
220 recognize the chairman of the Energy Subcommittee, Mr.  
221 Markey.

222           Mr. {Markey.} Thank you, Mr. Chairman, very much.  
223 First, I want to thank Secretary LaHood, Secretary Chu, and  
224 Administrator Jackson for being with us here today. The  
225 presence of this all star lineup is a testament to the  
226 priority that the Obama Administration places on developing  
227 sound energy legislation and fighting global warming. Today,  
228 Earth Day, 2009, we begin the process of writing history as  
229 we work to pass new energy legislation that will revitalize  
230 our economy, enhance our energy security, create millions of  
231 new jobs, and end the global warming crisis. We arrive at  
232 this crucial moment with much at stake and not a moment to  
233 spare.

234           Winston Churchill once said courage is what it takes to  
235 stand up and speak. Courage is also what it takes to sit  
236 down and listen. In the days ahead, we will need to have  
237 both the courage to speak out and the courage to sit down and  
238 listen. If we do that, we can pass legislation that will  
239 create millions of new jobs and reduce our dependence on  
240 foreign oil all in a way that meets our environmental and  
241 economic needs. We have reached a crossroads where inaction

242 is simply not an option. Our economy cannot continue to  
243 depend heavily on foreign oil. Our energy system cannot  
244 continue to be highly inefficient.

245 We cannot continue energy policies that look to last  
246 century's energy sources while other nations race ahead to  
247 take the lead in developing and marketing clean energy  
248 technologies and green jobs. Germany's second largest export  
249 after cars is wind turbines. China is becoming the leader in  
250 renewable energy. Japan and Korea are leap frogging America  
251 in advanced vehicle technology. Nor can we pretend that  
252 business as usual has shielded us from harmful, negative  
253 changes in our economy or from increases in energy prices.  
254 It has not. Attempts to seek refuge in the status quo have  
255 left us further behind in the ongoing global economic and  
256 energy race.

257 Those who predict our bill will result in soaring energy  
258 costs fall into a long line of doomsayers who have eventually  
259 been proven wrong. Environmental statutes have saved lives  
260 and smart energy policies have saved money, and done so at a  
261 fraction of the high cost projected by industry. Nor will  
262 global warming or oil-driven foreign regimes wait for us to  
263 act. Just last Friday, Administrator Jackson issued her  
264 proposed endangerment finding stating that climate change is  
265 an enormous problem and ``the greenhouse gases that are

266 responsible for it endanger public health and welfare.''  
267 Among the impacts that flow from global warming are increased  
268 drought, more frequent and intense heat waves and wildfires  
269 and harm to water resources, agriculture, wildlife, and  
270 ecosystems.

271         And EPA also emphasized that global warming will have  
272 disproportionate impacts on the very poor, the very young,  
273 the elderly, those already in poor health, and those living  
274 alone are dependent on few resources. Left unabated, global  
275 warming and our dependence on oil will jeopardize America's  
276 national security and increase our economic risk. Whether it  
277 is in the hundreds of billions we send every year to  
278 unfriendly regimes or the hundreds of millions globally who  
279 could be without drinking water from increased drought, we  
280 cannot wish away these problems.

281         Chairman Waxman and I have developed our discussion  
282 draft with all of these factors in mind. In the discussion  
283 draft and going forward, Chairman Waxman and I will strive to  
284 get reductions in global warming pollution that meets  
285 science-based targets by using cost saving, energy  
286 efficiency, and clean energy solutions. We will continue to  
287 develop strategies to help keep costs low from the use of  
288 offsets, to banking and borrowing, and through the use of a  
289 strategic reserve of allowances that can limit any costs that

290 are higher than expected. We will continue to fund clean  
291 energy solutions that will allow new American companies to  
292 prosper creating clean energy jobs that can't be shipped  
293 overseas, and we will continue to provide opportunities and  
294 incentives for energy efficiency to save families money.

295 We will continue to ensure that we assist and benefit  
296 consumers, especially low income consumers. We will ensure  
297 that our most internationally competitive industries are not  
298 left exposed to foreign inaction, and we will hold ourselves  
299 to high standards and we will hold the international  
300 community to high standards. Nor are we finished improving  
301 this legislation. As we proceed through these hearings, we  
302 will hear dozens of other witnesses, some with positive  
303 comments and some with suggestions for improvements. We  
304 welcome these comments, and we look forward to working with  
305 all the members of this committee to develop legislation that  
306 will create a new clean energy economy free of the threat of  
307 dangerous global warming and free of our dependence on  
308 foreign energy sources. Thank you, Mr. Chairman.

309 [The prepared statement of Mr. Markey follows:]

310 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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311           The {Chairman.} Thank you, Mr. Markey. Now I wish to  
312 recognize for an opening statement the ranking member of the  
313 energy subcommittee, Mr. Upton.

314           Mr. {Upton.} Thank you, Mr. Chairman, and before I  
315 begin my opening statement, I would like to submit a number  
316 of articles for the record. First of all, from last week's  
317 Washington Post, India Rejects Calls for Emission Cuts. With  
318 regards to the President's push to combat climate change,  
319 Indian officials said it was unlikely to prompt them to agree  
320 to binding emission cuts. From the New York Times, Thirsty  
321 for Energy in India's Boon Town and Beyond, I quote, ``Almost  
322 half of India's population has no access to the electricity  
323 grid. About 700 million Indians rely on animal waste and  
324 firewood as fuel for cooking.'' From the Saginaw News,  
325 Terrible Time for Higher Bills, ``As a result of the recent  
326 green mandates sticking people with an average of \$125  
327 utility bill increase seems kind of cruel in a state that is  
328 suffering 12-1/2 percent unemployment.'' From the Detroit  
329 News, Cap and Trade Plan will Hit the Heartland, with a  
330 quote, ``Cap and trade system is a giant economic dagger  
331 aimed at the nation's heartland, particularly Michigan.''

332           From the Hill, Not All Senators Warming to Obama Cap and  
333 Trade. Sherrod Brown, former member of this committee,

334 Obama's plan would lead to an increased energy cost and would  
335 drive American firms abroad. From the Wall Street Journal,  
336 Who Pays for Cap and Trade, with a quote, ``An economy wide  
337 tax under the cover of saving the environment is the best  
338 political money maker since the income tax.'' And from the  
339 U.S. News and World Report, The Next Bernie Madoff, Emissions  
340 Cap and Trade Aids the Corrupt, Hurts the Little Guy, and on  
341 and on.

342 I would like in advance to thank the 60 some witnesses  
343 who will be testifying before our committee this week, and  
344 due to the limited time, I would like to submit the following  
345 4 questions to each of our witnesses and would ask them to  
346 address these during their opening remarks. Number 1, will  
347 the legislation increase energy costs? If so, is there  
348 anything in the underlying bill that prevents these costs  
349 from being passed on to consumers? 2, since the legislation  
350 applies only to the U.S. but not other nations like China,  
351 India, and Mexico, is there a chance it will result in  
352 American jobs being shipped overseas, and how many jobs will  
353 be lost? 3, what is the cumulative cost per household of  
354 this legislation, and, 4, absent other nations adopting the  
355 same reduction policy, how much will the legislation actually  
356 reduce global temperatures, if at all?

357 I do believe that we need to reduce emissions, but we

358 must do it in a common sense way that takes into account the  
359 economic and global realities of the issue. This week it was  
360 reported in the New York Times that China discovered 180  
361 miles of the Great Wall that they didn't know existed. How  
362 on earth are they going to be able to monitor and reduce  
363 their greenhouse gas emissions, and I wonder how many coal-  
364 fired plants that they might have discovered in the last  
365 couple of years as they were analyzing this new 180 miles.  
366 We are not engaged in a guessing game. We have the luxury of  
367 examining empirical evidence of past forays into different  
368 policies. All one has to do is to examine the results of the  
369 EU's cap and tax scheme. It was a failure.

370 CO2 emissions in the U.S. fell by 1.8 percent in 2006  
371 compared to a .3 percent increase in emissions in the EU  
372 according to the EIA. Both economies grew at a near  
373 identical pace in 2006 of about 3 percent. Cap and tax, cap  
374 and trade, will essentially kick working families when they  
375 are down. And we thought the American public was angry at  
376 \$4.25 gas prices last summer. Just wait till they get their  
377 hands on their utility bills under a cap and tax. In 2008,  
378 approximately 21 percent of all utility accounts were overdue  
379 with folks carrying past due balances on average of \$160 in  
380 electric bills and \$360 for natural gas. And in Michigan the  
381 account debt totaled \$367 million with 1 out of 3 behind on

382 their bills in some of our areas.

383 Times are tough, yet this proposal puts a bulls eye on  
384 the back of working families who are struggling to feed their  
385 families and to keep the lights on. In fact, in Michigan it  
386 came out just yesterday that we have lost 150,000 jobs in 4  
387 months, and it is expected that according to the University  
388 of Michigan we are going to lose 239,000 jobs in 2009. We  
389 are one of the hardest hit in this weak economy, and we would  
390 be disproportionately impacted with this legislation. NAM  
391 did a detailed analysis of the impact on Michigan, and, quite  
392 simply, jobs are going to be lost, electric prices are going  
393 to go up, and household incomes will be decimated and any  
394 growth will absolutely disappear.

395 Let us put the scale of emissions reductions called for  
396 into perspective. Current proposals would mean that the U.S.  
397 cannot emit more in the year 2050 than we emitted in 1910.  
398 That is a pretty daunting task considering that in 1910 the  
399 U.S. had only 92 million people compared to about 420 million  
400 expected in 2050. And to reach the lofty goal of 80 percent  
401 reductions emissions from the entire transportation sector  
402 would have to drop to 0. Emissions from all electricity  
403 generation would have to drop to 0, and then we would need to  
404 reduce everything else by 50 percent. Climate change is a  
405 serious problem that necessitates serious solutions, but how

406 can we address such a critical issue without nuclear even  
407 being addressed in this measure even though nuclear power  
408 accounts for 70 percent of our nation's emission free  
409 electricity.

410         We are in desperate need of a reality check. Without  
411 international participation jobs and emissions will simply  
412 shift overseas to countries that require few, if any,  
413 environmental protections harming the global environment as  
414 well as the U.S. economy. If our objective is to send  
415 manufacturing jobs overseas, destroy the Midwest, mortgage  
416 our future, and hand the keys over to our super power status,  
417 then I would say job well done. This bill does it. The  
418 stakes are high, the planet is warming, and this is no time  
419 to throw in the towel all in the name of cap and tax. So I  
420 guess, Mr. Chairman, you can put my name as undecided with  
421 Mr. Barton. I yield back.

422         [The prepared statement of Mr. Upton follows:]

423 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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424           The {Chairman.} Thank you very much, Mr. Upton. We are  
425 pleased to welcome 3 representatives from the Obama  
426 Administration, Secretary LaHood, Secretary Chu, and  
427 Administrator Jackson. Your prepared statements will be in  
428 the record in full, and we would like to recognize each of  
429 you to make an opening statement. And we will have a clock  
430 that will indicate 5 minutes. When you see the red light on,  
431 we would like you to recognize your time is up and to  
432 summarize so we will have plenty of time for questions and  
433 answers by members of the committee. Administrator Jackson,  
434 we would like to start with you.

|  
435 ^STATEMENTS OF LISA JACKSON, ADMINISTRATOR, UNITED STATES  
436 ENVIRONMENTAL PROTECTION AGENCY; STEVEN CHU, SECRETARY,  
437 UNITED STATES DEPARTMENT OF ENERGY; AND RAY LAHOOD,  
438 SECRETARY, UNITED STATES DEPARTMENT OF TRANSPORTATION

|  
439 ^STATEMENT OF LISA JACKSON

440 } Ms. {Jackson.} Thank you. Thank you, Chairman Waxman.  
441 Chairman Waxman, Chairman Emeritus Dingell, Ranking Minority  
442 Member Barton, Congressman Markey, Congressman Upton, and  
443 members of the committee, thank you for inviting me to  
444 testify about the draft American Clean Energy and Security  
445 Act, and happy Earth Day to each and every one of you. Let  
446 me begin by commending this committee for embarking on the  
447 serious, difficult, and essential work of crafting  
448 comprehensive, detailed energy legislation and moving it  
449 through an open and careful process in which representatives  
450 hold hearings, make amendments, and cast votes.

451 When President Obama was inaugurated 92 days ago, the  
452 United States found itself in the worst economic crisis since  
453 the Great Depression. So the President worked with Congress  
454 to pass the American Recovery and Reinvestment Act. That law  
455 is now creating good jobs for Americans. Thanks to the Act,

456 EPA is putting Americans to work, overhauling clean water  
457 systems, restoring and redeveloping polluted properties,  
458 installing clean air equipment on diesel engines, and  
459 cleaning up leaking underground fuel tanks. The American  
460 Recovery and Reinvestment Act also injected an essential shot  
461 of adrenalin into the American energy sector. That immediate  
462 relief is essential to economic recovery. But President  
463 Obama has also leveled with the American people. Lasting  
464 economic recovery will come only when the federal government  
465 looks beyond the quick fix and invests in building the  
466 advanced energy industries that will help restore America's  
467 economic health over the long term.

468         So President Obama has called on Congress to pass  
469 forward-looking energy legislation. That legislation should  
470 create here in America millions of the clean energy jobs that  
471 cannot be shipped overseas. It should catapult American  
472 innovators past the foreign competitors who, due to  
473 aggressive investments by their governments, now enjoy a head  
474 start in the advanced energy technologies that represent the  
475 new Internet revolution, the new biotech wave. The  
476 legislation should reduce our dependence on oil and  
477 strengthen America's energy security. And it should start in  
478 a real and tangible way to tackle greenhouse gas pollution,  
479 which threatens to leave to our children and grandchildren a

480 diminished, less prosperous, less secure world.

481         Three weeks ago, Chairman Waxman and Markey released  
482 draft legislation that strives to accomplish the goals I just  
483 listed. The American Clean Energy and Security Act would  
484 introduce a clean energy requirement for American electric  
485 utilities and new energy efficiency programs for American  
486 buildings. Those initiatives aim to create good American  
487 jobs that cannot be shipped overseas. The legislation would  
488 launch programs to promote electric vehicles and deploy  
489 technologies for capturing, pipelining, and geologically  
490 storing carbon dioxide produced at coal-fueled power plants.  
491 Those incentives aim to help American companies make up for  
492 lost time in the advanced energy industries that will be to  
493 the 2010 what Internet software was to the 1990s.

494         The legislation would institute new low-carbon  
495 requirements for vehicles and fuels, as well as programs to  
496 reduce vehicles miles traveled. Those proposals aim to  
497 increase America's energy security and cut back on the  
498 hundreds of billions of dollars that America throws away  
499 every year on oil. And the legislation would put in place a  
500 declining cap on greenhouse gas pollution. That market-based  
501 system aims to protect our children and grandchildren from  
502 severe environmental and economic harm and from great threats  
503 to our national security while further invigorating advanced

504 American energy industries.

505         The American Clean Energy and Security Act draws on the  
506 thoughtful legislation that Chairman Emeritus Dingell and  
507 Congressman Boucher drafted last October, and it tracks many  
508 of the recommendations put forward by the U.S. Climate Action  
509 Partnership, a coalition that includes American  
510 manufacturers, such as Alcoa, John Deere, Caterpillar, Dow,  
511 Ford, General Motors, and General Electric. Now the no, we  
512 can't crowd will spin out doomsday scenarios about runaway  
513 costs. I do not claim that we can get something for nothing,  
514 but EPA's preliminary economic modeling indicates that the  
515 investments Americans would make to implement the cap and  
516 trade program in the American Clean Energy and Security Act  
517 would be very modest compared to the benefits that science  
518 and plain common sense tell us a comprehensive energy and  
519 climate policy will deliver.

520         I ask the members of this committee to recall the Acid  
521 Rain Trading Program, drafted by this committee as amendments  
522 to the Clean Air Act, and signed by a Republican president in  
523 1990. Beltway corporate lobbyists insisted that the law  
524 would cause, and I quote, ``death for businesses across the  
525 country.'' But as the members of this committee who worked  
526 hard on that legislation know well, it ended up delivering  
527 annual health and welfare benefits of over \$120 billion at an

528 annual cost of only \$3 billion. Our economy grew and acid  
529 rain was cut by more than 50 percent. The Clean Air Act  
530 amendments dealt with controversial issues, not just acid  
531 rain, but smog, hazardous air pollutants, and the threats to  
532 the ozone layer, but once Chairman Dingell and Chairman  
533 Waxman joined forces with other members of this committee to  
534 find consensus the committee reported the amendments  
535 favorably to the full House by a vote of 42-1. I believe  
536 this committee can make history again this year, and the  
537 draft American Clean Energy and Security Act is a great  
538 start. It reflects the President's priorities of reducing  
539 our dependence on oil creating millions of new jobs by  
540 leveraging America's tremendous capacity for innovation and  
541 significantly reducing greenhouse gas pollution.

542 This Administration wants to see this effort move  
543 forward, and I pledge to work with this committee over the  
544 weeks ahead to help you find consensus. Thank you. I look  
545 forward to answering the members' questions.

546 [The prepared statement of Ms. Jackson follows:]

547 \*\*\*\*\* INSERT 1 \*\*\*\*\*

|  
548           The {Chairman.} Thank you very much, Administrator  
549 Jackson. Secretary Chu, we would like to hear from you.

|  
550 ^STATEMENT OF STEVEN CHU

551 } Mr. {Chu.} Chairman Waxman and Markey, Chairman  
552 Emeritus Dingell, Ranking Members Barton and Upton, and  
553 members of the committee, thank you for the opportunity to  
554 appear before you today to discuss the American Clean Energy  
555 and Security Act. For decades our energy strategy has been  
556 little or no strategy at all. For our transportation needs,  
557 we have become increasingly addicted to oil at escalating  
558 costs to our economy, our environment, our security. For our  
559 electricity needs, we burn immense amounts of coal, which is  
560 cheap and abundant, but a major contributor to global  
561 warming. We will continue to use coal as a fuel, but we must  
562 learn to do it in a cleaner way. On this Earth Day, we must  
563 state in no uncertain terms we have a responsibility to our  
564 children and their children to curb the carbon emissions from  
565 fossil fuels that have begun to change our climate.

566 President Obama recognizes that the energy challenge is  
567 a defining challenge of our time, and he is committed to a  
568 comprehensive energy plan that creates jobs, reduces our  
569 greenhouse gas emissions, and reduces our dependence on oil.  
570 The Energy Independence and Security Act and the American  
571 Recovery and Reinvestment Act have made a down payment on

572 clean energy future. I am pleased to report that the  
573 Department of Energy is getting the Recovery Act money into  
574 your local communities as quickly as possible, while  
575 maintaining the highest standards of transparency and  
576 accountability. We are already putting Americans to work  
577 making homes and buildings more efficient, which will grow  
578 our economy and cut energy bills for families. The Recovery  
579 Act also provides financing options that could double the  
580 production of renewable energy and expands investments in the  
581 development of break-through energy technologies.

582         But we need to do more. We need not only to jump start  
583 our economy today but to lay the foundation for America's  
584 long-term prosperity. In the years ahead, the work will turn  
585 increasingly to unconventional sources of petroleum, which  
586 could lead to higher prices for consumers. With these rising  
587 energy costs and the mounting challenges of our climate, the  
588 development of clean, renewable sources of energy will be the  
589 growth industry of the 21<sup>st</sup> century. The key question is who  
590 will lead the world in making energy efficient vehicles when  
591 turbines, solar panels, and other products and technologies  
592 that will power tomorrow's economy? There are 2 dangers,  
593 either of which could dramatically weaken America's future.  
594 The first is that the world will fail to take action on  
595 climate change in time to prevent its worst potential

596 effects. The second is that the United States will fail to  
597 seize the opportunity to lead and new clean energy jobs will  
598 be created overseas rather than in America.

599 We can neither let our planet get too hot or let our  
600 economy grow too cold. We must get off the sidelines of the  
601 clean energy race and play to win. To that end, we in the  
602 Administration appreciate Congress' effort in developing the  
603 American Clean Energy and Security Act. While we are still  
604 reviewing the details, it is clear that Chairman Waxman's  
605 legislation would advance the President's goals of launching  
606 a new sector of clean energy jobs, making our economy more  
607 competitive and weaning the nation from its dependence on  
608 oil. The President looks forward to working with members of  
609 Congress in both chambers to pass a bill that would  
610 transition the nation to a clean energy economy.

611 The Administration believes that a gradual market-based  
612 cap on carbon pollution would also be a significant step for  
613 restoring America's leadership in the deployment of clean  
614 energy technology. Building on the success of the bipartisan  
615 Acid Rain Program created in 1990 Clean Air Act, this  
616 approach will set clear long-term emission goals that empower  
617 the private sector to find the most innovative ways to reduce  
618 carbon pollution. The Administration also believes a  
619 renewable electricity standard could help create a stable

620 investment environment for America's innovators to do what  
621 they do best, create new jobs and entire new industries. We  
622 also believe it is important to foster continued development  
623 of critical technologies to give the American people advanced  
624 clean vehicles, to capture and store carbon to limit  
625 emissions and sustain our environment, to accelerate energy  
626 efficiency improvements, and to develop a smart grid to  
627 improve the efficiency, reliability, and security of our  
628 electricity transmission system. I applaud Chairman Waxman  
629 and Markey for bringing this bill forward.

630 Now is the time to take comprehensive and sustained  
631 action to meet our nation's energy challenge. With the  
632 leadership of the President, the actions of this Congress,  
633 and the support and participation of the American people, I  
634 am confident we will succeed. Thank you, and I will be glad  
635 to answer your questions.

636 [The prepared statement of Mr. Chu follows:]

637 \*\*\*\*\* INSERT 2 \*\*\*\*\*

|

638           The {Chairman.} Thank you very much, Secretary Chu.

639 Secretary LaHood.

|  
640 ^STATEMENT OF RAY LAHOOD

641 } Mr. {LaHood.} Mr. Chairman, Mr. Markey, Mr. Dingell,  
642 and Mr. Barton, and friends all, thank you for inviting me to  
643 discuss the Department of Transportation's commitment to  
644 promote a cleaner, greener America through effective and  
645 innovative transportation policy. I appreciate the  
646 opportunity to discuss the important environment and energy  
647 policies laid out in the American Clean Energy and Security  
648 Act. I commend the committee for drafting this important  
649 legislation. Since today is Earth Day, this is an excellent  
650 time to hold a serious national conversation on the most  
651 effective ways to improve energy efficiency, reduce  
652 greenhouse gas emissions, and mitigate the impact of climate  
653 change.

654 As you know, one of the highest priorities of President  
655 Obama's Administration is to develop a comprehensive energy  
656 plan that will not only achieve these goals but also create  
657 millions of good paying, clean energy jobs and help our  
658 communities become more livable in the process. There is no  
659 question that the United States must be the leader in the  
660 global effort to address climate change, cut pollution, and  
661 find more sustainable ways to keep our society mobile. The

662 President has already taken concrete steps in this direction.  
663 The Administration has proposed new fuel efficiency standards  
664 for cars and light trucks that would significantly reduce  
665 emissions and save millions of gallons of fuel beginning in  
666 model year 2011. And we are coordinating with the  
667 Environmental Protection Agency and the Department of Energy  
668 on new fuel economy standards to take us through 2016. Our  
669 department is also using new statutory authority to explore  
670 new fuel economy standards for medium and heavy duty trucks.  
671 Additionally, the department continues to invest in buses  
672 running alternative fuels thereby reducing emissions and  
673 improving air quality in cities and towns across America.  
674 Our commitment has helped to quadruple the number of clean  
675 fuel bus fleets across and around the nation since 1998.

676 Through the Recovery Act, we are making hundred million  
677 dollar grants in grant funds available to help the transit  
678 industry to improve fuel efficiency and reduce emissions for  
679 bus, rail cars and other transit equipment. On the climate  
680 change front over the last several years we have invested in  
681 research and technology efforts that will help us to  
682 transition away from fossil fuels, improve vehicle  
683 efficiency, and optimize our transportation network to reduce  
684 congestion and idling while contributing to higher emission  
685 levels. Across the department, we are committed to programs

686 and policies that address our environmental concerns. The  
687 FAA, for instance, is working with the private sector on  
688 sustainable alternative fuel for aircraft. The Maritime  
689 Administration exploring new technologies in cooperation with  
690 EPA and industries to reduce emissions from marine diesel  
691 engines.

692         Looking ahead, the Department of Transportation stands  
693 ready to meet the President's ambitious goals for making  
694 transportation an integral part of our approach to addressing  
695 environmental challenges. In the coming months, we will work  
696 with stakeholder groups around the country to determine how  
697 best to invest \$8 billion in new funding for high speed  
698 passenger rail service that will ultimately improve mobility  
699 and reduce congestion, and we will work closely with Congress  
700 to develop a new service transportation bill that focuses on  
701 reducing greenhouse gas emissions by investing in green  
702 transportation choices such as bike paths, pedestrian  
703 walkways, and building more affordable housing near transit.

704         In closing, the Department of Transportation will  
705 continue to be your full partner as we move forward with new  
706 legislation to help America address its formidable energy  
707 challenges. I look forward to working with you, Mr.  
708 Chairman, and the entire committee.

709         [The prepared statement of Mr. LaHood follows:]

710 \*\*\*\*\* INSERT 3 \*\*\*\*\*

|

711           The {Chairman.} Thank you very much, Secretary LaHood.  
712 We will now recognize members for questions, 5-minute rounds,  
713 and I will start off. The 3 of you gave us testimony on  
714 behalf of the Administration, and I thank you for your  
715 presentations. Our nation is facing some very difficult  
716 energy challenges and we have ignored them for too long. We  
717 are overly dependent on foreign sources of oil. Our economy  
718 is in a recession. We are no longer leading in the  
719 development of clean energy technology and we are polluting  
720 our environment. President Obama is trying to confront these  
721 problems. He has said we need a comprehensive energy policy  
722 that creates new clean energy jobs, promotes energy  
723 independence, and tackles a tremendous threat of global  
724 warming.

725           Chairman Markey and I tried to draft a discussion, a  
726 proposal that addresses these 3 issues. And what I want to  
727 ask you is whether you think our draft accomplishes the  
728 President's goals. Let me begin by asking about jobs and our  
729 economy. Americans are hurting, and this is the first  
730 question on most of our minds. Administrator Jackson, do you  
731 believe the bill would create jobs here in the U.S. and  
732 stimulate economic growth?

733           Ms. {Jackson.} I do indeed, Mr. Chairman. I believe

734 this is a jobs bill, and it is a jobs bill that focuses our  
735 country's attention on the growth industry of the future,  
736 which is the clean energy industry. There are opportunities  
737 here for us to create literally millions of jobs in the green  
738 energy.

739 The {Chairman.} Secretary Chu, do you agree, would this  
740 bill put us on the path to a clean energy economy?

741 Mr. {Chu.} I absolutely agree with that. I think as  
742 you yourself noted the world has rapidly changed its attitude  
743 towards carbon emissions and it is continuing to do so. So  
744 in a future world, it is very clear that we will be living in  
745 a carbon constrained world so the action will be how do you  
746 transition to a sustainable energy future. The United States  
747 must position itself in a way so that we can lead this  
748 transition, that we take advantage of the full intellectual  
749 opportunities and vigor of this country to develop those  
750 technologies that will add to our economic prosperity.

751 The {Chairman.} And, Secretary LaHood, what do you  
752 think about creation of jobs and helping our economy with the  
753 Obama proposal?

754 Mr. {LaHood.} Well, Mr. Chairman, I think that nothing  
755 has taken as much time for this Administration than trying to  
756 get the economy going. This is the number 1 priority for  
757 this Administration, and I know it is for Congress also, and

758 I know that is why Congress passed the Economic Recovery Act,  
759 which many of us in this Administration are implementing to  
760 try and get our fellow Americans back to work, and we are  
761 certainly doing that at the department. I believe that the  
762 work that you all are doing, the bill that you have laid out  
763 will go a long way to creating jobs, and particularly I want  
764 to note green jobs.

765         And in the area that we work at the Department of  
766 Transportation, we believe there will be a number of green  
767 job opportunities created around the country as a result of  
768 the approach that is being taken by your legislation and this  
769 is the reason that we are here today.

770         The {Chairman.} Let me ask you this though. The other  
771 objective, one of the other objectives, is to reduce our  
772 dependence on foreign oil. Americans are tired of sending  
773 billions and billions of dollars overseas for oil in many  
774 countries to countries with hostile governments. Do you  
775 believe this bill would reduce our dependence on foreign oil?

776         Mr. {LaHood.} Absolutely. I think it sets the bar very  
777 high and obviously one of the concerns that all of us in  
778 public policy positions have faced is the ire of the public  
779 when a barrel of oil goes up and gasoline goes up, and people  
780 are not able to use their automobiles. And I think this  
781 approach will help. The approach that you are taking in your

782 legislation will relieve our dependence on foreign oil by  
783 creating other opportunities for people, certainly in the  
784 area of transportation.

785         The {Chairman.} Thank you very much. I assume,  
786 Secretary Chu and Administrator Jackson, you agree this will  
787 reduce our dependence on foreign oil as well?

788         Mr. {Chu.} Yes, I do.

789         The {Chairman.} The third goal of this discussion draft  
790 is to effectively address the danger of global warming. We  
791 want to craft legislation based on science, and that means a  
792 bill that makes the global warming pollution reductions  
793 scientists tell us are necessary to avoid catastrophic  
794 climate change. Secretary Chu, does this bill represent an  
795 effective response to the threat of global warming? Does it  
796 take the necessary steps at home to ensure that American can  
797 restore global leadership on this issue?

798         Mr. {Chu.} It does.

799         The {Chairman.} And do the other two of you agree with  
800 that position? Administrator Jackson?

801         Ms. {Jackson.} Yes, I certainly do, Mr. Chairman. This  
802 bill includes strong targets, and it moves us to addressing  
803 global warming pollution by establishment of a cap and trade  
804 program which I think many businesses agree is the way to  
805 harness private investment and capital into on our side in

806 reducing pollution and creating the green energy economy.

807       The {Chairman.} Thank you very much. My time has  
808 expired. Do you want to add anything, Secretary LaHood?

809       Mr. {LaHood.} I agree.

810       The {Chairman.} Okay. Good. Mr. Barton.

811       Mr. {Barton.} Thank you, Mr. Chairman. Before I begin  
812 my questions, I want to commend you and Mr. Markey on one  
813 thing that I didn't in my opening statement. We have had  
814 intense debates about the number of Republican witnesses  
815 versus Democrat witnesses at these hearings. In this case, I  
816 want to commend you on your Administration panel. You went  
817 out of your way to make sure we had a Republican witness and  
818 we didn't even have to ask. I should have commended you for  
819 that, so we appreciate you doing that.

820       The {Chairman.} You can commend the American people for  
821 that.

822       Mr. {Barton.} Very good. Thank you. And the President  
823 for appointing him. Administrator Jackson, your agency  
824 yesterday came up with an economic impact analysis of the  
825 pending draft. How were you able to do that since the most  
826 important economic component of the draft has not allocation  
827 cost scheme in it?

828       Ms. {Jackson.} At the request of the drafters, we did  
829 indeed release economic modeling and in order to do it, we

830 had to make assumptions about how allowance revenue would be  
831 distributed. At the request of the drafters those  
832 assumptions were put into the modeling.

833 Mr. {Barton.} I haven't seen the analysis, but are  
834 those economic assumptions and allowances cost, are those  
835 public?

836 Ms. {Jackson.} Yes, they are, and the modeling is  
837 public.

838 Mr. {Barton.} They are public. Thank you. Your agency  
839 also recently came up with a finding that CO2 is hazardous to  
840 health and therefore should be regulated under the Clean Air  
841 Act. Just what is the health hazard since CO2 itself is not  
842 a pollutant?

843 Ms. {Jackson.} Well, the proposed finding would  
844 classify CO2 as a criteria pollutant, and the health impact  
845 associated with CO2, especially for the very young and for  
846 the elderly, are exacerbation of other impacts from  
847 pollution. CO2 acts to make impacts from pollution worse  
848 because the CO2 and the warming that it causes the climate  
849 change is actually--

850 Mr. {Barton.} Inhaling CO2, being exposed to CO2, in  
851 and of itself is not a health hazard?

852 Ms. {Jackson.} Well, right. Well, CO2 in the absence  
853 of oxygen--

854 Mr. {Barton.} You are creating CO2 as you talk to me.

855 Ms. {Jackson.} I think I understand your question, sir,  
856 which is if you inhale only CO2 certainly that would make you  
857 sick. You wouldn't live without oxygen. But the CO2 and the  
858 endangerment finding is based on scientific analysis of CO2  
859 and 5 other greenhouse gases and their impact on the welfare  
860 of our country and then human health because of--

861 Mr. {Barton.} Do we have examples in your finding of  
862 CO2 pollution causing death or large illnesses? We know SO2  
863 and we know mercury and we know lead. We know the criteria  
864 pollutants. Even ozone causes asthma or can exacerbate  
865 asthma. We don't have that with CO2.

866 Ms. {Jackson.} The finding, the proposal answers the  
867 question put to us by the law and by the Supreme Court, which  
868 is do these greenhouse gases as a class endanger public  
869 health and welfare, and the finding is based on an analysis  
870 of what the greenhouse gases do first to our environment and  
871 our planet and what that means for human health.

872 Mr. {Barton.} I thank you for those answers. Mr.  
873 LaHood or Secretary LaHood, former Chairman Dingell in his  
874 opening statement yesterday talked about the need for  
875 specific funding for the automotive industry and some  
876 assistance in terms of meeting their admission requirements  
877 under legislation that was passed last year. Have you looked

878 at former Chairman Dingell's comments, and, if so, do you  
879 support some of the things that he said yesterday?

880 Mr. {LaHood.} I am sorry, I have not seen his  
881 testimony. I will be happy to look at it, but I haven't seen  
882 it.

883 Mr. {Barton.} He was specifically saying that there  
884 should be a specific funding source in this bill to help the  
885 automotive industry meet the requirements in terms of their  
886 emission improvements that they have to meet, and he also  
887 said that for retooling issues and things that there should  
888 be additional funding so you might just--

889 Mr. {LaHood.} You mean the bill that is under  
890 consideration here by the committee?

891 Mr. {Barton.} Yes. If I understood him correctly, that  
892 is what--

893 Mr. {LaHood.} Well, to be honest with you, Mr. Barton,  
894 I haven't thought about this, but I would say this. I don't  
895 know of another Administration or another Congress that has  
896 done more for the American automobile manufacturer than the  
897 Obama Administration and this Congress in the Economic  
898 Stimulus Bill and also last year in what Congress did in  
899 terms of the money available to the American automobile  
900 manufacturers. This Administration is committee--

901 Mr. {Barton.} You don't have to convince me, Mr.

902 Secretary. I am one of the Republicans who voted for the  
903 auto package so you don't have to preach--

904 Mr. {LaHood.} No, if you are asking me if we are  
905 committed to helping the American automobile manufacturer,  
906 the answer is, yes, we have, and I believe the President  
907 will--

908 Mr. {Barton.} I am specifically asking just to take a  
909 look at what Mr. Dingell said.

910 Mr. {LaHood.} I didn't see his testimony, but I will be  
911 happy to look at it.

912 Mr. {Barton.} Dr. Chu, I don't want to leave you out.  
913 You are our scientist. I have one simple question for you in  
914 the last 6 seconds. How did all the oil and gas get to  
915 Alaska and under the Arctic Ocean?

916 Mr. {Chu.} This is a complicated story but oil and gas  
917 is a result of hundreds of millions of years of geology, and  
918 in that time also the plates have moved around, and so it is  
919 the combination of where the sources of the oil and gas--

920 Mr. {Barton.} But I mean isn't it obvious that at one  
921 time it was a lot warmer in Alaska and on the North Pole.  
922 There wasn't a big pipeline that we created in Texas and  
923 shipped it up there and then put it underground so we can now  
924 pump it out and ship it back.

925 Mr. {Chu.} There are continental plates that have been

926 drifting around throughout the geological ages.

927 Mr. {Barton.} That just drifted up there?

928 Mr. {Chu.} That is certainly what happened, and so it  
929 is a result of things like that.

930 The {Chairman.} The gentleman's time has expired. Mr.  
931 Markey.

932 Mr. {Markey.} Thank you, Mr. Chairman, very much.  
933 Secretary Chu, I know you spent a lot of time thinking about  
934 new energy technologies. Are you concerned that we could  
935 lose our leadership in new energy technologies to other  
936 countries?

937 Mr. {Chu.} I am very concerned of that. It actually  
938 tears my heart out to see what has happened. If you consider  
939 what happened photovoltaics were invented by Bell Labs in the  
940 1930s. We are not a leading manufacturer of photovoltaics.  
941 Wind turbines, which were first deployed in the United States  
942 in the first energy crisis in the mid-1970s, that had gone  
943 overseas to Denmark--to Germany. Nuclear reactors which we  
944 pioneered. Now Westinghouse, there is a major shareholder in  
945 Westinghouse that is now owned by a company in Japan. I am  
946 very concerned. Major power electronics of the world has  
947 drifted overseas. It is in Europe and it is in Asia. And so  
948 I see step by step us losing the technology lead. We need to  
949 bring those high technology jobs back, manufacturing jobs,

950 back to the United States.

951 Mr. {Markey.} Thank you, Mr. Secretary. During the  
952 presidential campaign now President Obama pledged that the  
953 United States could actually deploy 25 percent of our  
954 electricity from renewable resources by the year 2025, which  
955 would be a revolution in the way in which we generate  
956 electricity in our country. Do you agree with that  
957 assessment that we can reach that goal by the year 2025, Mr.  
958 Secretary?

959 Mr. {Chu.} Yes, I do. I think when the American public  
960 and especially the science and technology part of the United  
961 States gets going it can really move, and so although it  
962 might seem like an ambitious goal, I think with the proper  
963 incentives we can get there.

964 Mr. {Markey.} Could I ask you, Secretary LaHood, what  
965 role do you think that new advanced automotive technologies  
966 can play in revitalizing the American economy?

967 Mr. {LaHood.} Well, we know from visiting with the  
968 automobile manufacturers that the kind of technology that  
969 they are developing in terms of hybrids, in terms of battery  
970 powered automobiles, and then the standard that we have asked  
971 them to meet in terms of CAFÉ standards are going to allow  
972 the American people to have many, many choices in the future  
973 for opportunities to have automobiles that will emit far less

974 CO2, and certainly the case is true with hybrids and the  
975 further development of that. There are a couple of American  
976 automobile manufacturers that are developing an all battery  
977 automobile, and obviously that is going to go a long way to  
978 enhance our opportunities.

979         Mr. {Markey.} Are you an optimist, Mr. Secretary, that  
980 if we continue to invest in these new technologies as an  
981 American strategy that we can meet this goal?

982         Mr. {LaHood.} I think the American automobile  
983 manufacturers have gotten the message. They need to get  
984 where the American people are, and the American people are  
985 ready to drive automobiles that get good gas mileage in the  
986 instance of those that use gasoline, but if development of  
987 hybrids and battery powered automobiles come on to the  
988 opportunities for people and are allowed to be developed, I  
989 think the American people are ready for that.

990         Mr. {Markey.} Thank you. Mr. Secretary. Administrator  
991 Jackson, you have had a chance to look at the Waxman-Markey  
992 draft. Could you tell us in your opinion how that  
993 legislation could help to reduce our use of oil, our  
994 dependence upon imported oil in the United States?

995         Ms. {Jackson.} Well, the bill as you drafted it is  
996 comprehensive in that it has several opportunities for  
997 advancing renewable energy, energy efficiency. We just heard

998 about the opportunity to put forward electric cars, a low  
999 carbon fuel standard, and all of those things along with  
1000 especially the energy efficiency, which is such low-hanging  
1001 fruit right now for our country, and which could start  
1002 tomorrow in reducing our dependence, and then the longer term  
1003 options as we move towards a lower carbon future through a  
1004 cap and trade program, all of those are drivers that will  
1005 push us towards using foreign oil right now as it makes us  
1006 vulnerable.

1007         Mr. {Markey.} We produce 8 million barrels of oil a day  
1008 in the United States. We import 13 million barrels of oil a  
1009 day. That is our weakness. We thank each of you for your  
1010 leadership in helping us to address that question. Thank  
1011 you, Mr. Chairman.

1012         The {Chairman.} Thank you, Mr. Markey. Mr. Upton.

1013         Mr. {Upton.} Thank you, Mr. Chairman. I would first  
1014 like to ask Secretary Chu, Secretary Chu, the loan guarantees  
1015 for nuclear are certainly, as many of us know, an essential  
1016 part for building new projects such as new nuclear reactors.  
1017 We know that you have proposed a revision to the DOE loan  
1018 guarantee program, but as I understand it, OMB is not  
1019 satisfied and has rejected the proposed change. In spite of  
1020 that, can you comment on what we need to improve the program?  
1021 I don't know, is that a final resolution?

1022 Mr. {Chu.} No. I believe that nuclear power has to be  
1023 part of the energy mix in this century. I stated that many  
1024 times. I continue to state that.

1025 Mr. {Upton.} That would be my follow-up question, but  
1026 go ahead.

1027 Mr. {Chu.} And so we are certainly moving as  
1028 aggressively as we possibly can. We are going to work out  
1029 the differences with OMB to try to get those initial loan  
1030 guarantees going. We are also using our budget of 2008-2009  
1031 and going to 2010, we are helping the getting the NRC  
1032 licenses, particularly the AP-1000, so its generic design can  
1033 be licensed. That is being done with the aid of the  
1034 Department of Energy. We fully intend to use the resources  
1035 of the Department of Energy to further develop nuclear  
1036 technology. This is one of the areas of technology that the  
1037 United States should recapture leadership in.

1038 Mr. {Upton.} During your confirmation, I was heartened  
1039 when you said nuclear is going to be part of our energy  
1040 future. It has to be, and yet you had a statement a couple  
1041 weeks later as it related to Yucca Mountain, as you know,  
1042 there is no nuclear title as part of this bill, and I just  
1043 want to know as you indicate now that nuclear needs to be  
1044 part of the equation. Would the Administration support a  
1045 nuclear title to this bill knowing that there is no

1046 greenhouse gas emissions, and what are we going to do about  
1047 Yucca? And, lastly, would you support reversing President  
1048 Carter decision on recycling, something that our subcommittee  
1049 actually visited last year as we saw the French begin to--or  
1050 they have done it for now a number of decades, recycle the  
1051 nuclear waste. It is my understanding that both Japan and  
1052 the British are doing it as well. What are your comments in  
1053 that regard?

1054         Mr. {Chu.} What we are planning to do is to appoint a  
1055 panel to step back and take a fresh new look at how we are  
1056 going to--a comprehensive plan of how we are going to deal  
1057 with the nuclear waste. A lot has happened since the  
1058 beginning of Yucca Mountain some 25, 30 years ago, and so  
1059 without prejudging what these blue ribbon panels are going to  
1060 find, I think it is an opportunity to actually develop a much  
1061 more comprehensive forward looking plan. The fact that we  
1062 are doing this, I see, in no way conflicts with my vision of  
1063 trying to move the nuclear industry forward to restart the  
1064 American nuclear industry. We can and will develop a  
1065 comprehensive nuclear waste plant.

1066         Now with regard to the recycling issue, I think it has  
1067 become increasingly apparent even to France and Japan that  
1068 the current recycling technology used today, which isolates  
1069 plutonium, has proliferation issues, serious proliferation

1070 issues. So what I intend to do is to start a vigorous  
1071 research and development program to look for ways to close  
1072 the fuel cycle, to actually recycle, but in a way that is  
1073 proliferation resistant, so I think it is premature to start  
1074 today because we simply don't have those processes today but  
1075 in the long term I think that is the goal.

1076 Mr. {Upton.} Well, as we begin to embark on this  
1077 legislation would the Administration support that a nuclear  
1078 title that there is no greenhouse--a nuclear title to this  
1079 bill which it does not currently have now to encourage the  
1080 development and forward movement of additional new reactors?

1081 Mr. {Chu.} I think the Administration has supported  
1082 this. We are trying to, as I said, restart the American  
1083 nuclear industry again. It should be--

1084 Mr. {Upton.} So it ought to be yes.

1085 Mr. {Chu.} Yes. The answer is yes.

1086 Mr. {Upton.} We look forward to working with you.

1087 Okay, good. Administrator Jackson, last year, I believe it  
1088 was last year, in testimony before our committee, your  
1089 predecessors indicated that the Lieberman-Warner bill, had it  
1090 passed the Senate, would really not changed the--as long as  
1091 other countries were not participating, India and China, the  
1092 largest emitters, they didn't participate, that the global  
1093 temperature would change by a miniscule amount of less than 1

1094 degree. Do you concur with that same thought now what we  
1095 have a change in the Administration?

1096 Ms. {Jackson.} I certainly concur with the concept,  
1097 which is that global warming--

1098 Mr. {Upton.} It doesn't happen without India and China?

1099 Ms. {Jackson.} The international leadership,  
1100 international action is needed to solve the entirety of the  
1101 problem, yes.

1102 The {Chairman.} The gentleman's time has expired. The  
1103 chair wishes to recognize the Chairman Emeritus of this  
1104 committee, Mr. Dingell, under whose leadership as chairman,  
1105 we passed the last revisions to the Clean Air Act with a vote  
1106 of 42-1. I am hopeful we can get to 42-1 or that kind of a  
1107 margin this time around but I have my suspicions given some  
1108 of the opening statements that we may not be able to succeed  
1109 as you had in the last go round on the most important  
1110 environmental legislation that we had passed. Mr. Dingell is  
1111 recognized for 5 minutes.

1112 Mr. {Dingell.} Mr. Chairman, than you for your  
1113 courtesy. Thank you for those kind comments. I intend to  
1114 try to work with you to see to it we get a good bill out of  
1115 here. And I want to commend you for the legislation that you  
1116 have brought forward. Welcome to our panel, and particularly  
1117 our old friend, Ray LaHood. Welcome back, Ray.

1118 Mr. {LaHood.} Thank you.

1119 Mr. {Dingell.} These questions for Secretary Chu. How  
1120 many applications for the Section 136 advanced technology  
1121 vehicles manufacturing incentive programs has the department  
1122 received?

1123 Mr. {Chu.} Actually the exact number I can't really  
1124 say.

1125 Mr. {Dingell.} Would you submit that for the record,  
1126 please?

1127 Mr. {Chu.} Yes.

1128 Mr. {Dingell.} The current authorization for Section  
1129 136 is 25 million. What is the total amount that has been  
1130 requested?

1131 Mr. {Chu.} Well in excess of that amount.

1132 Mr. {Dingell.} Would you give us the exact figure?  
1133 And, Mr. Chairman, I ask unanimous consent that I be  
1134 permitted to write a letter to the departments asking to  
1135 expand upon the questions that I am making now and that both  
1136 that letter and the response be included in the record of the  
1137 committee.

1138 The {Chairman.} Without objection, that will be the  
1139 order.

1140 Mr. {Dingell.} Mr. Secretary, this goes to both you and  
1141 my old friend, Secretary LaHood. This country has had a

1142 wonderful experience. The new Chevy Volt was driven out of  
1143 the factory on electric power, and that wonderful vehicle was  
1144 driven out on batteries that were made in Korea. Now we have  
1145 had a policy in this country that has gone into effect and  
1146 gone in and out like Murphy's glass eye. Each new  
1147 administration comes in with a new package to stimulate new  
1148 technology in the auto industry. And so we have a constant  
1149 replacement of these programs and they never work because  
1150 they never get a chance to. What do you think we ought to do  
1151 in this legislation to see to it that we finally get Chevy  
1152 Volts driving out of the factory on American made batteries  
1153 and to stimulate the technology of the American industry so  
1154 that it will in fact produce cars of the kind that we want  
1155 them to produce and to do so in competition, not just with  
1156 foreign manufacturers but with foreign governments which are  
1157 subsidizing their manufacture?

1158 Mr. {LaHood.} Mr. Chairman, I wanted to express my  
1159 thanks for the warm welcome that you have given me here today  
1160 and to say to you that--

1161 Mr. {Dingell.} You will get a warmer welcome if you  
1162 give me an answer.

1163 Mr. {LaHood.} I am going to let--Secretary Chu knows a  
1164 lot more about this, but I want to say this. I do believe  
1165 that there are some technology and research going on with

1166 respect to batteries that can be used by the American  
1167 automobile manufacturers.

1168 Mr. {Dingell.} Very little support from our federal  
1169 government, very little.

1170 Mr. {LaHood.} I suspect given your interest in this  
1171 there may be a little bit more from Congress in the future.

1172 Mr. {Dingell.} And I want to get something like that in  
1173 this legislation. I need your guidance and that of Secretary  
1174 Chu to define what that will be.

1175 Mr. {LaHood.} You will have our guidance.

1176 Mr. {Dingell.} All right. I will submit a letter on  
1177 this but I want you alerted to the fact something has got to  
1178 be done on this. Now to Administrator Jackson. EPA is  
1179 moving forward with an endangerment finding for greenhouse  
1180 gases. When the Congress wrote the Clean Air Act, which our  
1181 chairman so kindly referred to, our assessment at that time  
1182 was that CO2 was not a pollutant. In any event, you are now  
1183 in this wonderful situation where you are going to have to  
1184 regulate under the Clean Air Act unless this committee does  
1185 something. Our chairman very happily has recognized this  
1186 need and in his bill and Mr. Markey's bill there is a  
1187 provision which will get us down to the point where the  
1188 federal government is going to regulate those under the new  
1189 legislation. I commend them for that. But just how many

1190 regulations and regulators will there be if we regulate under  
1191 the Clean Air Act? My off the cuff figuring tells me it  
1192 would be something on the order of 106. Am I incorrect in  
1193 that judgment?

1194 Ms. {Jackson.} I don't know how you came up with the  
1195 number of 106 there but--

1196 Mr. {Dingell.} Would you give us an answer on that  
1197 particular point, please?

1198 Ms. {Jackson.} Is the question whether there would be  
1199 regulation under the Clean Air Act if this--

1200 Mr. {Dingell.} Well, you are going to have to regulate  
1201 everything in sight for CO2 production and I am asking you  
1202 how many or I am asking you to deny that we would have the  
1203 situation where we would have as many as 106 regulations,  
1204 perhaps more, on CO2 emissions because you would have to do  
1205 it under the state implementation plans. You would have to  
1206 do it under all kinds of other regulatory powers and the  
1207 states and the federal government, and you would have, as I  
1208 have defined it, a glorious mess. Do you deny that we would  
1209 have a glorious mess if you had to do it under existing law?

1210 The {Chairman.} The gentleman's time has expired but we  
1211 would like to have you answer the question.

1212 Ms. {Jackson.} Thank you.

1213 Mr. {Dingell.} I look forward to your answers,

1214 gentlemen and lady.

1215           Ms. {Jackson.} Thank you. First, let me state that I  
1216 believe new legislation is the best way as the President has  
1217 said, and I certainly agree, to address the problem of global  
1218 warming and greenhouse gas emissions in our country. I  
1219 believe that the endangerment finding, the proposal that is  
1220 out, certainly addresses that which the Supreme Court compels  
1221 us to do, which is to speak as the Clean Air Act says EPA  
1222 must now as to whether greenhouse gases endanger public  
1223 health and welfare, and that draft is out for comment. It  
1224 certainly means that it is the first step in a potential  
1225 regulation of greenhouse gases via the Clean Air Act.

1226           And if your point, sir, is that it is more efficient to  
1227 do it via a bill, via new legislation like this discussion  
1228 draft envisions, then I couldn't agree more.

1229           The {Chairman.} Secretary Chu, do you want to add  
1230 something to that?

1231           Mr. {LaHood.} Yes. To answer Chairman Emeritus  
1232 Dingell's question, the American Recovery Act is investing \$2  
1233 billion in advanced manufacturing. Also, we are investing a  
1234 significant amount of money in R&D to develop next generation  
1235 of advanced batteries.

1236           The {Chairman.} Thank you. Mr. Stearns.

1237           Mr. {Stearns.} The first question I have is this is

1238 directed at the Secretary of Energy. During your  
1239 confirmation hearing, you testified that DOE has a legal  
1240 obligation to safely dispose of nuclear waste. You said I am  
1241 supportive of the fact that the nuclear industry is and  
1242 should have to be part of our energy mix in this century.  
1243 Doesn't it concern you then that nuclear energy does not even  
1244 seem to be a part of this bill, and I think this is a follow-  
1245 up to Mr. Upton's question.

1246 Mr. {Chu.} Well, not specifically a part of this bill.  
1247 If you look at the sum package of all the bills like the  
1248 America Recovery Act, nuclear energy is supported in those  
1249 other bills.

1250 Mr. {Stearns.} But don't you think there should be a  
1251 separate title in this bill for nuclear energy, just yes or  
1252 no?

1253 Mr. {Chu.} Pardon? What was the question?

1254 Mr. {Stearns.} Do you think there should be a separate  
1255 title in this bill for nuclear energy, just yes or no?

1256 Mr. {Chu.} We are looking forward to working with the  
1257 committee on--

1258 Mr. {Stearns.} Just yes or no. Do you think it should  
1259 be? Can I have your yes or no answer?

1260 Mr. {Chu.} A separate title on nuclear energy?

1261 Mr. {Stearns.} Yes. Yes or no.

1262 Mr. {Chu.} I think nuclear energy can be mentioned in  
1263 this bill but again it is working with this committee and the  
1264 Administration in developing that.

1265 Mr. {Stearns.} Is that a no then, you don't think  
1266 nuclear energy--

1267 Mr. {Chu.} No, that was we will look forward to working  
1268 with the committee and making sure that nuclear energy is  
1269 part of our energy mix.

1270 Mr. {Stearns.} Last September you made the statement  
1271 that somehow we have to figure out how to boost the price of  
1272 gasoline to the levels in Europe, which at the time exceeded  
1273 \$8 a gallon. As Secretary of Energy will you speak for or  
1274 against any measures that would raise the price of gasoline?

1275 Mr. {Chu.} As Secretary of Energy, I think especially  
1276 now in today's economic climate it would be completely unwise  
1277 to want to increase the price of gasoline and so we are  
1278 looking forward to reducing the price of transportation in  
1279 the American family, and this is done by encouraging fuel  
1280 efficient cars. This is done by developing alternative forms  
1281 of fuel like biofuels that can lead to a separate source, an  
1282 independent source, of transportation fuel.

1283 Mr. {Stearns.} But you can't honestly believe that you  
1284 want the American people to pay for gasoline at the prices,  
1285 the level in Europe?

1286 Mr. {Chu.} No, we don't.

1287 Mr. {Stearns.} But your statement somehow we have to  
1288 figure out how to boost the price of gasoline to the levels  
1289 in Europe, doesn't that sound a little bit silly in  
1290 retrospect for you to say that?

1291 Mr. {Chu.} Yes.

1292 Mr. {Stearns.} Okay. You have also stated that the  
1293 American electricity prices are anonymously low and that coal  
1294 is our worst nightmare largely due to its contribution to  
1295 global warming. As Secretary of Energy, will you support  
1296 coal-fired electric generation in order to provide affordable  
1297 electricity for the American people?

1298 Mr. {Chu.} I believe the full statement when I made  
1299 that statement is that coal as it is used today in China and  
1300 India especially where there is no trapping of sulfur  
1301 dioxide, nitrogen oxide, mercury particular matter, and no  
1302 capture of carbon dioxide, and when China was building coal  
1303 plants, close to one a week, without the sequestering of any  
1304 of these pollutants, is a nightmare. So I think going  
1305 forward, I have also said that the world is not going to turn  
1306 its back on coal, and the United States again should take a  
1307 leadership position, as we have done in scrubbing the sulfur  
1308 dioxide, the nitrogen oxide, the lead particular matter, and  
1309 working toward--

1310 Mr. {Stearns.} Does that mean you would support more  
1311 coal burning operations generation?

1312 Mr. {Chu.} I certainly will be looking forward to  
1313 supporting coal burning operations as we work towards clean  
1314 coal, absolutely.

1315 Mr. {Stearns.} Because President Obama in the campaign  
1316 indicated if we can go to the moon, we certainly can burn  
1317 coal cleanly, and he sort of indicated that he would support  
1318 coal operation if the coal was burned cleanly. The EPA  
1319 analysis contains a rather aggressive assumption about carbon  
1320 capture and sequestration technology coming to market. Does  
1321 the Department of Energy have any analysis that shows that  
1322 CCS being available by let us say 2015?

1323 Mr. {Chu.} Well, if you look at where we are today in  
1324 terms of the capture technology and sequestration technology,  
1325 we are beginning--not only the United States, but Europe and  
1326 Asia are beginning to look aggressively at piloting and  
1327 bringing to commercial scale these projects. So it takes  
1328 several years to build them. It takes several more years to  
1329 have the lessons learned so that power companies can invest  
1330 with confidence that this is not only technically feasible  
1331 but it is economically feasible. And so at a minimum, I see  
1332 6, 8 years, for example, as a time when very serious  
1333 deployment begins, but we are working as fast as we can to

1334 begin the testing both at pilot scale and at commercial  
1335 scale.

1336           The {Chairman.} The gentleman's time has expired. Mr.  
1337 Rush.

1338           Mr. {Rush.} Thank you, Mr. Chairman, for this hearing,  
1339 and I certainly want to add my kudos and commendations to my  
1340 friend from Illinois, Secretary LaHood. It is good to see  
1341 you again, Mr. Secretary, and welcome to all of our witnesses  
1342 today. Mr. Chairman, I just want to make sure that the  
1343 record is real clear here that it is my contention and others  
1344 contention that this bill is silent on nuclear simply because  
1345 of the fact that nuclear energy doesn't generate any carbon  
1346 emissions so the bill is silent on this, and I think that the  
1347 future of the nuclear energy field is going to be quite good  
1348 and quite positive and the nuclear energy field is subject  
1349 under this bill. I want you to know that my state has  
1350 enormous investments in nuclear facilities and we look  
1351 forward to this bill and to the new era because we look  
1352 forward to being able to generate jobs and additional  
1353 revenues from nuclear energy.

1354           So, Mr. Chairman, the comments of those on the other  
1355 side kind of remind me of the phrase this dog just don't hunt  
1356 no more because they are operating under kinds of premises  
1357 here. So for the record, I want to clear that up. I do have

1358 a number of questions, and I am going to try to ask each and  
1359 every one of you, if you will, to try to take a shot at these  
1360 questions. I am going to ask them all together, if I might,  
1361 because if time permits I got another area of questioning  
1362 that I would like to engage on. Currently, the phrase green  
1363 jobs and green job training and certification means different  
1364 things for different jurisdictions, and each state or  
1365 locality may define training and certification differently.  
1366 In your opinion, should the federal government set standards  
1367 for training and certification and should that be done  
1368 through legislative language or through the EPA's  
1369 administration of the program?

1370         The next question, how do we ensure that local  
1371 communities with large percentages of population without  
1372 college or advanced degrees be recruited and trained in green  
1373 job technologies in order to be a part of the job creation  
1374 and economic boom that this new energy sector is create?  
1375 And, lastly, how do we ensure that minority and women-owned  
1376 businesses are able to gain equal access to federal funding  
1377 in order to take advantage of the entrepreneurship and  
1378 innovative business opportunities that this new energy  
1379 section will enable? Should the rules of the road be written  
1380 through legislative action or through the administration and  
1381 implementation within the agencies how do we track this

1382 funding and ensure that the people we are trying to reach are  
1383 indeed recipients of this fund? Each one of you can take a  
1384 crack at it.

1385         Mr. {LaHood.} Mr. Chairman, let me just see if I can  
1386 answer the question on green jobs because an economic  
1387 recovery plan the Department of Labor is receiving a lot of  
1388 money to really implement the kind of opportunities for  
1389 training for green jobs and if Secretary Solis were here, she  
1390 could really get into depth on this, but at our cabinet  
1391 meeting that we had just this week with the President, she  
1392 talked about the opportunities that are going to be created  
1393 through her department with the money that comes from the  
1394 Economic Recovery Plan for training for people in the whole  
1395 area of green jobs.

1396         Mr. {Chu.} Let me also add that Secretary Solis and I  
1397 had visited a community college recently where this community  
1398 college was providing the proper training for these new green  
1399 jobs. I think you raise a very important part. There are  
1400 certainly many examples across the country where proper  
1401 training programs have been developed. Right now because of  
1402 the urgency of what we are trying to do in terms of getting  
1403 the economic recovery money out there and in practice, we  
1404 first want to just make sure that best practices are shared  
1405 in states.

1406 Mr. {Rush.} Administrator Jackson, would you speak  
1407 specifically to the issue of certification and training?

1408 Ms. {Jackson.} Certainly, Mr. Rush. Let me first say  
1409 that environmental justice in the future is going to also  
1410 mean that this green economy is green for all as others have  
1411 said to coin a phrase as others have coined. So I think that  
1412 what you are asking is whether or not there needs to be  
1413 assurances that all are actually able and ready to partake as  
1414 we create and embark on putting America right in the bulls  
1415 eye of the green energy economy, and certainly it should be.  
1416 Again, I would defer to my colleague, Secretary Solis, as to  
1417 how to do that. I am an environmental specialist myself.

1418 The {Chairman.} Thank you very much. The gentleman's  
1419 time has expired. We would like to at this time recognize  
1420 Mr. Whitfield.

1421 Mr. {Whitfield.} Mr. Chairman, thank you very much, and  
1422 I certainly want to thank the witnesses for being here today,  
1423 and it is great to have Secretary LaHood here with us who  
1424 many of us had an opportunity to be in Congress with in 1994.  
1425 But I think it is imperative that as we discuss this issue of  
1426 energy policy that we not go into this with rose-colored  
1427 glasses, and that we just get it all out on the table and  
1428 then the Congress will make its decision and the American  
1429 people will be very much aware of the pluses and the minuses

1430 about all of this. Now the economists a couple weeks ago or  
1431 last week had an article entitled Saving the Planet and  
1432 Creating Jobs May Be Incompatible, and in that article they  
1433 specifically referred to President Obama when he was in  
1434 Europe. He gave a speech, and he said think of what is  
1435 happening in countries like Spain where they are making real  
1436 investments in renewable energy. They are surging ahead of  
1437 us poised to take the lead in these new industries.

1438         This isn't because they are smarter than us or work  
1439 harder than us but because they are making investments with  
1440 government funds in renewable energy, and these investments  
1441 are paying off with good high wage jobs. And then we hear a  
1442 lot about green jobs and we want green jobs. We need green  
1443 jobs, particularly at this time in our nation's history with  
1444 our economic problems. And we have heard a lot of models  
1445 being used about the jobs that are going to be created, and  
1446 we hear models used about how cap and trade and renewable can  
1447 improve the health care of the American people and can reduce  
1448 dramatic weather changes and so forth.

1449         And we know that with all models there are all sorts of  
1450 problems with models depending on the information that is  
1451 going in. But I wanted to ask you all, you, Mr. Chu,  
1452 particularly, and Ms. Jackson if you had read Gabriel  
1453 Alvarez's study. He is at King Juan Carlos University in

1454 Madrid. And he used empirical data based on the government  
1455 subsidizing renewable energy in Spain, and he came up with  
1456 the conclusion exactly how much every job cost, and I know  
1457 that President Obama in this renewable energy package is  
1458 using Spain as one of the models. But for every job created  
1459 in the renewable energy sector, so-called green job, they  
1460 lost 2.2 jobs. And this is a 50-page empirical study that he  
1461 conducted. And have either one of you seen his study?

1462 Ms. {Jackson.} No, sir, I am not familiar with the  
1463 study.

1464 Mr. {Whitfield.} Were you aware of the study? Had you  
1465 even heard about in?

1466 Ms. {Jackson.} Generally, I know that there are many  
1467 studies out. That particular study, I have not reviewed.

1468 Mr. {Whitfield.} Well, you have heard time and time  
1469 again that people are concerned about loss of jobs. I mean  
1470 the issue on cap and trade, of course, is that, yeah, China,  
1471 they are not using scrubbers. They are not using carbon  
1472 capture and sequestration. They are bringing on one new coal  
1473 power plant every 2 weeks. How do we deal with that, Mr.  
1474 Secretary, if we unilaterally move to take steps and China  
1475 and India and other countries are not, how do we deal with  
1476 that?

1477 Mr. {Chu.} Well, this is an issue where I believe the

1478 United States should take a leadership role. The President  
1479 has emphatically stated that, and I actually believe that  
1480 other developing countries like China, Mexico has already  
1481 stated that they want as a goal to reduce their carbon even  
1482 though they are a developing country that they would like to  
1483 reduce their carbon emission by 50 percent by 2050, and I  
1484 think if China--if the United States does take the lead China  
1485 will follow.

1486         Mr. {Whitfield.} Well, I hope that as you work with the  
1487 committee that you all will keep these jobs as a priority  
1488 because if we are losing 2.2 jobs in existing industries as  
1489 they did in Spain and they only picked up one job in green,  
1490 the economy, then that is a losing proposition. And I would  
1491 also just point out a study that Johns Hopkins did, for  
1492 example, that said if you replace three-fourths, for example,  
1493 of U.S. coal based energy with higher priced energy because  
1494 we are doing to increase the price of energy with cap and  
1495 trade and other things it would lead to 150,000 premature  
1496 deaths annually in the U.S. alone. Now that was a study at  
1497 Johns Hopkins. Have you all seen that study because we hear  
1498 a lot of benefits, you know, from moving in the direction we  
1499 are moving but this shows the negative aspect of it. Have  
1500 you seen that study?

1501         Ms. {Jackson.} No, Mr. Whitfield, but I would be happy

1502 to review it.

1503 Mr. {Whitfield.} Okay. Well, my time is expired.

1504 Thank you.

1505 The {Chairman.} The gentleman's time has expired. The  
1506 chair would request of the gentleman that he submit that  
1507 study because I think the committee would like to look at it  
1508 carefully. Ms. DeGette.

1509 Ms. {DeGette.} Thank you, Mr. Chairman. I would like  
1510 to follow up, first of all, on some questions that were being  
1511 asked that Mr. Rush was asking about the effect of this  
1512 legislation on low income individuals. And I am wondering,  
1513 Administrator Jackson, if you could tell us in EPA's analysis  
1514 how the discussion draft might affect the economy and  
1515 individual households, in particular low income households.

1516 Ms. {Jackson.} Certainly. The overall message from  
1517 EPA's modeling, and again it was based on assumptions from  
1518 the drafters that I can discuss in a second was that the  
1519 impact is quite modest on the economy in general and that the  
1520 impact on the average household annualized over a year, an  
1521 annualized impact for a year is around \$98 to \$140.

1522 Ms. {DeGette.} And why is that? Why is that impact  
1523 relatively modest because to many outside observers they  
1524 think that this is going to present a huge cost burden to  
1525 American families.

1526 Ms. {Jackson.} Well, one of the opportunities and one  
1527 of the things that I know this committee has before it to  
1528 discuss is what happens with the money generated from the  
1529 allowances, The value in the cap and trade system is in this  
1530 currency called allowances. And one of the assumptions we  
1531 made in the modeling was that about 40 percent of that money  
1532 would go back to the American people to households in the  
1533 form of rebates.

1534 Ms. {DeGette.} So even though the discussion draft is  
1535 silent as to where the allowances would go if the committee  
1536 made the determination to put at least 40 percent back to  
1537 American families then that would help reduce the impact on  
1538 individual households, correct?

1539 Ms. {Jackson.} Certainly that is the driver.

1540 Ms. {DeGette.} Another question that I have, and this  
1541 is really for Secretary Chu but also either of the other  
1542 witnesses could answer. I am wondering what your thoughts  
1543 are about how realistic the discussion draft's reduction  
1544 targets are both near term and long term.

1545 Mr. {Chu.} I think they are aggressive but I think we  
1546 can meet them. If you look back in history of how we have  
1547 actually met certain things, the Clean Air Act, clean water,  
1548 how we dealt with the ozone layer, invariably what happens  
1549 especially that aggressive but obtainable target of 2050 that

1550 you reduce carbon by 83 percent, I think it is science and  
1551 technology that is going to lead the way to give us those  
1552 solutions. In the near term, efficiency will give us most of  
1553 the gains immediately and it will also save us money.

1554 Ms. {DeGette.} Let me ask you this question. Much has  
1555 been made by some of my colleagues on the other side of the  
1556 aisle of the fact that India and China in particular but also  
1557 other developing countries don't seem to have much of a  
1558 interest in controlling global climate change right now. Is  
1559 that a reason for us to not move ahead with our aggressive  
1560 goals in the U.S., Mr. Secretary?

1561 Mr. {Chu.} The view of China has changed dramatically  
1562 in the last several years. I had the opportunity about a  
1563 year and a half ago to speak with Premier Wen Jiabao for  
1564 about an hour on this issue. They are taking it very  
1565 seriously because they see the impacts of climate change in  
1566 their own country, and so they are very--

1567 Ms. {DeGette.} Well, let me stop you. What about  
1568 India?

1569 Mr. {Chu.} India is less far along in this realization.

1570 Ms. {DeGette.} So to answer my question then in  
1571 particular with India but to a lesser degree with China and  
1572 maybe other developing countries, is there lack of  
1573 prioritization of this issue reason for us not to move

1574 forward?

1575 Mr. {Chu.} No. We have to move forward. Right now the  
1576 United States and China represent 50 percent of the carbon  
1577 emissions of the world, and as we go forward we have to take  
1578 those leadership positions.

1579 Ms. {DeGette.} Now if, say, we don't get China  
1580 participating fully although we hope we will, if we don't get  
1581 India and the other developing countries participating, what  
1582 is that going to do towards the bill's reduction targets. In  
1583 other words, are the draft legislation's targets tied to  
1584 reductions in these third world countries or can we maintain  
1585 some reductions in and of ourselves?

1586 Mr. {Chu.} No. I think what the bill is saying is that  
1587 we will go forward and we will start to reduce, aggressively  
1588 start to reduce the carbon emissions in the United States.  
1589 But in a cap and trade scheme, it also provides for offsets.  
1590 Some of those offsets, much of those offsets, will be in the  
1591 United States to the parts of our country, but some of that  
1592 could also be used to help bring in developing countries.

1593 Ms. {DeGette.} Thank you. Thank you, Mr. Chairman.

1594 The {Chairman.} Thank you, Ms. DeGette. Representative  
1595 Bono Mack.

1596 Ms. {Bono Mack.} Thank you, Mr. Chairman. And I thank  
1597 our distinguished panel of experts for their time today, and

1598 I just want to start by saying my congressional district is  
1599 probably one of the most beautiful congressional districts  
1600 with all due respect to all of my colleagues, and I am  
1601 extremely proud of the work we have done on renewables. We  
1602 have invested, we believe, if you start at one end of my  
1603 congressional district you will see windmills that we are  
1604 very famous for. You can go to the other end and see a lot  
1605 of geo-thermal capacity and certainly a lot of hope in  
1606 between for solar projects. But, conversely, my  
1607 congressional district is also one of the top 5 hardest hit  
1608 in the housing crisis. So this legislation is keenly  
1609 important to me and to my district. As a Californian, I  
1610 believe in innovation and I believe there is a lot in this  
1611 bill that can go a long way towards energy independence. I  
1612 believe there is a lot in this bill that will promote the  
1613 technologies that we all believe in.

1614 But again I have very, very big concerns about the cost  
1615 and what this will do to my constituents. California's rates  
1616 are on average about 65 percent higher than the rest of the  
1617 nation for electricity, and this truly can be a matter of  
1618 life and death for my constituents. In the summertime we see  
1619 the deaths occur for people who are afraid to turn on their  
1620 air conditioning. Years past, we saw a flawed deregulation  
1621 bill in California that created vast, unattended consequences

1622 where we saw rolling blackouts, and we saw what flawed  
1623 policy, whether it be out of Sacramento or Washington  
1624 eventually, can do to harm people.

1625         So my concerns in this bill I believe has been well  
1626 known and my colleague, Mr. Upton, has asked each of you  
1627 answer the questions in writing about what will this do for  
1628 the cost of energy on our consumers, and I look forward to  
1629 seeing those answers from all of the panelists. I would like  
1630 to know from Administrator Jackson the EU, California's AB-  
1631 32, the Western Climate Initiative, and Northeast RGGI system  
1632 all handle transportation fields outside of the cap and trade  
1633 program and in the case of California in particular works  
1634 with fuels through a low carbon fuel standard. We have  
1635 portions of both approaches in this draft legislation. Is it  
1636 your opinion that putting fuels under the cap and trade is  
1637 the right approach or can we separate fuels out with a low  
1638 carbon standard?

1639         Ms. {Jackson.} My opinion is that it is extraordinarily  
1640 important that we deal with transportation fuels and that we  
1641 do it in a way where we see meaningful reductions in the  
1642 carbon foot print of those fuels like a renewable fuel  
1643 standard, like the low carbon fuel standard which are in this  
1644 bill. I do believe that there are alternate approaches, and  
1645 I think the committee will have the opportunity to discuss

1646 that and find the most effective way of dealing with it. And  
1647 I think anything EPA can do to assist you in those  
1648 discussions we are happy to.

1649 Ms. {Bono Mack.} Well, you can start by answering a  
1650 question, should it or should it not be under an economy wide  
1651 cap and trade system?

1652 Ms. {Jackson.} Well, I think that it can be addressed  
1653 either way and I don't think there is a right or a wrong. I  
1654 think that it should be evaluated and discussed in terms of  
1655 what gets the best result.

1656 Ms. {Bono Mack.} Secretary LaHood, I am a firm believer  
1657 that the new clean diesel needs to be a little bit more  
1658 thoroughly discussed in Washington that there is great  
1659 promise in clean diesel but I might be entirely misguided. I  
1660 would love to know your thoughts on clean diesel, and if  
1661 there is a role whether it be under low carbon fuel standard  
1662 or just increased CAFÉ where clean diesel might fit in.

1663 Mr. {LaHood.} First of all, I will agree with you that  
1664 you have one of the most beautiful districts in the country,  
1665 and some of the most beautiful golf courses too, by the way.  
1666 But I am not prepared to talk about the diesel standard. I  
1667 don't know whether Secretary Chu or Administrator Jackson can  
1668 do that but I would be happy to get back to you after I look  
1669 into it. That is not something that I have expertise in. I

1670 don't know if either one of these two folks want to say  
1671 something about it not.

1672       Mr. {Chu.} Yes. I think the Department of Energy is  
1673 certainly funding programs that develop clean diesels. As  
1674 you know, there has been a change in the technology in  
1675 diesels and moderate size diesel engines can now satisfy the  
1676 very stringent California EPA rules on particular matter on  
1677 NOX that we didn't think was possible 5 or 10 years ago. I  
1678 should also say that I am very proud of the fact that the  
1679 Department of Energy funded a program that works with Sandia  
1680 Labs with Cummings that makes large diesel engines to  
1681 actually use high performance computing to design a cleaner  
1682 diesel and it actually reduced the design time by 15 percent.  
1683 The engine was designed in software and built and said it  
1684 satisfies our design goal and they went into production. So  
1685 clean diesel is something that we will be investing in.

1686       The {Chairman.} The gentlelady's time has expired.

1687       Ms. {Bono Mack.} Thank you.

1688       The {Chairman.} Representative Green.

1689       Mr. {Green.} Thank you, Mr. Chairman. Like our  
1690 colleagues, I would like to welcome our new secretaries, and  
1691 particularly our former colleague, Ray LaHood. Ms. Jackson,  
1692 the EPA produced a preliminary analysis of the economic  
1693 impact of the discussion draft that was publicized yesterday

1694 and the analysis did not measure the overlapping impacts of a  
1695 carbon cap, the renewable electricity standard, the  
1696 efficiency standards, the new plant regulations, and low  
1697 carbon gasoline program. From what I understand, it was a  
1698 preliminary draft and when can we expect the analysis measure  
1699 that includes all parts of the bill taken together?

1700 Ms. {Jackson.} Well, I think that we will be happy to  
1701 provide additional modeling analysis once the bill is ready,  
1702 once you have an actual bill. It was a discussion draft. It  
1703 was incomplete. EPA was asked by the drafters to model a  
1704 narrow portion of it, and as I mentioned we had to make quite  
1705 a few assumptions to do that, but EPA stands ready to provide  
1706 additional modeling analysis at the request of the committee.

1707 Mr. {Green.} I appreciate it. In fact, since we are  
1708 going to mark up in our subcommittee next week, I don't know  
1709 if we can get those specifics to you because some of those  
1710 decisions are being made now but I appreciate the update on  
1711 the analysis. The discussion draft both regulates refining  
1712 through a carbon cap and imposes a new gasoline standards for  
1713 carbon essentially regulating these fuels twice. Last year,  
1714 when the Senate considered a climate bill their estimates of  
1715 gasoline price increases as high as 129 percent, and of  
1716 course last year's price of gasoline was \$4 so 129 percent  
1717 was very substantial compared to what gasoline may be today.

1718 My question for both EPA and DOE, would EPA and DOE  
1719 perform an analysis of the case prices and supply that  
1720 considers the impact of the implementation of the second  
1721 stage of the renewable fuels program, the new low carbon  
1722 program, and the carbon cap before we mark up the  
1723 legislation. Is that possible that would look at both of  
1724 those, the new low carbon program and the carbon cap before  
1725 we get to a markup on the legislation?

1726 Ms. {Jackson.} Are you asking about the low carbon  
1727 program in this bill, sir?

1728 Mr. {Green.} In this bill, the low carbon program in  
1729 this bill, along with the other requirements that we are  
1730 going to have on refining capacity and ultimately the price  
1731 of fuel. Does EPA and DOE have the capability to do that?

1732 Ms. {Jackson.} I know that EPA's capabilities are  
1733 focused around the impact of the cap and trade on emissions  
1734 and then allowance prices, but I am certainly happy to work  
1735 with the Department of Energy to make sure we get you  
1736 whatever we can.

1737 Mr. {Green.} Secretary Chu, is that possible?

1738 Mr. {Chu.} Pardon? Is what possible?

1739 Mr. {Green.} Since we had some estimates in the Senate  
1740 last year on the climate change bill as high as 129 percent  
1741 gasoline cost increases, does DOE perform an analysis of the

1742 gasoline price and supply that considers the impact of the  
1743 implementation of the second stage renewable fuels program,  
1744 the new low carbon program, and the carbon cap before we have  
1745 an opportunity to mark up the legislation?

1746 Mr. {Chu.} Yes. We will get the EIA and we will get  
1747 you that information.

1748 Mr. {Green.} Thank you. I guess this one is for Dr.  
1749 Chu, Secretary Chu. In testimony you talk about the  
1750 Administration believes the renewable electricity standard  
1751 could help create a stable investment environment for  
1752 America's innovators to do what they do best, create new jobs  
1753 and entire industries. And I know coming from the State of  
1754 Texas, we don't have a percentage. I know the bill calls for  
1755 25 percent renewable electricity standard. The House in 2007  
1756 passed a 15 percent renewable electricity standard that  
1757 included electricity efficiencies. Why is the difference to  
1758 have a national standard as compared to what a lot of states  
1759 are doing? Some particularly in the south have hard kilowatt  
1760 hours that they say this is what we are going to use from  
1761 renewable electricity. And Texas is a good example because  
1762 of growth in wind power. But why do we need a national  
1763 standard to allow the states who are already doing it?

1764 Mr. {Chu.} Well, surprisingly when I--or maybe not  
1765 surprisingly, but when I meet with industry representatives

1766 many of the industries' representatives who are in these  
1767 renewable energies want a national standard. It creates a  
1768 uniform basis with that plus trading and the option for  
1769 states to do this will create a market so that people who  
1770 want to develop these new industries and further advance and  
1771 deploy them will say that we have a market that we can make  
1772 these hundreds of millions of dollars in investment across  
1773 the country.

1774         Mr. {Green.} My colleague, Congresswoman DeGette, from  
1775 Colorado pointed out some of the concerns I think some of us  
1776 may have about international agreements because I represent  
1777 an area that is refining capacity and the refining that we do  
1778 in Houston, Texas could easily be transferred to China or  
1779 India or Libya or Saudi Arabia who would love to enhance  
1780 their product. Instead of being crude oil suppliers, they  
1781 would love to be refined product suppliers. Our concern is  
1782 that the United States needs to be a leader, but we also need  
1783 to recognize that some of the requirements we do similar to  
1784 what our trade legislation has in the past that even if a  
1785 country has very strong environmental laws they are typically  
1786 not enforced.

1787         Don't you think particularly dealing with climate change  
1788 and carbon because if a ton of carbon goes up in Houston,  
1789 Texas and a ton of carbon goes up in China, it is basically

1790 the same on the worldwide impact unlike some of our other  
1791 pollutants. Do you feel like this legislation, at least the  
1792 draft that we have now, is strong enough in dealing with not  
1793 only the United States leading but also bringing the  
1794 developing world along in trying to make sure that we don't  
1795 have that dislocation of some of our basic industries?

1796 The {Chairman.} The gentleman's time has expired, but  
1797 we would like to ask the witnesses to answer.

1798 Mr. {Chu.} Very briefly, I think this is the reason why  
1799 this bill is advocating cap and trade, the cap and trade  
1800 allowances begin in developing countries. I think the  
1801 Administration wants to work very much with this committee on  
1802 deciding how to dispose of the allocations. We already  
1803 talked about the sensitivity, the most vulnerable parts of  
1804 our society, and also there is a sensitivity with regard to  
1805 the heavily energy intensive industries, so this is something  
1806 the Administration will work with the committee in dealing  
1807 with these issues.

1808 The {Chairman.} Thank you, Mr. Green. Mr. Walden.

1809 Mr. {Walden.} Thank you very much, Mr. Chairman. And I  
1810 want to thank our panelists for being here today. The first  
1811 question I have given the complexity of this legislation, I  
1812 just want to make sure each of you has actually read the  
1813 draft bill in its entirety. Can you give me a yes or no,

1814 have you read it in its entirety?

1815 Mr. {LaHood.} I haven't had time to read all 600 pages.

1816 Mr. {Walden.} 648, but that is--

1817 Mr. {LaHood.} I have not had time to read all 648  
1818 pages.

1819 Mr. {Chu.} Neither have I.

1820 Mr. {Walden.} Ms. Jackson.

1821 Ms. {Jackson.} Nor have I. My staff have certainly  
1822 read through it.

1823 Mr. {Walden.} Okay. Well, then I want to draw your  
1824 attention to a couple of issues. First of all, I come from a  
1825 district that is very rural, 70,000 square miles, home to 11  
1826 national forests where we have all kinds of catastrophic  
1827 fires and enormous overgrowth of wood fiber. Is there a  
1828 scientific reason, Dr. Chu, for excluding woody biomass off  
1829 federal land under the definition on page 8 of biomass, and  
1830 why would the Administration support that exclusion?

1831 Mr. {Chu.} Well, the Administration will be working  
1832 with the draft of this bill.

1833 Mr. {Walden.} Do you support this draft? Do you  
1834 support the definition of biomass as found on page 8?

1835 Mr. {Chu.} I would certainly look forward to working  
1836 with you in terms of looking at how biomass is defined.

1837 Mr. {Walden.} Okay. Well, biomass is defined right now

1838 on page 8 as you couldn't take any of this off federal land.  
1839 Federal land is completely excluded. I would love to know  
1840 the scientific reason for doing that. Second, there are all  
1841 these other definitions that private timber growers in my  
1842 part of the world tell me would basically make it impossible  
1843 for them to participate in woody biomass development.  
1844 Whether that is a chip plant, whether that is a pellet plant,  
1845 whether that is--all this stuff is being invested in right  
1846 now. Our department of environmental quality in Oregon says  
1847 basically there is virtually no emissions from heating  
1848 sources that come that are heated with the wood pellets.  
1849 This is a disc. They want to make these in my district using  
1850 woody biomass off private and federal ground, put it in a mix  
1851 with coal burning power plant reduce carbon emissions and  
1852 improve efficiencies, and yet under this legislation you  
1853 couldn't do that. It wouldn't count. Let me move on to  
1854 hydro. Is hydro renewable or not?

1855 Mr. {Chu.} Hydro power is renewable.

1856 Mr. {Walden.} Can you give me the scientific reason for  
1857 why hydro power prior to 2001 is not renewable in this  
1858 legislation?

1859 Mr. {Chu.} I think whether it is included in this  
1860 legislation or not just like the definition of biomass is not  
1861 a scientific question.

1862 Mr. {Walden.} Okay. I agree. So there is no  
1863 scientific reason. It is a political reason.

1864 Mr. {Chu.} I think the issue here with hydro power one  
1865 wants to encourage new forms of renewable--

1866 Mr. {Walden.} Okay. Let me go to that. Page 11, new  
1867 forms. It says the hydroelectric project installed on the  
1868 dam is operated so that the water surface elevation at any  
1869 given location and time that would have occurred in the  
1870 absence of the hydroelectric project is maintained subject to  
1871 license, et cetera, et cetera. Now my understanding, we have  
1872 a lot of wind energy in my district. All this energy is with  
1873 the hydro system being able to store water when the wind is  
1874 blowing and be able to balance out the load. This is  
1875 Bonneville Power. Apologies to my colleagues here. This is  
1876 wind energy 1,000 megawatts that dropped to 0. This is the  
1877 hydro system. Now is there any way that new hydro could be  
1878 used to balance out wind energy if the pool level cannot be  
1879 modified?

1880 Mr. {Chu.} Actually, I think that the--especially in  
1881 Oregon and with Bonneville Power Administration, this is  
1882 something I heartily not only support but am encouraging them  
1883 to look at pump storage as a method of storing wind energy.

1884 Mr. {Walden.} Right. And I don't have any problem with  
1885 that. I think it is great but you are going to store that

1886 behind some dam, right?

1887 Mr. {Chu.} That is correct.

1888 Mr. {Walden.} You are going to affect the level  
1889 somewhere, aren't you, if you have hydro, if you had a hydro  
1890 facility? Could we meet this definition that says at no time  
1891 and in no location behind a facility that the water level  
1892 could change because you added hydro? How would you read  
1893 that?

1894 Mr. {Chu.} Well, I must confess I am not familiar with  
1895 this particular part of the--

1896 Mr. {Walden.} Page 11. And with all due respect, I am  
1897 going to move on because I only have 40 seconds. Back to Ms.  
1898 Jackson. In your EPA evaluation of the cost of this  
1899 legislation, you only included, if I heard you correctly, the  
1900 cap and trade provisions, correct, in your analysis?

1901 Ms. {Jackson.} Correct. EPA was asked to model the  
1902 impact of the cap and trade.

1903 Mr. {Walden.} Okay. So in your model since I have not  
1904 had a chance to read through it, what percentage do you  
1905 allocate to auction, what percent were allocated credits, and  
1906 what cost per ton of carbon did you factor in your model?

1907 Ms. {Jackson.} The allowance price that came out of  
1908 EPA's analysis in 2012 is \$12 to \$15 a ton, \$17 to \$22 a ton  
1909 in 2020. And I forgot the other part of your question.

1910 Mr. {Walden.} Percent of auction and percent of  
1911 allocation.

1912 Ms. {Jackson.} The model did not, I believe, I can  
1913 double check this for you, but I don't believe that question  
1914 needed to be answered in order for the modeling to occur. I  
1915 will double check.

1916 Mr. {Walden.} Because that hasn't been answered in the  
1917 draft text either.

1918 The {Chairman.} The gentleman's time has expired.

1919 Mr. {Walden.} Thank you, Mr. Chairman. I thank the  
1920 witnesses.

1921 The {Chairman.} Ms. Capps.

1922 Ms. {Capps.} Thank you, Mr. Chairman. I want to just  
1923 take a second to continue for my friend, Mr. Walden, from  
1924 Oregon. I grew up in the shadows of Grand Coulee Dam and we  
1925 do have a lot of hydro energy in this country, and I know  
1926 this discussion is what we should be doing this as a draft  
1927 bill. My thought would be that if we counted everything we  
1928 already have it would less incentivize us to go forward, and  
1929 this legislation, I would hope, from my reading of it is  
1930 something that we want to push us forward, and then at some  
1931 point we will have a debate about what counts from what we  
1932 already have just for starters.

1933 As the 39<sup>th</sup> Earth Day was celebrated on Sunday in my

1934 district, there was a lot of enthusiasm and anticipation that  
1935 this year could mark a big turning point, that we are finally  
1936 addressing in a very significant way some longstanding energy  
1937 issues and the challenge now of global warming. A question  
1938 quickly for each of the 3 of you. Secretary Chu, one of the  
1939 important features of the discussion draft is that it is a  
1940 very comprehensive approach to our energy problems and one  
1941 title devoted to clean energy, deployment which will help us  
1942 win the race against China and other countries to establish  
1943 leadership in clean energy technology. Title 2 on energy  
1944 efficiency, a huge title also, and Title 3 that sets up a  
1945 system to reduce global warming pollution and hold energy  
1946 companies accountable. And, finally, a title seeking to  
1947 protect consumers as well as our industries as we transition  
1948 to this new energy policy huge shift in the 21<sup>st</sup> century.

1949 A lot of people have been arguing that this is taking on  
1950 so very much, that this comprehensive approach is way too  
1951 much, that we should parse these out. Can you give us a  
1952 brief but compelling reason why it is important to address  
1953 these in a comprehensive way?

1954 Mr. {Chu.} I think it is because again going back to  
1955 what the President has said. We have been doing this  
1956 piecemeal for decades, and, quite frankly, because there are  
1957 going to be trade offs here, there, and everywhere, so I

1958 commend this committee and the chairman on actually moving  
1959 forward with a comprehensive bill. This is what the country  
1960 needs.

1961 Ms. {Capps.} Thank you very much. Administrator  
1962 Jackson, the recent endangerment finding is showing that  
1963 greenhouse gases indeed do threaten the public's health and  
1964 welfare. And, you know, despite our very best efforts in  
1965 this bill and other legislation as well, the climate is  
1966 changing, has caused effects and will despite these efforts  
1967 continue to do so, and that is why--I am a public health  
1968 nurse by background, and I am committed along with you and  
1969 others to ensuring that this legislation helps the American  
1970 public and also helps developing countries adapt to the  
1971 public health impact of climate change. I actually have some  
1972 legislation to introduce separately on this topic. What are  
1973 some significant and targeted investments such as monitoring,  
1974 planning, education, and so forth that would ensure that we  
1975 promote and protect public health in a changing climate?

1976 Ms. {Jackson.} Well, one of the easiest investments  
1977 that can be made is communities or governments investing in  
1978 heating centers or places that protect people from extremes  
1979 of climate. If we are looking at warming in areas, we have  
1980 seen the impact, literally deaths, that happen in heat waves,  
1981 and one of the ways that can easily be addressed is by making

1982 climate centers or comfort centers. You see that especially  
1983 in urban areas. And on top of that, I think you mentioned  
1984 education. First, public health professionals are on the  
1985 front line of this so I thank you for your work, and  
1986 educating people about how to deal with changes in the  
1987 climate and how to, if they have health effects that are  
1988 going to be exacerbated by that how to be aware and alert,  
1989 not unlike we do with ozone alert days making them understand  
1990 what is coming so that they take care of themselves is  
1991 probably one of the first ways to keep you from having to  
1992 take care of them first.

1993 Ms. {Capps.} Thank you. Thank you so much, and there  
1994 is more to come, I know. But, finally, Secretary LaHood, our  
1995 former colleague, the average person in the United States now  
1996 spends about 20 percent of their income per month on  
1997 transportation largely on maintaining and driving personal  
1998 vehicles. What are some specific ways this legislation will  
1999 help invest in people's ability to take more affordable low  
2000 carbon and transportation opportunities?

2001 Mr. {LaHood.} We think that there are opportunities to  
2002 develop a concept called livable communities where you  
2003 provide opportunities for people to get out of their  
2004 automobiles, they want to walk to work, ride their bike to  
2005 work, take a light rail to work, take a bus to work, and the

2006 model for this really is Portland, Oregon. They have done a  
2007 marvelous job in really creating an opportunity for people to  
2008 get out of their car and have opportunities. And we are  
2009 working with the Secretary of HUD in developing a program  
2010 that I hope can be included in the authorization bill of  
2011 transportation and also a program under HUD to really move  
2012 forward with livable communities and create some models  
2013 around the country and some pilots around the country to form  
2014 different alternatives to people just using their  
2015 automobiles.

2016 Obviously, the announcement the President made on high  
2017 speed rail, the work we are doing with transit districts  
2018 under the Economic Stimulus Bill for more buses, cleaner  
2019 buses, and the opportunities for light rail, we think this is  
2020 our opportunity in transportation and HUD to work with this  
2021 committee to create opportunities for people to use  
2022 alternatives other than automobiles.

2023 Ms. {Capps.} Thank you very much.

2024 The {Chairman.} Thank you, Ms. Capps. Your time has  
2025 expired. Mr. Terry.

2026 Mr. {Terry.} Thank you, Mr. Chairman. Mr. LaHood, my  
2027 first question is for you, and this is a parochial question  
2028 more than anything that has to do with cap and trade. But in  
2029 the stimulus bill to our metropolitan area transit company

2030 buses, all we get is buses. We don't get rail in our area.  
2031 We are only a metropolitan area of 700,000 so we don't  
2032 qualify. Our bus company is trading out their older diesel  
2033 for just a newer brand diesel, not a cleaner energy, not  
2034 natural gas. Is that the intention of the stimulus dollars  
2035 is just to let them trade out different one piece of diesel  
2036 equipment for another piece of diesel bus?

2037 Mr. {LaHood.} The transit portion of the Economic  
2038 Recovery Plan is our ability to work with transit districts  
2039 around the country that want to buy new vehicles, build  
2040 facilities whether they be bus facilities or bus shelters or  
2041 facilities where--

2042 Mr. {Terry.} So the energy efficiency aspect isn't a  
2043 criteria?

2044 Mr. {LaHood.} I visited a bus company in St. Cloud,  
2045 Minnesota, and the orders for these buses are way, way up.  
2046 If they are building--

2047 Mr. {Terry.} But I just want to know if energy  
2048 efficiency or clean energy is part of the criteria. I  
2049 thought this was a softball question. I didn't know it was  
2050 difficult.

2051 Mr. {LaHood.} Our people in the Federal Transit  
2052 Administration are encouraging transit districts to buy fuel  
2053 efficient buses for their transit districts.

2054 Mr. {Terry.} Okay. I appreciate that. Dr. Chu, real  
2055 quick, this isn't even a question, just my rhetoric, but you  
2056 said in your opening statement that you know coal is going to  
2057 continue to be an energy source but we hear statements about  
2058 cap and trade being used as a tool to force out coal as a  
2059 fuel and even President Obama said when he was campaigning  
2060 that under my plan of cap and trade system the electricity  
2061 rates would necessarily skyrocket so if somebody wants to  
2062 build a coal plant they can. It is just that it will  
2063 bankrupt them because they are going to be charged a huge sum  
2064 for all of the greenhouse gas that is being emitted. So you  
2065 can see when the President makes statements like that that  
2066 there is some cynicism when we hear about, well, coal is  
2067 still going to be a fuel.

2068 Now, Administrator Jackson, does setting the rate at \$11  
2069 or \$12 per ton of CO2 meet the Administration's goal of  
2070 bankrupting coal fired plants? Does that meet their goal?

2071 Ms. {Jackson.} The Administration has no goal that is  
2072 nefarious for coal. The President is on TV in ads. I see  
2073 him talking about clean coal and how clean coal is crucial  
2074 not only for the environment but to create jobs and make coal  
2075 which is right now 50 percent--

2076 Mr. {Terry.} I am going to interrupt because I only  
2077 have a minute, 45. Methane is a greenhouse gas that is in

2078 here, and it is reported that methane is going to be  
2079 calculated at a time of 25 times the potency of CO2. Can you  
2080 point me to a scientific study that says methane is 25 times  
2081 more potent than CO2 as a greenhouse gas?

2082 Ms. {Jackson.} I would be happy to give you scientific  
2083 backup for that statement.

2084 Mr. {Terry.} I would appreciate that. Last, in regard  
2085 to methane, what industry do we have in the United States  
2086 that has to worry about methane emissions?

2087 Ms. {Jackson.} Well, methane is natural gas, CH4, so  
2088 the natural gas industry obviously if any leaks in many  
2089 states addressing leakage from natural gas pipelines is one  
2090 very quick and important way. The other are landfills,  
2091 landfills gases in our country. As food waste decays, as  
2092 organic waste decays it makes methane. And previously that  
2093 has been vented--

2094 Mr. {Terry.} What is the largest emitter of methane gas  
2095 in the United States?

2096 Ms. {Jackson.} It may well be livestock.

2097 Mr. {Terry.} Welcome to Nebraska, the cattle state.  
2098 Okay. Is it then the EPA's plan to start regulating the  
2099 methane from cattle emissions?

2100 Ms. {Jackson.} EPA has no plans to regulate cattle  
2101 emissions.

2102 Mr. {Terry.} But there is nothing in this bill that  
2103 exempts cattle?

2104 Ms. {Jackson.} This bill takes regulation of greenhouse  
2105 gases for sources into this bill away from the Clean Air Act,  
2106 and it is the Clean Air Act threat where people have spun  
2107 these ridiculous notions of EPA taxing cows or regulating--

2108 Mr. {Terry.} Well, that has been stated by publicly  
2109 elected officials from Congress so it is not spun stories.  
2110 But the point is about if nothing is in this bill that  
2111 exempts the cattle industry, won't cattle have to be  
2112 regulated?

2113 Ms. {Jackson.} I do believe there is an exemption but I  
2114 will check on that. Obviously, this discussion draft it  
2115 meant to make sure those interests are protected.

2116 The {Chairman.} Just on that point for the gentleman's  
2117 information only very large sources are covered by this and  
2118 there is a specific exemption for what would be considered  
2119 cattle. We now go to Ms. Harman.

2120 Ms. {Harman.} Thank you, Mr. Chairman. I recall in the  
2121 last century when Ray LaHood and I had offices next to each  
2122 other in the back of the back of the Cannon Office Building.  
2123 Mine at least was contiguous space. His was divided by some  
2124 kind of a construction barrier. My guess is that his digs  
2125 have improved. I would like to welcome this panel and say

2126 how impressed I am by your credentials and experience on this  
2127 issue. You can play a big role in guiding us, helping us,  
2128 and helping the Administration to fashion the right  
2129 legislation, the right comprehensive legislation on climate  
2130 change. I want to hold up my regular prop which is the USCAP  
2131 blue print for legislative action. USCAP is testifying in  
2132 the next panel, but I want to say how impressed I am that a  
2133 diverse group of industry and environmental representatives  
2134 has developed a consensus on basic principles, and then how  
2135 impressed I am that this committee has used this as the basis  
2136 for the bill.

2137 I just want to ask you briefly to comment on whether you  
2138 agree that USCAP has played an important role here and  
2139 whether you agree that these consensus principles which are  
2140 not partisan are a very useful starting point. Let us start  
2141 with Ray LaHood.

2142 Mr. {LaHood.} I am going to defer to these other two  
2143 folks but I know from discussing this with staff that they  
2144 have played a very valuable role.

2145 Ms. {Harman.} Thank you. Dr. Chu.

2146 Mr. {Chu.} My understanding is that document says--I  
2147 haven't read it in detail, but my understanding is that  
2148 document says that 14 to 20 percent reduction in carbon  
2149 emission by 2020 is economically possible to the United

2150 States, so that statement alone coming from industry is a  
2151 very powerful statement.

2152 Ms. {Harman.} Secretary Jackson.

2153 Ms. {Jackson.} I certainly agree with my colleagues.

2154 Ms. {Harman.} Thank you. Now, Dr. Chu, welcome to a  
2155 fellow Californian. Your experience in California is very  
2156 valuable to those of us from California, but I think also to  
2157 this effort since California, as everyone here knows, has  
2158 been the leading state in terms of strict environmental  
2159 regulation. There was a New Yorker article in December  
2160 entitled Note to Detroit, Consider the Refrigerator. And  
2161 this is a story by you, little profile, little picture of you  
2162 here, and the experience of California which set out to  
2163 regulate the efficiency of refrigerators. Of course, the  
2164 industry objected but then, guess what, engineers rather than  
2165 lobbyists figured out whether compliance was possible and now  
2166 lo and behold the size of the average American refrigerator  
2167 has increased by more than 10 percent while the price in  
2168 inflation adjusted dollars has been cut in half.

2169 Meanwhile, energy use has dropped by two-thirds. I tell  
2170 this story, Dr. Chu, because you had a role in this. You  
2171 talked about it. In this bill in the efficiency sections we  
2172 have some new bipartisan standards on regulating the  
2173 efficiency of outdoor lighting, and we also have a cash for

2174 clunkers provision which would encourage folks to trade in  
2175 old clunker refrigerators and appliances, trade them in, get  
2176 ride of them, not plug them in in the basement, in exchange  
2177 for efficient appliances. And I just welcome your thoughts  
2178 and thoughts by anyone else on the panel about these  
2179 provisions and the experience that California has had  
2180 regulating the efficiency of appliances.

2181       Mr. {Chu.} Well, the refrigerator story is one of  
2182 several stories but in fact the efficiency has gone up so  
2183 that the present day refrigerators are using one-quarter of  
2184 the energy they used in 1975. In fact, it was the  
2185 anticipation of regulations, the regulations didn't start for  
2186 several years, but as soon as the manufacturers realized that  
2187 they couldn't go to either party that both parties in  
2188 California strongly supported these regulations the  
2189 efficiency immediately started improving. The reason the  
2190 price went down inflation adjusted by a factor of 2 was  
2191 because the better insulation and the smaller compressor of  
2192 the refrigerator led to a reduction in the price.

2193       Now I cannot emphasize how important this was. If you  
2194 look at the energy saved today, we have roughly 150 million  
2195 refrigerators, the energy we are saving today relative to the  
2196 1974 standards are actually more energy saved than all of the  
2197 wind and solar energy we are now producing in the United

2198 States, just refrigerators alone. And so we can do similar  
2199 dramatic improvements in building efficiencies,  
2200 transportation. Building efficiencies can be even a bigger  
2201 success story than refrigerators.

2202 Ms. {Harman.} Any other comments?

2203 Mr. {Chu.} Well, I can go on and on.

2204 Ms. {Harman.} No. I was asking the others, Secretary  
2205 Jackson.

2206 Ms. {Jackson.} Well, he is certainly the expert, but I  
2207 think that story is repeated over and over again that often  
2208 times the movement toward regulation and the call for  
2209 national standards unlocks innovation. I am an engineer, you  
2210 know unlocks engineers to move to where the market is going  
2211 to be and unlocks the private sector investment to do it. We  
2212 have seen it with cars. We have seen it with the phase out  
2213 of gases that affect the ozone layer. Every time we have a  
2214 challenge once we make up our mind we are going to do it  
2215 innovation kicks in and makes it a lot cheaper and quicker.

2216 Ms. {Harman.} Thank you so much. My time has expired.  
2217 I just add that we are now seeing it with indoor lighting  
2218 which this committee regulated a couple years ago and  
2219 California is moving on to clunker television sets. Thank  
2220 you, Mr. Chairman.

2221 The {Chairman.} Thank you, Ms. Harman. Mr. Rogers.

2222 Mr. {Rogers.} Thank you, Mr. Chairman. You know, one  
2223 of the things Ms. Harman and I are working together on an  
2224 incentive program to get us there, and when you look at the  
2225 places where we provided incentives the market kicks in  
2226 faster, cheaper, better. And I get a little worried that  
2227 this is a huge government mandated program that is very  
2228 complicated. Who is involved in the trading? Who actually  
2229 determines at the end of the day what the value of CO2 or  
2230 methane is? How do you quantify it? So a lot of the jobs we  
2231 are talking about are going to be folks who aren't really  
2232 producing anything but they are going to be living on the  
2233 backs of those who are producing something because the  
2234 government mandated a system that really hasn't been flushed  
2235 out all that well.

2236 And I would hope that we would stop and pause for a  
2237 minute and try to find ways to incentivize people. I had a  
2238 bill in 2006, an energy star system for servers, computer  
2239 servers, because the largest growing energy use in the United  
2240 States at that time were server parts. And lo and behold  
2241 built on an incentive system, it has radically changed the  
2242 way--now they advertise on those servers which are the most  
2243 efficient servers, and it changed the way. If you talk to  
2244 the people in the industry, they say it absolutely changed  
2245 the way we buy, produce, sell servers. Fantastic. We didn't

2246 mandate anything. And it concerns me for a couple of  
2247 reasons.

2248         And I wanted to talk to the Secretary for a minute. I  
2249 come from Michigan. Nobody is hurt more in this economy than  
2250 we are, and to say that this Administration has done more for  
2251 the car companies than anyone else is a bit shocking to us  
2252 who live there. And I will give a couple examples. They  
2253 went in and the guy who cut the work force from General  
2254 Motors in half got concessions from the union, produced the  
2255 Car of the Year last year, the CTS Cadillac, oh, by the way,  
2256 produced the Car of the Year, the Malibu, both of which are  
2257 built in my district, by the way, this year. The government  
2258 came in and said you got to go, you are fired, oh, and take  
2259 the board with you and you have 30 days for a viability plan.  
2260 That is pretty hard to recover from when you are going  
2261 through all of those tough times.

2262         And, oh, by the way, they have more cars that get over  
2263 30 miles to the gallon than any other car company period in  
2264 the world. The government didn't do that. They did that.  
2265 The Chevy Volt, which Mr. Dingell so aptly talked about will  
2266 revolutionize the way we think about commuting and how we  
2267 power our cars. It is the first time it is an electric  
2268 driven engine that is charged by gasoline versus the other  
2269 way around, which really radically departs even from hybrid

2270 technology, very exciting. Billions and billions of dollars  
2271 of research, decades, they were ahead of the curve. And what  
2272 do we do? We come to this committee and kick them around.

2273 They finally the attention of the American people. Really?

2274 In 2007 they mandated \$80 billion in cost on these car  
2275 companies. Gasoline went to \$4.50 and they are struggling to  
2276 make it and we are losing jobs as fast as we can count them.  
2277 So be careful when you tell us that. The proposal for cap  
2278 and tax will raise the energy rates for producing everything  
2279 in the United States of America. Secretary Chu, you  
2280 mentioned that, gee, if we raise the rates of gasoline it is  
2281 going to hurt average Americans. Absolutely right. If we  
2282 dramatically raise the rates of electricity, we will not be  
2283 competitive when it comes to building anything in the United  
2284 States. It is an attack on the middle class.

2285 It is an absolute slap in the face to everybody that got  
2286 up and built good cars or they built houses or they got in  
2287 their car and drove somewhere to build something of use in  
2288 the United States. And guess what India said this week?  
2289 They are not going to play along. Go ahead, United States,  
2290 make yourself uncompetitive because we have got lots of  
2291 mouths to feed and we would love to be the new center of the  
2292 middle class in the next several hundred years. I am just  
2293 shocked that you would say that about a company who has done

2294 so much to survive and will lead the way in 2011 when that  
2295 Chevy Volt rolls off the line. Also, in the new proposal  
2296 there is an inventory tax increase. And if you produce  
2297 anything in a just in time manufacturing system, you are  
2298 going to be hurt by this inventory tax increase so  
2299 manufacturers are going to take it on both ends of this.

2300 That is very frustrating to those of us who represent  
2301 lots of people who believe that the middle class is  
2302 important. I had questions but the fact that you stand  
2303 before us and tell us that you have done more for the  
2304 automobile companies than any other administration, as you  
2305 can tell put a burr under my saddle. We certainly don't  
2306 think so, and we would hope that you would look at every job  
2307 lost. You talk about green jobs created. You forgot to tell  
2308 us how many manufacturing jobs go overseas, and we know there  
2309 is a bunch of them. So, Mr. Chairman, I would argue we  
2310 better go slow and we better worry about the middle class in  
2311 this country that is quickly evaporating because of all of  
2312 the weight and burden we are putting on their ability to  
2313 produce anything in the United States.

2314 Mr. {Markey.} [Presiding] The gentleman's time has  
2315 expired but, Secretary LaHood, if you would like to make a  
2316 comment, we would allow you to do so. Thank you. The chair  
2317 recognizes the gentleman from Washington State, Mr. Inslee.

2318           Mr. {Inslee.} Thank you. I am from Washington. I just  
2319 want to tell you I got some constituents who are so happy you  
2320 3 are here today. They have been waiting for you to get to  
2321 Washington, D.C. The obvious one is Dennis Hayes, one of the  
2322 two co-founders of Earth Day, but the non-obvious ones are  
2323 the people at the Sapphire Energy Company, which are  
2324 developing algae based biofuels which have 0 net CO2  
2325 emissions, the people at Infinia in Washington that have  
2326 developed a sterling engine based solar power system, the  
2327 people at AltaRock in North Seattle which are developing one  
2328 of the world's leading engineer geothermal systems, the  
2329 people at McKinstry that is the world leading energy  
2330 efficiency contractor really probably in the world, the  
2331 Better Place people that are developing an electrical  
2332 infrastructure for electric cars, the Ramgen company in  
2333 Bellevue Washington, which has developed a way to sequester  
2334 CO2 so we maybe can use coal cleanly and create hundreds of  
2335 jobs in this country. These people are thrilled that you are  
2336 here to promote these job creation exercises.

2337           Now we have heard on many occasions people have said  
2338 that President Obama said that this was going to be bad for  
2339 the economy some time. I have heard him say repeatedly that  
2340 in fact this bill is going to grow jobs and ultimately be  
2341 good for the economy. I think this bill has been quite well

2342 balanced because it speaks to multiple technologies and  
2343 multiple ways to create jobs. It hasn't just picked  
2344 favorites. Is that a fair assessment of this? I will just  
2345 ask Dr. Chu that.

2346 Mr. {Chu.} Yes, it is a fair assessment. I would also  
2347 want to emphasize that it is looking towards the future. To  
2348 use a sports analogy, when Wayne Gretzky was asked how come  
2349 he was such a mortal hockey player he said because I skated  
2350 to where the puck will be, and I think this bill actually  
2351 brings that--it positions America to go to the future and for  
2352 the jobs of the future.

2353 Mr. {Inslee.} I want to ask you about the low carbon  
2354 fuel standard. I think an important portion of this bill  
2355 that will promote the development of low carbon emitting  
2356 fuels. We have tried to address this so that it is  
2357 consistent with the other parts of the bill or other  
2358 regulatory systems. For instance, it does not kick in  
2359 effectively until the renewable fuel standard essentially  
2360 expires so we have tried to tailor it in a careful fashion.  
2361 It also really drives on the European experience that a cap  
2362 and trade bill while very important is not the only game in  
2363 town, and I think their experience is you have to take  
2364 multiple approaches to this big challenge, not just a cap and  
2365 trade system. I just wonder if you have any comments, either

2366 Dr. Chu or Secretary Jackson, in that regard.

2367 Ms. {Jackson.} I absolutely agree that the design of  
2368 the discussion draft is such that it phases the low carbon  
2369 fuel standard in after the renewable fuel standards that are  
2370 authorized also by a law of Congress are done. And I could  
2371 not agree more that experience has shown that a cap and trade  
2372 program while an extremely powerful tool to harness the kind  
2373 of private capital that you just referenced in your opening  
2374 remarks and certainly that is the key. The key is to make  
2375 those who are investing in green energy future able to do it  
2376 in a way that they know with certainty that this country is  
2377 turning its gaze towards that. It makes the private sector  
2378 full partners in the game, and I think it is part of why  
2379 USCAP--it is not just the big companies of USCAP who have  
2380 done extraordinary thinking on this in partnership with NGOs,  
2381 but also the smaller folks.

2382 Mr. {Inslee.} Thank you. I will take that as an  
2383 answer. I do want to ask one more question. The longer I  
2384 look at this, it becomes apparent that our ability to really  
2385 maximize these clean resources of solar and wind and  
2386 hydrokinetic and the like depends on the development of a  
2387 grid system fit for this century which we do not have today.  
2388 I think one of the great quotes I have heard is that the bad  
2389 news is that Thomas Edison would recognize our grid system.

2390 This is not really a salutary remark. One of the things I  
2391 hope we can work on in the development of this bill is a way  
2392 to increase the ability to cite increased transmission  
2393 systems so that we can access the solar in the southwest and  
2394 the wind in the Midwest and the off shore wind and the  
2395 hydrokinetic to move it where we need it, but we have some  
2396 proposals to try to have back stop authority for the federal  
2397 government to assist the siting of transmission in the event  
2398 that we can't do it through sort of the typical channels.  
2399 Would you encourage us in that regard? Any comments you  
2400 have, I would appreciate it. Dr. Chu, perhaps you want to--  
2401 Mr. {Chu.} I would encourage you to try to develop  
2402 this. I think you are quite right. As we go forward and  
2403 develop renewable energy that we have to concurrently develop  
2404 a new transmission system that can handle that. The fact  
2405 that wind and solar are variable means that you have to have  
2406 a much more robust system that is able to port energy very  
2407 rapidly from different parts of the country, so increased  
2408 siting authority is one element. It can't be the only  
2409 element because after all just with increased siting  
2410 authority alone, I think there has to be other elements that  
2411 would help encourage the states and local areas to allow  
2412 that, but is a very important part of our way into the  
2413 future.

2414 Mr. {Inslee.} We hope you will continue to encourage us  
2415 all. Thanks very much.

2416 The {Chairman.} Thank you, Mr. Inslee. Ms. Blackburn.

2417 Ms. {Blackburn.} Thank you, Mr. Chairman. Thank you  
2418 all for your patience this morning. Ms. Jackson, I wanted to  
2419 talk with you a little bit about your pronouncement of  
2420 regulating CO2 under the Clean Air Act and that you could do  
2421 that or the agency could do that with or without Congress and  
2422 our consent, and I would like to know what your time table  
2423 is. How do you see the agency moving forward on that  
2424 regulation?

2425 Ms. {Jackson.} I would certainly like to just clarify  
2426 that. It is not with or without Congress' consent. It is  
2427 actually the Clean Air Act, the law passed by Congress and  
2428 signed by the President, that compels us to and the Supreme  
2429 Court's interpretation of the Clean Air Act that compelled  
2430 EPA to make a finding, and it is a proposed finding. As far  
2431 as time table, that time table starts with the proposal and a  
2432 60-day public comment. If it is finalized, and presuming it  
2433 is finalized regulatory action would proceed after that. The  
2434 history of the Clean Air Act, which is a good guide, is that  
2435 proposed regulations under that Act take months to propose  
2436 and, you know, after that the process--

2437 Ms. {Blackburn.} Okay. Let me ask you this then. With

2438 whatever emission standard that you use in that as you go  
2439 through that period, will sectors of the economy such as Mr.  
2440 Terry was talking about farming, and we all have great  
2441 concerns about farming. Right now, building construction, we  
2442 have tremendous concerns about that. Are they going to be  
2443 forced to meet that standard? What do you see coming out at  
2444 us through that?

2445 Ms. {Jackson.} If there is regulation under the Clean  
2446 Air Act in the future, if that happens, EPA would move as it  
2447 does on other regulations to look at the largest sources  
2448 first, and in our economy the largest sources of greenhouse  
2449 gases are mobile sources, automobiles, and trucks, and then  
2450 the large stationary sources, especially the power generation  
2451 sector, so I think we could expect that if there were  
2452 regulations that would be where EPA's first regulatory  
2453 actions would be. And, again, I don't believe we would ever  
2454 get to the small sources. I think those discussions are  
2455 really being made to scare people with a very unlikely future  
2456 instead of focusing on the big issue which is cars and power  
2457 generation.

2458 Ms. {Blackburn.} So you see it affecting cars. Would  
2459 you apply that also to this bill in addition to your actions  
2460 under the Clean Air or your proposed actions under the Clean  
2461 Air Act, would you look at the bill and say the same thing

2462 that you would focus more on the large items such as  
2463 transportation rather than farming and home construction?

2464 Ms. {Jackson.} As the drafter pointed out, as the  
2465 Chairman pointed out, actually the bill says that regulations  
2466 would be for those large sources over--

2467 Ms. {Blackburn.} Okay. Let me come to Mr. LaHood then.  
2468 And, Mr. Secretary, I would just like to ask you when you  
2469 look at the low carbon fuel standard in the bill. What do  
2470 you see that doing to prices at the pump if the focus is  
2471 going to be on the large sectors like transportation fuels?  
2472 What do you see that doing to the price at the pump?

2473 Mr. {LaHood.} Well, I wouldn't have any idea. I don't  
2474 know if Dr. Chu would or not. I simply don't know the answer  
2475 to that.

2476 Ms. {Blackburn.} Okay. Dr. Chu, any comment?

2477 Mr. {Chu.} It will increase the price at the pump but  
2478 the other issue is that also in this bill what we are  
2479 focusing on is trying to hold transportation costs the same  
2480 and so this is also we are encouraging higher mileage  
2481 vehicles, things of that nature. And depending on how this  
2482 committee working with the Administration works the  
2483 allocations the impact on the American people for the total  
2484 cost of living we hope to be as moderate as possible.

2485 Ms. {Blackburn.} So, in other words, you all see this

2486 as increasing the cost to the American consumer, the price at  
2487 the pump and the price of electric power generation?

2488 Mr. {Chu.} We see this as shifting costs so that what  
2489 happens as we return the allocations back to the American  
2490 public and to the energy sectors that would be most adversely  
2491 affected that the overall cost of living, if you will, which  
2492 is the essential thing, plus the fact that we are  
2493 aggressively moving towards higher efficiency, higher  
2494 efficiency cars, higher efficiency homes that those costs  
2495 actually could be held constant.

2496 Ms. {Blackburn.} Okay. Mr. Chu, let me ask you this  
2497 about the renewable energy, the 20,000 megawatts of renewable  
2498 energy that would need to come on line every year in order to  
2499 meet the 2025 deadline at the 25 percent renewable energy  
2500 standard. Do you think that that is a realistic goal?

2501 Mr. {Chu.} Yes, it is.

2502 Ms. {Blackburn.} And then how did you come to that  
2503 conclusion?

2504 Mr. {Chu.} Well, actually in the following way. I  
2505 actually asked the EIA for an analysis several weeks ago, and  
2506 that we did is we took a base line of where we saw the base  
2507 line going. Then we added to it the stimulus, the Economic  
2508 Recover Act, which actually accelerates the deployment of  
2509 renewable energy. Also, in the provision of the bill there

2510 are small power producers, for example, a university that has  
2511 a cogent plant in a small town, you take those off. You  
2512 don't want this university to have a renewable portfolio.  
2513 You take that off the mix from the 25 percent. It decreases  
2514 the target by about 3 percent. Depending on whether  
2515 efficiency is going to be worked into this bill to take  
2516 another 5 percent off, you are now talking about a difference  
2517 of doing nothing and the 25 percent target as something on  
2518 the scale of 5 or 6 percent additional beyond what the  
2519 country--what the EIA projects the country is doing, so it is  
2520 actually quite a reasonable bill in my opinion.

2521       The {Chairman.} The gentlelady's time has expired. Mr.  
2522 Matheson.

2523       Mr. {Matheson.} Thank you, Mr. Chairman. I welcome the  
2524 panel here. And, Secretary Chu, maybe following up on the  
2525 discussion with Mr. Inslee, I know when I had a chance to see  
2526 you a few weeks ago, we had a brief discussion about the  
2527 electric transmission issue about the need for finding ways  
2528 to encourage greater investment and greater beefing up of  
2529 that infrastructure. You had mentioned you had been having  
2530 discussions, I think, with EIA and others about this. This  
2531 draft probably needs to be beefed up on its transmission  
2532 section. Do you have thoughts about how we should be looking  
2533 at that issue and things we should incorporate in this draft

2534 bill in terms of encouraging investment in our transmission  
2535 grid?

2536 Mr. {Chu.} Well, I am looking forward to actually  
2537 working with the committee on this. Let me also say that not  
2538 only the Department of Energy but Department of Interior,  
2539 Agriculture, CEQ, have been meeting regularly. We have now  
2540 regularly scheduled meetings in trying to formulate what we  
2541 should be doing in terms of transmission and distribution.  
2542 And so it is very much on our mind because as I said before  
2543 this is a very necessary part of moving the country forward.  
2544 We have somewhat old-fashioned energy and distribution  
2545 system. It is divided into vertically organized utility  
2546 companies, RTOs, ISOs, and in the past what happened is that  
2547 these various sectors look out and they try to make the best  
2548 judgments they can within their realm of responsibility.

2549 And what that has led to is we don't have something that  
2550 serves the nation in the best possible way, that we have  
2551 incredible renewable energy resources, but they are  
2552 distributed geographically across the country so I think  
2553 anything that can help the siting, anything that can help get  
2554 the states and the local communities to say, yes, this is a  
2555 necessary part of the development of the United States would  
2556 be very appreciative.

2557 Mr. {Matheson.} I think there is broad consensus that

2558 we need to look at transmission policy in this Congress, and  
2559 I am pleased to hear you are meeting with these other  
2560 agencies. I think any input that you could offer us for  
2561 legislative action to help move that forward, I think would  
2562 be appreciate by all of us. The next question I want to ask  
2563 you, Secretary Chu, if I could, one of the struggles, I  
2564 think, that I am having right now with putting this whole  
2565 bill together is that we have had hearings on specific issues  
2566 for 2-1/2 years, and now we are trying to look how it all  
2567 looks as one package. And the concept of cap and trade is  
2568 that there is going to be a market base set of incentives to  
2569 meet the cap, and that is the driver to let the market place  
2570 figure out the most efficient ways to go about doing this.

2571         And yet there are a number of other sections of the bill  
2572 where Congress goes in and specifically says, okay, on this  
2573 technology we want to encourage it in this way and for that  
2574 technology, that issue, we want to encourage it that way.  
2575 And it is hard to find the right mix for how much Congress  
2576 should get into those individuals or not. For example,  
2577 carbon capture and sequestration, I think it is appropriate  
2578 that we got to encourage that with the carbon capture  
2579 sequestration of this bill. Have you thought about the  
2580 context of this bill where we have a renewable portfolio  
2581 standard, we have the energy efficiency standard, we have a

2582 lot of different components of the bill that are trying to  
2583 achieve lower carbon emissions, but it is under this broad  
2584 category of cap and trade.

2585           And should we--do you have concern about is Congress  
2586 overly prescribing what we should do as opposed to the cap  
2587 and trade mechanism that allows the market place to make  
2588 those decisions?

2589           Mr. {Chu.} I think I will agree with you. Overall the  
2590 cap and trade allows--it actually incentivizes the United  
2591 States industry to look for lower carbon solutions. However,  
2592 it is not going to start until 2012. It is going to have to  
2593 ramp up. We need to give industry and consumers time to  
2594 adjust. And so I view, for example, the renewable  
2595 electricity standard as a different tool that is also  
2596 necessary because a renewable electricity standard then  
2597 creates a market place, a guaranteed market place, for things  
2598 like wind, solar, new geothermal, the river hydro, things of  
2599 that nature. And that guarantees the market place so if I  
2600 were an investor and said do I want to invest tens to  
2601 hundreds of millions of dollars, will I have a market for  
2602 that?

2603           Mr. {Matheson.} Do you think no carbon emission coal  
2604 production should be included in that mix then in terms of  
2605 encouraging investors?

2606 Mr. {Chu.} I think the overall goal should be to  
2607 encourage all forms of no or very low carbon emissions, but I  
2608 would be glad to be working with the committee on these  
2609 issues. But just say that the renewable electricity standard  
2610 is a different mechanism that is somewhat orthogonal to cap  
2611 and trade. It is to create a market, to create a draw that  
2612 will guarantee the investors that they can actually have a  
2613 customer.

2614 Mr. {Matheson.} Thank you, Mr. Chairman.

2615 The {Chairman.} What was that word, octagonal?

2616 Mr. {Chu.} Pardon?

2617 The {Chairman.} You said a word that I didn't  
2618 understand.

2619 Mr. {Chu.} Oh, orthogonal. That means--sorry. It  
2620 means the carbon cap and trade is a way of overall globally  
2621 putting the real cost of energy into the market place and  
2622 letting the market then seek solutions. It is overall what  
2623 we need but in addition to that it is something that more  
2624 quickly stimulates investment in new technologies I think is  
2625 also needed so in that case it is not exactly the same thing  
2626 in a different way. It satisfies a different need.

2627 The {Chairman.} Thank you. Mr. Scalise.

2628 Mr. {Scalise.} Thank you, Mr. Chairman. Administrator  
2629 Jackson, in your opening statement you talked about the jobs

2630 that would be created, green jobs that would be created,  
2631 under a cap and trade bill. Can you quantify how many jobs  
2632 you estimate would be created under this legislation?

2633 Ms. {Jackson.} I believe what I said, sir, is that this  
2634 is a jobs bill and that the discussion jobs bill in its  
2635 entirety is aimed to jump start our moving to the green  
2636 economy.

2637 Mr. {Scalise.} And I think you quoted President Obama  
2638 saying that it was his opinion that this bill would create  
2639 millions of jobs. I think you used the term millions. Is  
2640 there anything that you can base your determination on how  
2641 many jobs would be created?

2642 Ms. {Jackson.} EPA has not done a model or any kind of  
2643 modeling on jobs creation numbers.

2644 Mr. {Scalise.} Because you did do the analysis, and  
2645 there are definitely a number of questions I have with the  
2646 assumptions that are made in your analysis. I wasn't sure  
2647 since you used the term a jobs bill in your opening  
2648 statement, I just wanted to know if you had anything to  
2649 quantify or back that up.

2650 Ms. {Jackson.} Well, I back it up on somewhat common  
2651 sense which is that if we are trying to move to a clean  
2652 energy economy, and we heard Secretary Chu talk about the  
2653 fact that the innovations that we come up with in this

2654 country are being used by other countries and manufacturing  
2655 is moving there. The rhetorical question is what is the plan  
2656 to keep them here and how do we convince the private sector  
2657 that we mean it, that we are going to be using the  
2658 technologies.

2659 Mr. {Scalise.} And this isn't something that you said,  
2660 some people in the Administration have claimed that there is  
2661 no alternative plan. That is not an accurate statement  
2662 because clearly there is an alternative plan that was  
2663 presented last year on comprehensive energy. There is one  
2664 that is being worked on this year on an alternative plan to  
2665 cap and trade that would create jobs, pursue alternative  
2666 sources of energy, but also make sure we don't lose the jobs  
2667 we have. And I think that has been a big concern raised by  
2668 many groups predicting the number of jobs and with the term  
2669 millions thrown around many industry groups have used the  
2670 term that millions of jobs would be lost, exported out of the  
2671 U.S. economy into countries like India and China. Do you  
2672 have any estimates on how many jobs will be lost by cap and  
2673 trade?

2674 Ms. {Jackson.} All I know--I am not a jobs expert. All  
2675 I know is that jobs have been lost and our economy is  
2676 hurting, and this is a plan to address that by moving a  
2677 manufacturing sector here that the world will need and that

2678 our country will need.

2679 Mr. {Scalise.} While you might not be a jobs expert,  
2680 you obviously are talking about and touting this bill as a  
2681 jobs bill. If you would claim that it would create jobs, are  
2682 you making an assumption that it won't lose any jobs, that no  
2683 jobs will be lost or if you don't make that claim, how many  
2684 jobs would you expect to be lost? Groups have made very  
2685 large claims. I mean the National Association of  
2686 Manufacturers claims our country would lose 3 to 4 million  
2687 jobs as a result of a cap and trade energy tax, so I just  
2688 wanted to know if you or any other members of the panel want  
2689 to answer that question.

2690 Ms. {Jackson.} I will go first and then I will turn it  
2691 over to the other panelists, but I know that lobbyists claim  
2692 large doomsday scenarios, quite deaths for businesses across  
2693 the country. That is what lobbyists said about the Clean Air  
2694 Act in 1990, and it didn't happen. In fact, the U.S. economy  
2695 grew 64 percent while this country cut acid rain by more  
2696 than--

2697 Mr. {Scalise.} So you don't think that there will be  
2698 job losses. You are saying those doomsday scenarios by those  
2699 groups--

2700 Ms. {Jackson.} I believe one of the tasks in moving  
2701 forward as this committee discusses is to figure out the cap

2702 and trade process and the other aspects of the bill can be  
2703 used to jump start and move us forward--

2704       Mr. {Scalise.} A lot of those details that aren't in  
2705 the language and that has been one of the expressions that  
2706 has been by many members of this committee is that a lot of  
2707 those details still are not written in this bill, the  
2708 allowances. A big portion of the bill how this trading  
2709 program would even work isn't in the bill. Since it is  
2710 silent on allowances, does the Administration have a position  
2711 on allowances and how many allowances should be given for  
2712 free to industry groups, to consumers? Do you all have a  
2713 position on how allowances should be given away because that  
2714 is an unanswered question in this bill? Do you have a  
2715 position? Does your department have a position?

2716       Ms. {Jackson.} The President has said that he believes  
2717 that there should be a 100 percent auction of allowances.

2718       Mr. {Scalise.} Should that be rebated to consumers  
2719 because one of the concerns is how much and many predictions  
2720 are out there backed up by a lot of evidence on how much  
2721 money taxpayers, American families would pay. Peter Orszag,  
2722 the President's own budget director, last year gave testimony  
2723 that a 15 percent reduction in carbon emissions would lead to  
2724 a \$1,300 a year increase in utility bills for every American  
2725 family on top of the fact that they would be paying higher

2726 for gas prices, which many of you have already acknowledged,  
2727 as well as other energy-related items, so some members of the  
2728 Administration have actually put some quantified numbers  
2729 there. So on the rebate side, would you be willing to rebate  
2730 any amount that a consumer would have to pay in higher  
2731 utility rates back to them based on the allowances?

2732 Ms. {Jackson.} The President has also called for  
2733 allowance value to be returned to those--

2734 Mr. {Scalise.} And I am running out of time so just yes  
2735 or no.

2736 The {Chairman.} The gentleman's time has expired so we  
2737 will give the witness a chance to answer the question.

2738 Ms. {Jackson.} Thank you. The Administration looks  
2739 forward to working on those questions, and the President,  
2740 though he has called for 100 percent auction, is interested  
2741 in working with this committee on ways to mitigate impacts on  
2742 the economy, and believes that the bones of that are in this  
2743 discussion draft. And there is flesh to be put on those  
2744 bones but that challenge could be addressed.

2745 The {Chairman.} Thank you, Mr. Scalise. Ms.  
2746 Christensen.

2747 Ms. {Christensen.} Thank you, Mr. Chairman. Three  
2748 questions, I think. Administrator Jackson, I even asked  
2749 several times about the recently proposed finding that

2750 greenhouse gases endanger public health which list in  
2751 particular 6 gases. As you know, the congressional Black  
2752 Caucus and the Health Brain Trust, which I chair, also have  
2753 as priorities the same population groups that you identify as  
2754 being most vulnerable. And I realize you are still in the  
2755 comment period and you have been asked a couple questions  
2756 about this, but are you satisfied that this bill could do  
2757 what is necessary to address this finding, and, if not, is  
2758 there anything that could or would be added to this  
2759 comprehensive bill which among other things reduces harmful  
2760 emissions to address this?

2761 For example, I think we list 5 greenhouse gases. We  
2762 don't list the -floral carbons, and I am a little rusty on my  
2763 organic chemistry, but should we add that to the list?

2764 Ms. {Jackson.} I do believe we need to address floral  
2765 carbons and I do believe that there is easy ways to do that.  
2766 I know that one of the things being considered is a Montreal  
2767 protocol like address. To answer your larger question, yes,  
2768 I believe this bill does a much better job than what EPA  
2769 could do now under the authorities it has. This is a better  
2770 solution. There are other solutions. The Clean Air Act  
2771 offers some direction but it is incomplete at best, and so I  
2772 believe this bill is a much better way of addressing the  
2773 endangerment finding, the proposal that we released last

2774 week.

2775           Ms. {Christensen.} Thank you. Secretary LaHood, your  
2776 department lists in your testimony several very active  
2777 programs that reduce greenhouse gases and advocate cleaner  
2778 energy in many areas, and I particularly appreciate the  
2779 livable communities effort because as we try to address  
2780 health, we look at the larger picture and the social  
2781 determinants, and I think that this gets to that. And don't  
2782 forget, we talked about adding the Secretary of Health and  
2783 Human Services with HUD, the HUD secretary in this effort.  
2784 But do any of the projects that you have referenced  
2785 specifically reach out to blighted, distressed communities,  
2786 poor communities, minority communities that need this help  
2787 the most?

2788           Mr. {LaHood.} Absolutely, and that is the reason that  
2789 we are working with the HUD secretary. And I might mention  
2790 that I am working with my two colleagues that are here with  
2791 me today on the whole livable-communities issues. But  
2792 Secretary and Dunham and I have had numerous discussions  
2793 about this, how we can really share the resources from both  
2794 departments in looking at communities, not only in terms of  
2795 housing and different types of housing, but the  
2796 transportation needs that need to be met so people can go to  
2797 work and go to their doctors appointments. And we are going

2798 to include rural areas in this, too, because the rural areas  
2799 have a great a need as any part of our country, and there  
2800 will be a real collaboration within the administration to  
2801 make the whole livable community include housing, not only in  
2802 the urban area, but in the rural areas, and incorporate some  
2803 of the activities that are going on in these departments,  
2804 too.

2805 Ms. {Christensen.} Dr. Chu, it seems as though the  
2806 nuclear-energy questions have kind of let up for awhile, but  
2807 just so I am clear, and it follows up on Congressman's Rush's  
2808 question, where the bill refers to low-carbon energy  
2809 producers, doesn't that automatically include nuclear-energy  
2810 producers.

2811 Mr. {LaHood.} I would agree with you that nuclear  
2812 energy is a low-end, near-zero-carbon energy source.

2813 Ms. {Christensen.} So when we talk about supporting and  
2814 promoting low-energy carbon producers, we are, in essence,  
2815 including nuclear energy.

2816 Mr. {LaHood.} Yes, I mean, as I have pointed out  
2817 before, there are other bills; whether it is incorporated in  
2818 this bill is something that the administration will be  
2819 working with this committee on. But certainly the restarting  
2820 nuclear energy has been supported has been included in other  
2821 bills, including the Economic Recovery Act.

2822 Ms. {Christensen.} Right, and I think you have been  
2823 very clear about the administration's position. Thank you.

2824 Thank you, Mr. Chairman.

2825 The {Chairman.} Thank you very much. The chair now  
2826 recognizes the gentleman from Illinois, Mr. Shimkus.

2827 Mr. {Shimkus.} Thank you, Mr. Chairman. I do  
2828 appreciate the panel here. It is good to see my friend Ray  
2829 LaHood, who was a mentor and a friend, and I am really  
2830 excited about your position. Dr. Chu, I look forward to  
2831 meeting with you personally and having another chance in this  
2832 committee to talk about the numerous things that are going on  
2833 with the Department of Energy. I know your background. I  
2834 have been following your experience, and I really do look  
2835 forward to spending some time with you, and I hope we can get  
2836 that arranged. Let me start out, those who have been  
2837 following this debate for many, many years, there is no  
2838 hiding where I am at. This is the largest assault on  
2839 democracy and freedom in this country that I have ever  
2840 experienced. I have lived thorough some tough times in  
2841 Congress, impeachment, two wars, terrorist attacks. I fear  
2842 this more than all of the above activities that have  
2843 happened, and I will tell you why as I go through, but I have  
2844 some questions.

2845 Secretary LaHood, has China agreed to a low-carbon fuel

2846 standard? Yes or no?

2847 Mr. {LaHood.} I don't know.

2848 Mr. {Shimkus.} I think it is no. How about India?

2849 Have they agreed to some type of low-carbon fuel standard?

2850 Mr. {LaHood.} I don't know.

2851 Mr. {Shimkus.} I would think that would be important to  
2852 this debate if we are going to be world competitive.

2853 Dr. Chu, has China agreed to an international regime to  
2854 cap carbon dioxide?

2855 Mr. {Chu.} Not yet.

2856 Mr. {Shimkus.} Not yet. How about India? Has India  
2857 agreed to an international regime to cap carbon dioxide or  
2858 other greenhouse gasses?

2859 Mr. {Chu.} No, they have not.

2860 Mr. {Shimkus.} Administrator Jackson, what is the  
2861 largest emitter of methane gas?

2862 Ms. {Jackson.} I believe we determined earlier, sir,  
2863 that it is probably livestock.

2864 Mr. {Shimkus.} And I don't think that is correct. I  
2865 think that the largest emitter of methane gas is wetlands.  
2866 So if wetlands is the largest emitter of methane gas, you are  
2867 not proposing that we drain wetlands, are you?

2868 Ms. {Jackson.} Sir, we are taking about anthropogenic  
2869 causes of global warming. Wetlands are a natural feature.

2870 We are not going to regulate wetlands.

2871 Mr. {Shimkus.} So the answer is, no, you are not  
2872 proposing draining wetlands.

2873 Ms. {Jackson.} No, we are not proposing draining  
2874 wetlands.

2875 Mr. {Shimkus.} Thank you. Let me take follow up on  
2876 Congressman Green's line of questioning. The problem that we  
2877 have on the analysis of what Administrator Jack Newjew  
2878 proposed to us is not your fault. It is the fault of this  
2879 draft which has a big gaping hole, and that is what are the  
2880 costs of the credits? What are the allocations? And my fear  
2881 or my belief is that this is an intentional move to deceive  
2882 us so that we are not allowed to do the cost-benefit  
2883 analysis. Now, we know the cost-benefit analysis of the  
2884 Lieberman-Warner Bill because the allegations were addressed,  
2885 and those numbers have that the cost of energy cost of  
2886 natural gas is an increase from 26 to 36 percent by 2020, and  
2887 108 to 146 by 2030. Now, this is a bill that is less  
2888 stringent than this proposal. The electricity cost in 2020  
2889 under the Lieberman-Warner Bill was 28 to 33 percent  
2890 increase, and in 2030, 101 percent to 129 percent. Do you  
2891 dispute that analysis of the Lieberman-Warner Bill, anyone?

2892 Ms. {Jackson.} I believe that analysis was done between  
2893 EPA and DOE, and that is part of the analysis. The analysis

2894 of this discussion draft does not show skyrocketing.

2895           Mr. {Shimkus.} Because we don't have all of the data.  
2896 We don't have all of the credits. It is the height of  
2897 hypocrisy for this administration and this leadership to  
2898 bring a bill to a hearing when we don't have the data to ask  
2899 the great questions about the cost. And here is why: we talk  
2900 about the Clean Air Act Amendments and No Job Lost, but I  
2901 will tell you, my committee, these folks, have seen these.  
2902 This is Kincaid-Peabody Number 10, Kincaid, Illinois. The  
2903 Clean Air Act of 1990, do you know how many miners lost their  
2904 jobs? And I have the ONIDIR stats; 1,200 mine workers lost  
2905 their jobs. In the State of Ohio, we have got colleagues in  
2906 this committee. Do you know how many jobs were lost in Ohio  
2907 under the Clean Air Act Amendments? Let me ask this to  
2908 Administrator Jackson. Do you know how many coal-miner jobs  
2909 were lost in Ohio because of the Clean Air Act Amendments  
2910 which you were addressing earlier?

2911           Ms. {Jackson.} No, sir.

2912           Mr. {Shimkus.} Thirty-five thousand, so those of us who  
2913 want jobs are going to try to defeat this bill, and we are  
2914 going to hold our colleagues on the other side accountable,  
2915 especially if they are from areas that depend on the fossil-  
2916 fuel economy.

2917           And I yield.

2918           The {Chairman.} The gentleman's time has expired. We  
2919 will now hear from Ms. Castor.

2920           Ms. {Castor.} Thank you, Mr. Chairman, and thank you to  
2921 our panel for your leadership and your testimony today. The  
2922 American people are hungry for a new direction and a modern  
2923 energy policy. I think the American people are so far beyond  
2924 a lot of the partisan discussions in Washington. This really  
2925 isn't a partisan debate. That's not what I hear back home.

2926           First of all, I want to thank you for your efforts on  
2927 the recovery plan, because it shouldn't be loss on us, for a  
2928 historic foundation for a new direction for energy policy has  
2929 already been laid under the recovery plan, and it is marrying  
2930 job creation with our new energy future. The weatherization  
2931 programs to save people money on their electric bill, greater  
2932 energy efficiency, the transmission grid, these are vital  
2933 investments for the future of this country. But we have got  
2934 a whole lot more to do, and this discussion draft is a good  
2935 starting point, but as you can tell, it is not going to be  
2936 easy.

2937           Dr. Chu, a couple of months ago, the State of Florida  
2938 received a final report on Florida's renewable energy  
2939 potential assessment, received by the Florida Governor's  
2940 Office. The Lawrence Berkley National Lab was involved as  
2941 well. It states that solar technology has the largest

2942 renewable energy potential in the State of Florida. I guess  
2943 this is not any surprise for the Sunshine State, but right  
2944 now, we produce maybe two percent of our energy in Florida  
2945 from renewable, and the leading producer isn't even solar  
2946 energy. It is biomass.

2947         It has been interesting, because even with the just  
2948 discussions at the federal level and the state level, our  
2949 electric utilities have started to invest in solar  
2950 technology. The FPL is making a significant investment in  
2951 South Florida in solar technologies, so I think this lends  
2952 credence to your marketplace ideas and how important it is  
2953 going to be.

2954         Will you go into greater detail on what we can do to  
2955 make solar technologies more affordable? And is it going to  
2956 be on the large scale? Are we doing enough in the discussion  
2957 draft? Could you highlight certain concepts in the  
2958 discussion draft? And what role do homeowners have to play,  
2959 because there is a hunger out there to install solar panels  
2960 if they were affordable and it make sense.

2961         Mr. {Chu.} Well, I think the first thing is the  
2962 wonderful thing about solar energy, and I would agree with  
2963 you in that report, is it has an enormous potential in the  
2964 long run, if you consider how much sunlight energy is hitting  
2965 the earth. I did a quick calculation a couple of years ago

2966 which suggested that a few percent, less than five percent of  
2967 the world's deserts, if you can harness solar energy, 20  
2968 percent of the energy hitting that, and distribute it and  
2969 store it, that would satisfy the world's current electricity  
2970 needs, just five percent of the world's deserts.

2971         So the first thing I think one can do is there are lots  
2972 of programs statewide, and also the federal government  
2973 encouraging solar, but one of the things is that solar energy  
2974 is generated at a time when you need the most amount of  
2975 energy, during hot summer days, when the air conditioning is  
2976 taxing the ability to generate electricity. So I would  
2977 advocate to encourage all states to evolve into what we call  
2978 real-time pricing. If you ask, on those hot summer days  
2979 where people are running their air conditioning, what is the  
2980 real cost of energy, well, it is quite high because the  
2981 utility companies have to have installed backup generation  
2982 systems for those one or two percent of the days, where in  
2983 order to avoid a brownout, you have to have them running.  
2984 But a lot of the time, most of the time, they are sitting  
2985 idle, so that is invested capital sitting idle. So if you do  
2986 real-time pricing so that on those hot summer days the real  
2987 price of electricity for the electricity company, for the  
2988 generators, is quite high. But alternatively, at nighttime,  
2989 it is quite low. So that will encourage both businesses and

2990 homeowners to start to, if they can put off the use of energy  
2991 at night, and use it during the day, that means we have to  
2992 build less new power plants. The return on a particular  
2993 investment will be much higher, which will drive the energy  
2994 costs down for the businesses and for consumers. Real-time  
2995 pricing will allow solar energy to give a big boost, because  
2996 it is producing that energy when it is the most expensive.

2997         So that is one thing. The other thing is, quite  
2998 frankly, we should be taking a leadership in inventing new  
2999 solar technologies. Our first loan the Department of Energy  
3000 approved was to a company that is going to next-generation  
3001 thin-film solar technology. The company estimates that  
3002 thousands of new jobs will be created. The jobs are  
3003 incredibly important, and we are also trying to develop the  
3004 technologies so the United States resumes its leadership  
3005 position in new solar technologies that can drive the cost  
3006 down considerably. And that is the other important part of  
3007 this.

3008         The {Chairman.} Thank you, Ms. Castor.

3009         Now, the chair recognizes Mr. Radanovich.

3010         Mr. {Radanovich.} Thank you, Mr. Chairman. I want to  
3011 welcome the secretaries and administrator to the committee.  
3012 Mr. LaHood, it is great to see you back in the Congress.

3013         I represent the San Joaquin Valley in California. A lot

3014 of farming happens there, and there is a lot more my  
3015 constituents are worrying about than global warming right  
3016 now. We have got an imposition from the Endangered Species  
3017 Act that has shut down the pumps in the delta, and a lot of  
3018 my farmers are getting a zero allocation this year. It is  
3019 costing 40,000 to 60,000 jobs, and it is going to result in  
3020 about a \$9 billion in the state's industry. And I honestly  
3021 think that my state is suffering more from environmental  
3022 alarmism than it is global warming, and added to that, this  
3023 concept of cap and trade to me just seems to make the problem  
3024 worse.

3025       Secretary Chu, welcome. I noticed that you paid a visit  
3026 to California recently. I think you were quoted in the LA  
3027 Times saying that because of global warming, agriculture in  
3028 California was going to be gone in about 30 years. And one  
3029 other quote, and I just want to have a dialog on this, was a  
3030 quote that somehow we have to figure out how to boost the  
3031 price of gasoline to levels in Europe, which at the time was  
3032 \$8 a gallon. My concern for my constituents is that if you  
3033 adopt something like a cap and trade system, the math doesn't  
3034 work. You add a price of gas onto the fact that we have a  
3035 manmade drought in California, taking the water away. If you  
3036 increase the price of a gallon of gas or diesel from \$5 back  
3037 up to \$6 a gallon, the way it was last year, you are going to

3038 see the state's largest industry, \$90 billion, the main  
3039 supplier of fruits and vegetables to the nation, farm out.  
3040 And if you don't like the fact that 70 percent of your energy  
3041 comes from foreign countries, how would you like to have 70  
3042 percent of your food supply leave the country, because that  
3043 is what happening in my neck of the woods?

3044 I, for the life of me, can't figure out how you think  
3045 that you can do something like this without dramatically  
3046 increasing the national debt and deficit by subsidizing a  
3047 false economy and by raising the price to consumers on  
3048 energy. I think when the public finds out the true cost of  
3049 this thing, you are going to see a smack down that the World  
3050 Wrestling Federation would be proud to see by the public  
3051 towards this plan, which is unreasonable. I think research,  
3052 developing efficiencies in energy, and smoothing this  
3053 transition to another source of fuel, I think, is a great  
3054 idea. But this cap and trade notion, once the public finds  
3055 out what their price is in the home at the fuel pump, they  
3056 are not going to buy this. This will stop. This will not go  
3057 anywhere when you see the true cost of this thing come down.

3058 In the energy portfolio of the United States, 70 percent  
3059 of it consists of fossil fuels, 20 percent is nuclear, 10  
3060 percent is renewable, and of that renewable portion, 10  
3061 percent of it is hydroelectricity. That is about three

3062 percent. So you are proposing to take seven percent of our  
3063 energy portfolio and make it how much, how long? And I guess  
3064 my question to anybody who is going to answer this is what do  
3065 you think is going to be the cost to the household, because I  
3066 see numbers of \$3,000 or over \$3,000 of the cost of this plan  
3067 to the household. And then, we have talked about the high  
3068 price of gas, Secretary Chu, \$8 or whatever. I mean it is an  
3069 increase on the energy supply of the United States. How on  
3070 earth do you think you can pull this off without breaking the  
3071 back of the government and of the consumer?

3072 Ms. {Jackson.} I will go first, and then, I will turn  
3073 it over to the secretary.

3074 EPA's modeling shows not at all those cost ranges, sir.  
3075 It shows \$98 to \$140 for the average household per year, not  
3076 \$3,000. That is a misstatement of an MIT study that actually  
3077 shows something close to--

3078 Mr. {Radanovich.} In your opinion.

3079 Ms. {Jackson.} Well, certainly it is my opinion.

3080 Mr. {Radanovich.} I mean I am not sure I trust you for  
3081 the facts as much as I would trust that study. How can I  
3082 know? I mean how do I know your modeling is correct, and  
3083 what are your assumptions? You mentioned 40 percent of the  
3084 cap and trade revenues goes back to the household. How does  
3085 that work? How does that happen?

3086 Ms. {Jackson.} The history of EPA's modeling shows that  
3087 we are usually conservative, that we usually overestimate the  
3088 cost, not underestimate.

3089 Mr. {Radanovich.} How does that 40 percent get back to  
3090 the consumer?

3091 The {Chairman.} The gentleman's time has expired. The  
3092 witness will have a chance to answer briefly.

3093 Mr. {Radanovich.} If you could answer, how does that 40  
3094 percent get back?

3095 Ms. {Jackson.} The 40 percent was modeled as a rebate  
3096 back to American consumers, to American households.

3097 Mr. {Radanovich.} A check in the mail?

3098 Ms. {Jackson.} It gets back to them. I don't know the  
3099 model.

3100 Mr. {Radanovich.} Could you let me know how that gets  
3101 back to the consumer, please?

3102 Ms. {Jackson.} Well, sir, it is not my decision to  
3103 make.

3104 Mr. {Radanovich.} Well, then, maybe you better remodel  
3105 so you can explain to people how that is going to get back in  
3106 their pockets. Thank you, Mr. Chairman.

3107 The {Chairman.} Will the gentleman yield to--

3108 Mr. {Radanovich.} Well, I don't have any time left, but  
3109 I--

3110           The {Chairman.} The statement about California  
3111 agriculture being gone, that wasn't because of the bill.  
3112 That was because of global warming. Is that correct?

3113           Mr. {Radanovich.} An interpretation of the results of  
3114 global warming 40 years from now.

3115           Mr. {Chu.} Actually, if that was the quote, it was  
3116 inaccurate, because I know about this. I was citing some  
3117 studies, two studies, in fact, of predictions of what will  
3118 happen if we continue on a business-as-usual model, and they  
3119 took two scenarios. An optimist scenario, you keep carbon  
3120 below 500 parts per million, a target that we are all trying  
3121 to work towards, and in that study, in the first part of the  
3122 century, by 2050, the snowpack in California will be reduced,  
3123 and the optimistic scenario, by 26 percent. We will have 74  
3124 percent of the snowpack that we have today. And in the more  
3125 pessimistic scenario, business-as-usual scenario, it would be  
3126 down to 60 percent. By the end of this century, the 21st  
3127 Century, it is considerably less, as much as 93-percent  
3128 decrease in the snowpack in California if we continue as  
3129 business as usual. And so it was that concern for the  
3130 agriculture of California that I was speaking of.

3131           Mr. {Radanovich.} And I respect that. If I could  
3132 respond, Mr. Chairman? Environmental alarmism in the form of  
3133 the Endangered Species Act that is a runaway locomotive, and

3134 the cost of this cap and trade system will kill agriculture  
3135 long before global warming does. Thank you, Mr. Chairman.

3136 Mr. {LaHood.} Mr. Chairman, I have a letter here from  
3137 John M. Riley, correcting the statement that they made, and  
3138 it is a leader to the Republican leader, which has a much  
3139 lower cost per family, and if it is possible to have this put  
3140 in the record, if not, I will distribute it to the committee,  
3141 but it is a corrective letter, which states, correctly, the  
3142 right information.

3143 The {Chairman.} Without objection--

3144 Mr. {Shimkus.} I would object, Mr. Chairman.

3145 The {Chairman.} The gentleman would object.

3146 Mr. {Shimkus.} Just so if my former colleague can do  
3147 that, I would like the article from the Weekly Standard that  
3148 debunks those numbers also included into the record.

3149 The {Chairman.} Without objection, we will take both  
3150 documents and put them in the record.

3151 [The information follows:]

3152 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
3153           The {Chairman.} Ms. Sutton?

3154           Ms. {Sutton.} Thank you, Mr. Chairman. And thank you  
3155 for your testimony. It has been very, very insightful.

3156           I think that at the beginning you all laid out the  
3157 challenge that we face. We talked about the potential for  
3158 jobs under this bill and your desire to jumpstart us towards  
3159 that new green economy. And Secretary Chu, you also agreed  
3160 that there is great potential, but you really put your finger  
3161 on the point when you said that the question is how do we  
3162 transition from here to there? And that is extraordinarily  
3163 important to the people that I represent to the people in  
3164 Ohio, and I think it is extraordinarily important to people  
3165 far beyond Ohio. This is something that is going to require  
3166 all of us to be a part of and all of us to benefit from, so  
3167 not just in the long term, but in the near term. And so I  
3168 think it is that near-term challenge that is the one that is  
3169 so difficult for us to get past.

3170           Now, some comments were made by one of my colleagues a  
3171 little while ago, and I think that the statement was those of  
3172 us who want jobs are going to try to defeat this bill. I am  
3173 not somebody who is going to try to defeat this bill. I  
3174 certainly want jobs. I want them in the future, and I want  
3175 them now for my folks. They need them both now and then. I

3176 do want to find ways--and I believe it can be done--to  
3177 collaborate, to get to those jobs of the future, without  
3178 sacrificing the livelihood of the people in the process,  
3179 because that gap in the middle is where we can lose so much.  
3180 So that is where I come from with respect to these  
3181 complicated issues and challenges we face, but it has to be  
3182 done. We have to go where we know we need to go and we all  
3183 agree we should go, but we can't lose people in the process.

3184         So the first question I have, Secretary Chu, is  
3185 regarding coal. Of course, about 86 percent of electricity  
3186 consumed in Ohio, and more than half of the country's  
3187 electricity is produced by coal-fired power plants. Even  
3188 with aggressive gross scenarios, and your testimony reflects  
3189 this, the renewable energy, combined with energy efficiency  
3190 measures, coal will still be a major U.S. energy source, at  
3191 least in the near term, and probably well into our future.

3192         Clean coal technology is critical to address climate  
3193 change here and abroad, yet there are no commercial scale  
3194 carbon capture and storage projects worldwide. Secretary  
3195 Chu, you have stated that we must develop an inexpensive way  
3196 to capture and store carbon emissions from coal-fired plants,  
3197 and that the U.S. has to take a lead. The Recovery Act,  
3198 obviously, provided significant funding for CCS demonstration  
3199 projects, but how does the administration plan to accelerate

3200 the development of these technologies, including those that  
3201 offer very high levels of CO2 capture?

3202       Mr. {Chu.} Well, what we are doing is the following: we  
3203 have had a certain amount of Economic Recovery Act money,  
3204 \$3.4 billion, in total, devoted towards trying to accelerate  
3205 the progress on capture and sequestration of carbon from  
3206 coal. We are moving forward as fast as we can. We have  
3207 decided to fund a number of projects. We are looking forward  
3208 to exploring all of the avenues we think have a reasonably  
3209 good chance of leading to the beginning of deployment in the  
3210 next eight year, or optimistically, even less. So right now,  
3211 what technology we should use is not there. Gasification is  
3212 a promising technology. We would like, very much, to bring  
3213 that to a commercial demonstration scale to see if it is  
3214 economically viable. But there are other things. We also  
3215 have to capture carbon at the stack. There are existing coal  
3216 plants that have just been put up. A modern coal plant is a  
3217 couple of billion dollars, and you are not going to turn this  
3218 investment off, and as I said before, China is rapidly  
3219 expanding their coal facilities, so we have to develop  
3220 technologies that can capture the carbon at the stack, so we  
3221 are looking a myriad of ways. I should also say that there  
3222 are very active discussions. There are roughly ten projects  
3223 being considered in Europe and several in Asia to really

3224 collaborate so that our dollars go as much as possible. So  
3225 this is something very important to the United States. We  
3226 have the largest coal reserves in the world.

3227 The {Chairman.} Thank you, Ms. Sutton.

3228 Ms. {Sutton.} Thank you.

3229 The {Chairman.} Mr. Burgess?

3230 Mr. {Burgess.} Thank you, Mr. Chairman.

3231 Like representative Bono, I have one of the most  
3232 beautiful districts, at least in North Texas. We have solar.  
3233 We have research and development at Entech. We have got  
3234 academic research at the University of Texas at Arlington  
3235 that is on my Fort Worth campus. Wind energy, we manufacture  
3236 the big windmill blades at what was formerly an oil-field-  
3237 services warehouse up in Gainesville, Texas. We don't have  
3238 geothermal. We have got a lot of landfill and landfill  
3239 methane, but when you think of the State of Texas, we have  
3240 and have had a fairly robust renewable portfolio standard.  
3241 We are the leader in wind energy. This is, of course, the  
3242 result of the current governor and the previous governor,  
3243 Rick Perry and George W. Bush, who made a commitment to wind  
3244 energy, but Texas produces a lot of energy. So in order to  
3245 meet a percentage in the renewable portfolio standard by  
3246 2020, even though we are the nation's leader, by far, in the  
3247 production of wind energy, if we are not able to count the

3248 energy that we produce with landfill methane, if we are not  
3249 able to count, pound for pound, the amount of carbon dioxide  
3250 that we save with energy efficiency, then we will have a  
3251 very, very difficult time meeting energy-efficiency  
3252 standards. Can you address that? Are there ways that we may  
3253 write the regulations such that we could get credit for what  
3254 we are doing with energy efficiency?

3255 Administrator Jackson, you said it was up to 40 percent  
3256 of the energy that we consume now could be saved, but we are  
3257 going to be restricted on how much of that we can count  
3258 towards our renewable portfolio standard. Is that correct?

3259 Mr. {Chu.} Well, I will speak first. I am not sure  
3260 about the details of the bill. I mean this is a good point  
3261 of discussion, whether you can consider if you begin to  
3262 capture the methane from landfills and sewage treatment  
3263 plants, this is methane, otherwise, that would have escaped  
3264 in the atmosphere.

3265 Mr. {Burgess.} Let me interrupt you because I only have  
3266 a limited amount of time, and we have made the point for the  
3267 chairman, and I think he heard you.

3268 Dr. Chu, you said in response to a question, United  
3269 States is losing jobs, losing being the leader in technology  
3270 development. Administrator Jackson, you said in your  
3271 testimony that we are going to be producing clean-energy

3272 jobs, jobs that cannot be shipped overseas. Yet Dr. Chu is  
3273 concerned because many of the photovoltaics, many of the wind  
3274 turbines are manufactured overseas, and if we make an  
3275 enormous investment in photovoltaic and wind turbines, are  
3276 those jobs not already shipped overseas?

3277 Mr. {Chu.} Actually, no, there are agreements--

3278 Mr. {Burgess.} But Secretary, with all due respect, you  
3279 answered a question saying we have lost the leadership  
3280 position in this country because that manufacturing has gone  
3281 overseas, so we are no longer the leader.

3282 Mr. {Chu.} Well, I said that the technology leadership  
3283 has gone overseas. The wind turbines were developed  
3284 overseas, the modern wind turbines. But right now, today,  
3285 the president is in Iowa.

3286 Mr. {Burgess.} The second wind-producing state.

3287 Mr. {Chu.} Yes.

3288 Mr. {Burgess.} Well under Texas, for the record.

3289 Mr. {Chu.} But my point is that it is an old Maytag  
3290 plant where jobs were lost, but it is now manufacturing the  
3291 towers for wind turbines.

3292 Mr. {Burgess.} But still the point is that those jobs  
3293 can go overseas. There is nothing in the legislation that I  
3294 have seen before us that would prevent those jobs. When we  
3295 make a statement was made in the testimony submitted to us,

3296 ``jobs that cannot be shipped overseas,' ' how are you going  
3297 to ensure that those jobs are not going to be shipped  
3298 overseas? Are we going to have trade barriers or tariffs?  
3299 What are going to be the mechanisms that we will use?

3300 Ms. {Jackson.} Sir, most people refer to energy-  
3301 efficiency jobs. Those cannot be shipped overseas because  
3302 energy-efficiency work must be done at home.

3303 Mr. {Burgess.} Photovoltaics and wind turbines?

3304 Ms. {Jackson.} Now, renewable sources can certainly go  
3305 overseas and some have gone. We are in a race to get them  
3306 back and to keep them here.

3307 Mr. {Burgess.} Let me interrupt because I am going to  
3308 run out of time, but Dr. Chu, this last question will be for  
3309 you. We heard Dr. Radanovich talk about the major economic  
3310 convulsion that perhaps could result from the legislation  
3311 that we are considering before this committee. We heard  
3312 Ranking Member Barton talk about how did the oil get so far  
3313 up north where it is so cold to begin with. Mr. Dingell is  
3314 gone. Mr. Rogers is gone, but the great Michigan glacier  
3315 from 15,000, 20,000 years ago actually melted because of  
3316 global warming. I will stipulate that warming is happening.  
3317 But we have not heard from anyone who has come and testified  
3318 in this committee as to the smoking gun, if you will, that  
3319 demonstrates that mankind is responsible for the global

3320 warming that is occurring as an aberration outside of  
3321 naturally occurring solar cycles. So major economic  
3322 convulsion, yet we lack the fundamental piece of evidence  
3323 that would tell us that this is what we must do because we  
3324 are, after all, causing the problem to occur.

3325         You are a scientist, Dr. Chu. Can you, perhaps, give  
3326 some comfort to Mr. Radanovich's constituents and my  
3327 constituents that we indeed have that missing link that  
3328 mankind is responsible for what is occurring. Perhaps the  
3329 carbon dioxide is going up because the solar cycles have  
3330 changed and the planet is warming. There is another  
3331 plausible explanation.

3332         The {Chairman.} Mr. Burgess, your time has expired.

3333         Mr. {Burgess.} So I will yield to Dr. Chu for an  
3334 answer.

3335         The {Chairman.} Dr. Chu, you can give an answer, and  
3336 then, we have to move on.

3337         Mr. {Chu.} In brief, I think there is very strong,  
3338 compelling evidence that the lion's share of what we are  
3339 seeing, the warming that we are seeing, is due to human  
3340 activity. I would be glad to meet with you and to go over  
3341 the details of what that--

3342         Mr. {Burgess.} I wish you would. Your NOAA scientists  
3343 could not provide us that information, so I would very much

3344 like to hear it from an expert such as yourself.

3345           The {Chairman.} Mr. Gonzalez? Let me announce as I  
3346 recognize Mr. Gonzalez, Administrator Jackson and others on  
3347 the panel were promised they would be able to leave at 1:00,  
3348 and I regret that all of the members won't have a chance to  
3349 ask questions. He will be the last one to ask questions, and  
3350 then, we will proceed with the next panel, for those who did  
3351 not get a chance to ask question of this panel as the first  
3352 questions for the second panel. Mr. Gonzalez?

3353           Mr. {Gonzalez.} Thank you very much, Mr. Chairman. My  
3354 question will be directed to Secretary LaHood. It is great  
3355 to see you, and we do miss you.

3356           First of all, the general observation is that we all  
3357 believe that as a result of this piece of legislation that  
3358 the cost of energy will increase, and the consumption  
3359 behavior is going to be modified, and that is a good thing,  
3360 actually, and as I have said before, these are not  
3361 insurmountable obstacles in passing a piece of legislation  
3362 that is reality based. My concern is going to be more on  
3363 fossil fuels and the need and the use of them during this  
3364 transition or conversion period as we adopt new technologies,  
3365 as more efficient vehicles are made available, alternative-  
3366 fuel vehicles, battery operated, and such, because I think  
3367 that is going to take time.

3368           Taking into consideration some of the following: we  
3369   assume that we have a fixed number of vehicles now on the  
3370   road, and we have to figure out how many of those are going  
3371   to be retired, where are going with sales of vehicles and so  
3372   on. Historically, 15 to 16 million vehicles were sold in the  
3373   United States. For 2008, that was reduced to about 12 or 13  
3374   million. In 2009, it is projected it will be 8 or 9 million.  
3375   Historically, I guess I will call it the shelf-life of the  
3376   vehicle, before you turn that over, is about 11 years. And I  
3377   don't know when you put all of these figures together where  
3378   we are going to end up. I am trying to get an idea from  
3379   Secretary LaHood of how long he thinks this transitional  
3380   period will occur as we gain greater efficiencies and such.

3381           We also know that out of all of the millions of cars in  
3382   the United States, which I have been told 200 million, and I  
3383   will need to check that, there may be only 116,000 that are  
3384   powered by natural gas, and that the market share of hybrids  
3385   comprises no more than 2.2 percent of our entire vehicle  
3386   population in the United States. Taking into account how  
3387   long it will take the technology, how long it will take the  
3388   manufacturers to make the vehicles available and such, can we  
3389   determine the need for the traditional fossil fuels, what I  
3390   call the transitional or conversion fuels, as we leave one  
3391   stage where we presently find ourselves to that which we are

3392 trying to attain when it comes to greenhouse gas emissions.  
3393 Secretary LaHood?

3394 Mr. {LaHood.} Well, we complied with the president's  
3395 executive order to have a rule that will require the car  
3396 manufacturers to have a much higher café standard by 2011.  
3397 And now that that work is done, we are working with EPA and  
3398 others to try and figure out the path forward beyond 2011 to  
3399 develop with car manufacturers and other the idea that we can  
3400 get o a higher gasoline standard. So the direct answer to  
3401 your question on fuel efficiency, the car manufacturers have  
3402 to meet a much higher standard on CAFÉ standard by 2011 on  
3403 the cars they manufacture. On the battery powered, they are  
3404 way ahead of the curve on this. GM is going to be rolling  
3405 out an automobile that is run on batteries. The hybrid  
3406 vehicles are taking off. The flex-fuel vehicles are taking  
3407 off. But we know that within the next couple of years, the  
3408 American automobile manufacturers will have automobiles that  
3409 will be powered by batteries, and we know that the fuel  
3410 efficiency standards will be set much higher by 2011, and  
3411 then, even higher than that beyond that. So those are sort  
3412 of the benchmarks that we are working with, with the American  
3413 and other automobile industries.

3414 Mr. {Gonzalez.} And it does trouble me, because I want  
3415 to support this final piece of legislation, that we are not

3416 dealing with realistic expectation of what the manufacturers  
3417 will be able to provide out there for a willing and able  
3418 buyer. We are not factoring in the economic hard times for  
3419 the next few years, because I think they are going to be  
3420 there, and people retaining their cars for longer periods of  
3421 time. Manufacturers not being able to even meet the needs of  
3422 vehicles that are totally more efficiently, but if they are,  
3423 they are probably going to be hybrid, meaning that they still  
3424 have an internal combustion engine that is going to be run  
3425 with traditional fossil fuels. That doesn't mean we are  
3426 throwing in the towel and giving up on this endeavor. All I  
3427 am saying is let us be realistic about the need for a  
3428 domestic production and refining capacity in the United  
3429 States.

3430 Mr. Secretary, in looking at energy independence when it  
3431 comes to fuels, do we need to increase or decrease domestic  
3432 production and refining capacity of fossil fuels in the  
3433 United States in the foreseeable future?

3434 Mr. {LaHood.} Well, I can't be specific in answering  
3435 that question, but it is something that everyone is  
3436 investigating, looking into, debating. But I don't have a  
3437 specific answer for that at this point.

3438 Mr. {Gonzalez.} Thank you very much. I yield back, Mr.  
3439 Chairman. Thank you.

3440           The {Chairman.} Thank you very much, Mr. Gonzalez.

3441           I want to thank our three witnesses. You have been  
3442 very, very helpful to us and patient in answering the  
3443 questions, and we thank you so much for you input, and we  
3444 will look forward to working with you on this legislation.  
3445 Thank you.

3446           [Recess.]

3447           Mr. {Markey.} [Presiding] The hearing will reconvene.  
3448 We thank all of you for your patience, and we would ask our  
3449 next group of witnesses to please come up and to take their  
3450 seats in front of their names on the witness table.

3451           Thank you all very much for being here. Our next  
3452 witness is Mr. Chad Holliday. Mr. Holliday was the CEO of  
3453 DuPont until his retirement on January 1 of this year, and  
3454 now serves as the chairman of its board. He is also the past  
3455 chairman of the Business Roundtables Task Force on  
3456 Environment Technology and Economy for the World Business  
3457 Counsel for Sustainable Development. He coauthored the book  
3458 Walking the Talk, the Business Case for Sustainable  
3459 Development. Mr. Holliday, we welcome you. Please begin  
3460 when you feel comfortable.

|  
3461 ^STATEMENTS OF CHARLES HOLLIDAY, JR., CHAIRMAN, DUPONT; RED  
3462 CAVENEY, SENIOR VICE PRESIDENT FOR GOVERNMENT AND PUBLIC  
3463 AFFAIRS, CONOCOPHILLIPS; JIM ROGERS, CHAIRMAN, PRESIDENT AND  
3464 CEO, DUKE ENERGY CORP.; FRANCES BEINECKE, PRESIDENT, NATURAL  
3465 RESOURCES DEFENSE COUNCIL; MEG MCDONALD, DIRECTOR, GLOBAL  
3466 ISSUES, ALCOA INC.; AND DAVID CRANE, PRESIDENT AND CEO, NRG  
3467 ENERGY, INC.

|  
3468 ^STATEMENT OF CHARLES HOLLIDAY, JR.

3469 } Mr. {Holliday.} Thank you very much. It is an honor to  
3470 be here today. We appreciate you taking time for our  
3471 presentation. I do come here in two roles. I come as the  
3472 chairman of DuPont and also a member of the U.S. Climate  
3473 Action Partnership, a group of companies and NGOs who have  
3474 come together to forge a consensus view regarding the U.S.  
3475 action on climate-change issues.

3476 Mr. {Markey.} Mr. Holliday, could you move the  
3477 microphone in just a little bit closer.

3478 Mr. {Holliday.} We have put together this blueprint,  
3479 which I think you are familiar with, which was the result of  
3480 two years of work of discussing, greatly, the different  
3481 options, and I believe that has been useful, and we are very

3482 glad to see that you have taken this into account in the bill  
3483 that is before us today. We look forward to working with you  
3484 and your colleagues to further improve the bill as you  
3485 advance through this legislative process.

3486 DuPont's approach to greenhouse gas production is for  
3487 and by our experience the chlorofluorocarbons, or CFCs in the  
3488 1980s, when atmospheric research on the role of CFCs became  
3489 actively involved in what is called the Montreal Protocol.  
3490 This international agreement allowed us to phase out the use  
3491 of ozone-depleting substances, while providing adequate time  
3492 and market signals to develop effective alternatives. These  
3493 reductions also had great greenhouse gas benefits.

3494 The reduction for the Montreal Protocol were six times  
3495 greater than the full reductions from the Kyoto Protocol, if  
3496 it was fully enacted. So what we have seen from this  
3497 experience is great benefits can come from this kind of  
3498 activity. I am very proud of my company's work in that, and  
3499 I am also very proud of our country's work in making that a  
3500 success.

3501 As DuPont has become more aware of the potential  
3502 business and environmental implications of climate change, we  
3503 have looked for ways to contribute solutions. Since 1990 to  
3504 2004, we have reduced our own greenhouse gas emissions by 72  
3505 percent, while every project returned a positive return to

3506 our shareholders. We did it by using what we call an  
3507 internal cap and trade mechanism that mirrored what a cap and  
3508 trade would do in the external environment, inside, allowing  
3509 the recourses to flow to the very best project. We think  
3510 that is critical as we do something across the entire  
3511 economy.

3512         Yet I want to be clear: voluntary efforts are not enough  
3513 by themselves. We need a program that will focus the work  
3514 and resources on the best opportunities while we drive the  
3515 lowest cost, and that will take legislation across our entire  
3516 economy.

3517         I firmly believe this is an opportunity for American  
3518 industry to reinvent itself. There has never been a bigger  
3519 opportunity that is more perfectly sized to what American  
3520 company and American universities can come together to make  
3521 happen. So we are fundamentally behind this approach, and we  
3522 believe it will have a very positive long-term impact to our  
3523 overall economy.

3524         USCAP is this diverse coalition I have described  
3525 earlier, and we have worked very hard to resolve very  
3526 difficult issues with our different perspectives from NGOs  
3527 and companies from different industries, and we think it has  
3528 been very helpful. We have made substantial progress, but we  
3529 would be the first to say we have not answered all of the

3530 questions, and we are very glad to see that you have included  
3531 much of this in the work that you have before us today.

3532         We are pleased to see this taking great forward steps,  
3533 and we look forward to working with you as we go forward to  
3534 hopefully come out with something that has the same power as  
3535 the Montreal Protocol did once before. Creating an effective  
3536 climate-change program will not be easy, but it is necessary,  
3537 and the discussion is moving in the right direction. We  
3538 appreciate all of the steps that you are doing to make this a  
3539 success, and we believe these steps must be very aggressive  
3540 and must recognize and encourage early actions for it to be  
3541 very successful. Many companies have taken early actions,  
3542 and undoubtedly, there will be a start date to whatever  
3543 legislation you end up with. The last thing we want is all  
3544 action to stop until that start happens, so including early  
3545 action is very critical. We must also encourage innovation,  
3546 research development, demonstration and deployment programs  
3547 throughout the entire spectrum of our economy to make it a  
3548 success. We believe that will be the best way to ensure that  
3549 consumers are no unduly burdened by this bill. And we must  
3550 use policy tools and offsets to keep the costs of the program  
3551 manageable while achieving our long-term goals.

3552         In closing, I will refer to an old saying I think you  
3553 must know very well. We must lead, follow, or get out of the

3554 way. Gentlemen, this is a time our country should lead.

3555 Thank you very much.

3556 [The prepared statement follows:]

3557

3558 \*\*\*\*\* INSERT 4 \*\*\*\*\*

3559 |  
3560           Mr. {Markey.} Thank you, Mr. Holliday, very much. Our  
3561 next witness is Mr. Red Cavaney, a senior vice preside for  
3562 government and public affairs for Conoco Phillips. Mr.  
3563 Cavaney is the former president and chief executive officer  
3564 of the American Petroleum Institute and American Plastics  
3565 Council. He has served on the Senior White House Staffs of  
3566 Presidents Ronald Reagan, Gerald Ford, and Richard Nixon.

3567           Welcome, Mr. Cavaney. Whenever you are ready, please  
3568 begin.

3569           Mr. {Cavaney.} Thank you, Chairman Markey, Chairman  
3570 Waxman, and Ranking Member Barton, and members of the  
3571 committee. On behalf of Conoco Phillips and our chairman and  
3572 CEO, Jim Mulva, I am pleased to participate in this important  
3573 hearing. Conoco Philips supports the development of a  
3574 comprehensive national climate protection program that  
3575 addresses greenhouse gas emissions, while at the same time,  
3576 ensuring the supply of secure and affordable energy that is  
3577 necessary for our nation's continued economic recovery and  
3578 future growth.

3579           We believe the integrated set of policy regulations  
3580 contained in the USCAP blueprint for legislative action  
3581 represents a viable path forward to this end. I have been  
3582 asked to offer USCAP's insights on options to reduce the

3583 impact of climate-change technology on transportation-fuel  
3584 consumers. In addition, I will touch on some policy areas  
3585 that are of particular interest to Conoco Phillips and our  
3586 industry.

3587 Our company recognizes that public policy to address  
3588 climate change will come at a cost to U.S. consumers and  
3589 businesses, but we believe, in the long run, the benefits to  
3590 the overall American economy will outweigh these costs;  
3591 however, in these challenging economic times, individuals and  
3592 companies may not take much comfort in the promise of future  
3593 benefits as they struggle to make a mortgage payment or to  
3594 make payroll. This is why USCAP believes it is critically  
3595 important that any climate-change policy includes provisions  
3596 aimed at dampening the impact of policy on both consumers and  
3597 businesses.

3598 As a major provider of transportation fuels to the U.S.  
3599 consumer, Conoco Phillips is keenly aware of how sensitive  
3600 most consumers are to increases in the price of gasoline at  
3601 the pump. To address the impact of climate policy on  
3602 transportation-fuel consumers, USCAP recommends the judicious  
3603 use of allowance value to ensure the consumers  
3604 transportation-fuel impacts from allowance prices are  
3605 generally proportionate to their electricity and natural gas  
3606 impacts. Allowance value for transportation consumers could

3607 be applied over a range of option that reduce transportation-  
3608 fuel consumption.

3609         The impact of climate policy on companies that produce  
3610 and deliver transportation fuels will also have implications  
3611 for the consumer. Under the provisions of the discussion  
3612 draft, the U.S. refining sector would face a multibillion-  
3613 dollar annual compliance obligation while serving an  
3614 accounting function for the government as the point of  
3615 regulation for the end-users transportation-fuel emissions.  
3616 This would be in addition to our compliance obligations  
3617 associated with our own greenhouse gas emissions, with the  
3618 current renewable fuel standard, and with any low-carbon fuel  
3619 standard in the future.

3620         Based on the scale of our potential compliance burden,  
3621 we are deeply concerned about our ability to fully pass on  
3622 these costs, given the potential implications that even a  
3623 small percentage of unrecoverable costs could have on this  
3624 historically low-margin business. The consequences of not  
3625 getting the policy right could be premature reduction in U.S.  
3626 refining capacity, additional increases in gasoline prices,  
3627 rising transportation, fuel imports, and further loss of  
3628 American jobs.

3629         We stand ready to offer constructive suggestions for  
3630 fair and equitable allowances for improving the low-carbon

3631 fuel standard included in the discussion draft, and in an  
3632 variety of areas, from containment to market oversight to  
3633 incentives for carbon capture and store. Based on the recent  
3634 and ongoing work of the committee, we are encouraged by the  
3635 potential of a path forward that could gain broad support,  
3636 both within the halls of Congress and within homes across the  
3637 land. We commend the comprehensiveness with which Chairman  
3638 Waxman and Chairman Markey are approaching this legislation  
3639 and their careful consideration of USCAP's blueprint for  
3640 legislative action.

3641 In closing, Mr. Chairman, and on behalf of Conoco  
3642 Phillips, I thank you for your leadership and for the  
3643 opportunity to participate in today's hearing. We look  
3644 forward to continued work with your committee on this very  
3645 important matter.

3646 [The prepared statement follows:]

3647

3648 \*\*\*\*\* INSERT 5 \*\*\*\*\*

3649 |

3650 Mr. {Markey.} Thank you, Mr. Cavaney, very much.

3651 Our next witness is Mr. Jim Rogers. He is the CEO of  
3652 Duke Energy Group. Mr. Rogers has more than 20 years'  
3653 experience as a chief executive officer in the electricity-  
3654 utility industry. In addition to his position with Duke  
3655 Energy, he is the chairman of the Edison Foundation and co-  
3656 chair of the Alliance to Save Energy.

3657 We welcome you back, Mr. Rogers. Whenever you are  
3658 ready, please, begin.

3659 Mr. {Rogers.} Good afternoon. Thank you very much,  
3660 Chairman Waxman, Chairman Markey, Ranking Members Barton and  
3661 Upton, and members of the committee. I am Jim Rogers, CEO of  
3662 Duke. I am delighted to be here today and delighted to have  
3663 an opportunity to support and discuss the discussion draft  
3664 before us.

3665 More than 30 years ago, I started my career as a  
3666 consumer advocate, fighting rate increase at utility  
3667 companies. I sit here today as a consumer advocate on behalf  
3668 of the 11 million customers that we provide electric service  
3669 to in five states, also as a consumer advocate for those  
3670 consumers in the 25 states where more than 50 percent of the  
3671 electricity comes from coal.

3672 To supply our customers, we are the third largest

3673 generator of electricity in this country, third largest coal,  
3674 third largest nuclear. We have a very diverse mix of coal,  
3675 nuclear, natural gas, hydropower, and we reflect much of the  
3676 mix of generation in this country. We also have invested in  
3677 renewable such as wind. We have 500 megawatts under  
3678 operation and 5,000 megawatts under development in the  
3679 Western United States. We are also investing in biomass,  
3680 where our goal is to build 10 to 12 50-megawatt bio power  
3681 plants throughout the U.S. over the next five years.

3682 I have been an early, long-time advocate for climate-  
3683 change legislation. I was a founding member of USCAP. In  
3684 our business, we plan for 40 to 50 years, and one of the  
3685 reasons that I have been such a supporter of clear  
3686 legislation on carbon is so that I will have the certainty  
3687 that it will allow me to plan. I would have the certainty  
3688 with respect to the roadmap forward. And most importantly,  
3689 because we are the third largest emitter of CO2 in the  
3690 country, I recognize that I am part of the problem and that  
3691 we need to be part of the solution. And as I look out over  
3692 the next period of time, between now and 2050, we recognize  
3693 that every plant that we own and operate today will be  
3694 retired and replaced. So if the mission is to provide low-  
3695 carbon generation in the future, but we need to get started  
3696 now with a clear path forward, and so I appreciate the work

3697 that you all have done in bringing this discussion draft  
3698 forward at this time.

3699         But while I support climate-change legislation, I also  
3700 recognize the importance of getting the carbon legislation,  
3701 so it works not only for the environment but also for our  
3702 customers. I know how difficult it is to achieve the right  
3703 balance. USCAP's blueprint was developed after years of  
3704 difficult discussion and seemingly endless negotiations. We  
3705 are pleased the discussion draft includes many of our key  
3706 recommendations from the blueprint, including a market-wide  
3707 cap and trade program, a cap trajectory that falls within the  
3708 blueprints recommendations, although I would note the early  
3709 caps are on the aggressive end of the range, where someone  
3710 has said they have to hit the goalpost. It provides for  
3711 cost-containment mechanisms, such as offsets, banking and  
3712 borrowing, and multiyear compliance. It also provides  
3713 provisions for research and deployment of carbon capture and  
3714 storage to ensure that coal remains a choice.

3715         The environment is indifferent as to how the allowances  
3716 are distributed. Consumers and businesses are not.  
3717 Timetables and targets, in my judgment, assure the  
3718 environment integrity of the bill. The key is in the  
3719 transition. Of course, the elephant in the room is the  
3720 mission section on how allowances will be allocated, a

3721 critical issue for many of us at the table, and most  
3722 importantly for our customers. And I know that you all plan  
3723 to work on this because there is much work that needs to get  
3724 done to make this a reality.

3725         The other thing I would point out is that it is critical  
3726 to get this transition right, and we at USCAP spent a lot of  
3727 time focusing on that, and within the blueprint are specific  
3728 provisions that really address how we make the transition and  
3729 why getting the transition right is so critical.

3730         In closing, I would briefly mention nuclear power.  
3731 Early today, Secretary Chu mentioned it and his support for  
3732 it. Any serious long-term carbon-reduction plan is an empty  
3733 plate unless we, as a nation, commit to building zero-  
3734 emission nuclear power plants. Other countries meeting  
3735 carbon-reduction commitments will be relying on nuclear, and  
3736 we shouldn't count it out.

3737         In concluding, we believe it won't be cheap; it won't be  
3738 easy; it won't be quick. But I must be fair, and legislation  
3739 must be now. Thank you very much.

3740         [The prepared statement follows:]

3741 \*\*\*\*\* INSERT 6 \*\*\*\*\*

3742 |

3743           Mr. {Markey.} Thank you, Mr. Rogers, very much. Our  
3744 next witness, Ms. Frances Beinecke, is the president of the  
3745 Natural Resources Defense Council and is on the Steering  
3746 Committee of the U.S. Climate Action Partnership. She has  
3747 worked with NRDC for more than 30 years and has held  
3748 leadership roles in several other environmental  
3749 organizations.

3750           We welcome you back before this panel, Dr. Beinecke.  
3751 Whenever you feel comfortable, please, begin.

3752           Ms. {Beinecke.} Thank you very much, Mr. Chairman, and  
3753 members of the committee, thank you for the invitation to  
3754 testify to testify today on this Earth Day as a member of the  
3755 U.S. Climate Action Partnership. I am Frances Beinecke,  
3756 President of NRDC.

3757           Chairman Waxman and Markey and Ranking Members Barton  
3758 and Upton, thank you for holding this hearing on the American  
3759 Clean Energy and Security Legislative Proposal. The  
3760 discussion draft is an excellent starting point for enacting  
3761 comprehensive energy and climate legislation this year.  
3762 Passing effective climate legislation to address the eminent  
3763 threat of global warming is NRDC's highest priority, and it  
3764 is vital to enact legislation as quickly as possible.

3765           We have known for several years that the scientific data

3766 on global warming points towards urgent action, and now the  
3767 economic data is telling us that action is required as well.  
3768 Rather than a reason for delay, the current recession  
3769 amplifies the importance of acting quickly. If this Act were  
3770 enacted tomorrow, millions of clean-energy jobs would be  
3771 created, starting right away, and we anticipate there will be  
3772 minimum increased energy costs in the near term, because the  
3773 limits on carbon emissions proposed in this would not go into  
3774 effect until 2012, and by that time, the current recession  
3775 should be in the rearview mirror.

3776 Inaction is simply not an option. Carbon regulation is  
3777 moving forward. Last week, the EPA acted on what the law and  
3778 science require and formally found what we have known for  
3779 many years, that carbon dioxide emissions endanger public  
3780 health and the environment. Congress has the opportunity to  
3781 shape how carbon is controlled, going forward, and this  
3782 committee is at work on it right now. If we delay and  
3783 emissions continue to grow, it will become much harder to  
3784 avoid the worst impacts of climate going haywire. In short,  
3785 a slow start means a crash finish, with steeper and more  
3786 costly emission cuts required for each year of delay. If we  
3787 enact legislation this year, we can unleash American  
3788 innovation and tackle this global challenge right now.

3789 Today, I want to focus on three critical issues:

3790 allocation of allowance value, cost containment, and  
3791 international action. The allocation of the allowance value  
3792 is a major issue for the committee to consider and was a  
3793 central component of the U.S. Climate Action Partners  
3794 Blueprint for Legislative Action. USCAP strongly endorses an  
3795 approach for distributing emission allowances that leads to  
3796 achieving public objectives and not private windfalls. USCAP  
3797 believes that we can jumpstart the transition to a clean-  
3798 energy economy without creating undue burden on consumers by  
3799 initially distributing a significant portion of the  
3800 allowances to capped entities and economies sectors  
3801 particularly disadvantaged by the secondary effects of a cap.  
3802 This free distribution should be phased out over time with a  
3803 transition to a full auction.

3804         The Blueprint identifies principals to guide the fair  
3805 and equitable allocation of allowances. First, they should  
3806 go to end-use consumers of electricity, natural gas, and  
3807 transportation fuels. Specifically, a significant portion  
3808 should to regulated electric and natural gas local  
3809 distribution companies, LDCs, on behalf of their customers,  
3810 particularly in the early years of the program. The overall  
3811 costs of achieving the environmental goals will be minimized  
3812 if utilities used this value first to ensure that they are  
3813 investing in all cost-effective energy-efficiency

3814 opportunities, and then, rebate the remaining value to their  
3815 consumers in a transparent matter.

3816         Second, allowances should be given to energy-intensive  
3817 industries with trade-exposed commodity products that face  
3818 international competition, such as cement and steel. And  
3819 this will limit the outsourcing of U.S. jobs and the  
3820 outsourcing of U.S. emissions.

3821         Third, allowances should also be allocated for  
3822 competitive power generators, low-income consumers, and  
3823 worker transition and training, programs that drive low-  
3824 emission technology to commercial viability, programs to  
3825 reduce emissions from deforestation and forest degradation,  
3826 20-percent of emission sources, and adaptation needs of  
3827 vulnerable people in ecosystems at home and abroad.

3828         Previous major environmental initiatives, such as  
3829 controlling sulfur dioxide emissions, have proved far less  
3830 costly to accomplish than predicted. Nonetheless, there is  
3831 uncertainty about the cost of reducing global-warming  
3832 pollution, and that's why the USCAP Blueprint addresses cost  
3833 containment. Although there are some material differences,  
3834 the ACIS discussion draft reflects many of the measures  
3835 discussed in the Blueprint. These include a broadly  
3836 inclusive cap, emissions trading, unlimited banking of  
3837 allowances, and effective multiyear compliance periods. The

3838 discussion draft also includes a larger role for emission  
3839 offsets, provided that they meet, and I think this is  
3840 crucial, strong environmental quality standards.

3841 Finally, the discussion draft includes a strategic  
3842 offset and allowance-reserve pool, intended to prevent  
3843 allowance price spikes by releasing addition offsets and/or  
3844 borrowed allowances into the market in the event of  
3845 excessively high allowance prices.

3846 The third issue I want to discuss briefly is  
3847 international action. It is critical that the United States  
3848 provides a path forward in environmental discussion as we  
3849 lead to Copenhagen in the fall, and we need to provide key  
3850 tools in the legislation to aid our climate negotiator in  
3851 delivering a strong global warming solution, and we think the  
3852 draft addresses this effectively as well. I want to thank  
3853 you for the opportunity to testify and look forward to  
3854 questions.

3855 [The prepared statement follows:]

3856

3857 \*\*\*\*\* INSERT 7 \*\*\*\*\*

3858 |  
3859           Mr. {Markey.} Thank you, Dr. Beinecke, very much. Our  
3860 next witness is Ms. Meg McDonald, who is the director of  
3861 global issues, Alcoa. She also served in Australia as  
3862 Australia's Ambassador for the Environment, where she was the  
3863 lead negotiator for the Kyoto Protocol and has advised  
3864 several Australian Government Trade Ministers. We welcome  
3865 you, Ms. McDonald.

3866           Ms. {McDonald.} Thank you, Mr. Chairman, Chairman  
3867 Waxman, Ranking Members Barton and Upton, and members of the  
3868 committee. Thank you for the opportunity to testify today as  
3869 a member of the United States Climate Action Partnership, or  
3870 USCAP.

3871           I am here today to express Alcoa's support for  
3872 comprehensive climate legislation this year. We and others  
3873 in USCAP have welcomed the comprehensive approach taken in  
3874 the American Clean Energy and Security Act. We, like the  
3875 other colleagues at this table that you have heard, believe  
3876 that climate change is a global issue, which requires  
3877 leadership and immediate action from every sector of society.

3878           Alcoa is one of the world's largest producers of  
3879 aluminum and alumina. We are active in all segments of the  
3880 industry from mining, refining and smelting to rolling and  
3881 extrusions with some 850,000 employees in 34 countries. The

3882 majority of our manufacturing base is here in the United  
3883 States, and two-thirds of our smelting capacity, representing  
3884 30,000 U.S. jobs. The current global economic situation has  
3885 meant significant and difficult changes in that manufacturing  
3886 profile here in the United States and elsewhere.

3887 Aluminum is a globally and heavily traded, energy-  
3888 intensive commodity, for which the global price is  
3889 benchmarked according to the London Metal Exchange. Since  
3890 last June, we have experienced dramatic drops in global  
3891 demand, and the price of aluminum has dropped by more than 60  
3892 percent. Alcoa has put in place a detailed plan to weather  
3893 the economic storm, with the hope of emerging stronger when  
3894 the economy recovers.

3895 The energy-intensive nature of primary aluminum smelting  
3896 has meant that the location of aluminum production is driven  
3897 by energy costs. It has also meant that the industry has  
3898 been a leader in energy efficiency. We also believe that  
3899 aluminum is part of the solution to climate change because of  
3900 its properties of lightweight into transport solution and  
3901 because of its infinite recycling potential.

3902 Since 1990, Alcoa has reduced own direct greenhouse gas  
3903 emissions by 36 percent, and that is despite a significant  
3904 increase in our production over that same period. Alcoa has  
3905 been part of USCAP as a founding member and here today

3906 because we believe an economy-wide cap and trade program, as  
3907 part of a comprehensive U.S. climate program can be  
3908 constructed as to minimize the impact on the economic  
3909 competitiveness of U.S. business like Alcoa as we make our  
3910 transition to a lower carbon economy.

3911         There is a board consensus that the leakage cause must  
3912 be solved to achieve effective climate legislation, and we  
3913 and our USCAP colleagues look forward to working with the  
3914 committee achieve this. There has never been such a critical  
3915 time for us to be focusing on this issue as many businesses  
3916 like Alcoa, our workforce, and our communities confront the  
3917 very difficult challenges created by the current economic  
3918 downturn. During the evolution towards a comprehensive  
3919 global emissions trading regimes, transition arrangements for  
3920 energy-intensive trade-exposed sectors like ours will be  
3921 necessary to protect our competitiveness and our employees'  
3922 jobs. It will be essential to protect the employment base  
3923 and contribution to the U.S. economy that industry such as  
3924 aluminum, steel, chemical, glass, and paper represent, and we  
3925 think the most important way of doing this is through the  
3926 allocation process as well as additional complimentary  
3927 measures. USCAP set out our own detailed thinking on the  
3928 importance of inclusion of these in climate legislation in  
3929 our Blueprint, and we have included in that additional cost-

3930 containment measures, such as offsets in banking, the  
3931 technology program, international linking of trading, and  
3932 movement to a global system. Importantly, we also believe  
3933 there should be specific credit for early action by companies  
3934 such as ours, which have been reducing our emissions  
3935 voluntarily.

3936         Alcoa believes that a cap and trade program that follows  
3937 this approach will be successful in reducing emissions while  
3938 avoiding shifting jobs, investments, and emissions from the  
3939 U.S. to other nations. This sort of leadership from the  
3940 United States is essential for setting the stage for reaching  
3941 global agreement on climate change. We also believe that a  
3942 climate-change framework establish on this basis will bring a  
3943 new vision and policy direction which will spur innovation  
3944 through the U.S. economy and elsewhere. And we think if we  
3945 act wisely and swiftly, this will assist in restoring growth,  
3946 increasing jobs, and providing the means for America to be a  
3947 global leader in low-carbon technology.

3948         Chairman Waxman and Markey, Alcoa joins our other USCAP  
3949 colleagues in looking forward to working with you, the  
3950 subcommittee, and the committee in your objective in  
3951 reporting a comprehensive and effective energy and global  
3952 warming bill to the United States House of Representatives by  
3953 Memorial Day.

3954 [The prepared statement follows:]

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3956 \*\*\*\*\* INSERT 8 \*\*\*\*\*

3957 |

3958           Mr. {Markey.} Thank you, Ms. McDonald, very much.

3959           And our next witness is Mr. David Crane. He is the  
3960 president and CEO of NRG Energy. Mr. Crane has been the  
3961 president and CEO of NRG, a wholesale power-generation  
3962 company, since December of 2003. We welcome you back, Mr.  
3963 Crane, and we look forward to your testimony.

3964           Mr. {Crane.} Thank you, Chairman Markey and Chairman  
3965 Waxman, Ranking Member Barton and Upton. Chairman Markey, as  
3966 you mentioned, we are a competitive power-generation company,  
3967 or wholesaler, as you say. We produce approximately 70  
3968 million megawatt hours per year, and like others in our  
3969 industry, we do it in as a safe, inexpensive, and  
3970 environmentally benign manner as postwar technology permits,  
3971 and when I talk about postwar in this case, I am talking  
3972 about post-World War II technology permits. But as global  
3973 concern over climate change has grown, the management,  
3974 employees, and possibly most importantly, the shareholders of  
3975 NRG are aware that we have a moral imperative to reduce  
3976 substantially the carbon intensity of our electricity  
3977 production. Today, I welcome the opportunity to appear at  
3978 your committee as you begin consideration of whether there  
3979 should be an economic imperative aligned alongside that moral  
3980 imperative to reduce emissions.

3981           And I wanted to also offer you three general  
3982 observations. First, combating climate change is  
3983 inextricably linked to our country's future energy usage and  
3984 to a national energy policy, and the best answer lies in the  
3985 center, where both environmental protection and energy  
3986 security can be enhanced while avoiding the prospect of  
3987 short- to medium-term dislocation to the economy. This, in  
3988 my mind, is the fundamental principal upon which USCAP was  
3989 founded, and it informs virtually all of the recommendations  
3990 set forth in the USCAP Blueprint. A shared concern of five  
3991 environmental groups and 25 major American corporations led,  
3992 over the course of two years, to a carefully calibrated and  
3993 interlinked set of recommendations. As such, we believe all  
3994 members of the committee should carefully consider these  
3995 recommendations, whether you are more motivated by reducing  
3996 emittances of carbon in the atmosphere or by reducing  
3997 remittances of American wages and wealth to the Middle East  
3998 in order to pay for foreign-source fossil fuel.

3999           My second major point is that the potential embedded  
4000 within climate-change legislation for regional wealth  
4001 transfer and value destruction is real but can be effectively  
4002 addressed with a sensible balanced between auctioned  
4003 allowances and allowances allocated on a year-end basis and  
4004 with complimentary measures for clean coal and other core

4005 technologies, including new, advanced nuclear projects.  
4006 Wind, solar efficiency, and smart meters are all worthy  
4007 technologies that our company is investing in, and they all  
4008 deserve government support. But the fact is that if you run  
4009 the numbers, it is nearly impossible to see how we win the  
4010 battle against climate change without the successful  
4011 demonstration and global deployment of clean coal technology  
4012 and advanced nuclear plants.

4013         The transitional, partial allocation approach, which  
4014 France has referred to, will help drive these investments as  
4015 well as easing regional imbalances. It will give emitters  
4016 like us a financial runway of sufficient length to gain lift  
4017 in our efforts to innovate and invest in low-carbon  
4018 technologies that are critical to success in the fight  
4019 against global warming. This is important because carbon  
4020 will not be conquered just through increased funding of the  
4021 nation's research. It will be conquered when companies in  
4022 the electricity sector, like Duke and NRG, lead the way in  
4023 demonstrating cutting-edge, low-carbon technology at scale  
4024 and deploying it en masse.

4025         To illustrate, in 2006, NRG announced a plan to invest  
4026 up to \$15 million and 10,000 megawatts of new low- or no-  
4027 carbon projects in this country. Since that announcement, we  
4028 have made significant advances in major investments in wind,

4029 solar, CCS, and advanced nuclear development. We are doing  
4030 all of this as part of our philosophy that NRG wants to be a  
4031 first-mover in the technologies, the projects, and the  
4032 businesses that will be spawned by sustainability and climate  
4033 change.

4034         Third and finally, the electricity industry, currently,  
4035 is the largest emitting sector in the United States, but as  
4036 it decarbonizes, it will become a central part of the  
4037 solution, both in our ability to export our new technology to  
4038 electric industries in other emitting nations, and in our  
4039 ability to displace other forms of carbon-producing energy in  
4040 other sectors in this country. At the center of our fossil  
4041 fuel energy basis right now are the car, the high-voltage  
4042 transmission system, and the base-load power plants that feed  
4043 it. Congress is in the position, right now, to alter  
4044 fundamentally and for the better each of the three, but the  
4045 electric car or the smart grid and low- to no-carbon base  
4046 load power, emphasizing clean coal and advance nuclear, they  
4047 need to be advanced together as part of a coherent and  
4048 coordinated national energy and environment policy, and I  
4049 believe it is exactly right to base that energy and  
4050 environmental policy on a free-market basis like the cap and  
4051 trade approach contemplated by the Waxman-Markey discussion  
4052 draft. That will enable us to unleash the power of our free-

4053 market system on this issue. And even in the weakened state  
4054 of the American economy, as an unabashed capitalist, I would  
4055 say American capitalism remains the most potent peacetime  
4056 force for a change on this planet.

4057       To do this, if we do this, I think all of us need to  
4058 work, again, to define and find the common ground in the  
4059 center. If we succeed, I am convinced that when the history  
4060 is written of our age, it will be said that the first giant  
4061 leap for mankind into the post-hydrocarbon age began in the  
4062 ninth year of the third millennium, when the United States  
4063 Congress pointed the American public away from consuming the  
4064 earth's resources in a non-sustainable way so that the life  
4065 experience that all of us have enjoyed will be enjoyed  
4066 equally by future generations of Americans. Thank you,  
4067 Chairman.

4068       [The prepared statement follows:]

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4070 \*\*\*\*\* INSERT 9 \*\*\*\*\*

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4072           Mr. {Markey.} Thank you, Mr. Crane, very much, and we  
4073 thank all of you.

4074           And now, we will turn to questions from the committee  
4075 members, and we will begin by recognizing the gentleman from  
4076 California, Mr. McNerney.

4077           Mr. {McNerney.} Well, thank you, Mr. Chairman. I want  
4078 to thank the panel for coming here today, and I find your  
4079 testimony good and interesting.

4080           In your testimony, Mr. Holliday, you mentioned that  
4081 DuPont reduced greenhouse gas emissions while reducing costs.  
4082 Am I correct on that?

4083           Mr. {Holliday.} Yes, we reduced 72-percent greenhouse  
4084 gas emissions over the period of time described, and we did  
4085 it by letting the resources go to the very best projects, so  
4086 every project we authorized at least earned 12-percent  
4087 return, which was good for our shareholders, and so that is  
4088 what we think is so key about the cap and trade approach,  
4089 that it allows the resources to go to the best projects so  
4090 people can trade and develop those. We think it makes a big  
4091 difference.

4092           Mr. {McNerney.} Was there a net job gain or net job  
4093 loss, or was it neutral?

4094           Mr. {Holliday.} For the United States, it was a net job

4095 gain from that.

4096           Mr. {McNerney.} Ms. McDonald, I am going to ask you a  
4097 similar question. You said that Alcoa reduced the GHG  
4098 emissions by 36 percent. Was there an increase in cost or a  
4099 decrease in cost for operations as a result of that program?

4100           Ms. {McDonald.} It was a result of some major changes  
4101 in reducing our process emissions, and that has resulted in  
4102 not only decreased costs but has increased our efficiency  
4103 greatly.

4104           Mr. {McNerney.} Well, thank you, and that brings me to  
4105 my point, which is the thing that excites me about this bill  
4106 is that if we do it correctly, we can get to the point where  
4107 we pay less for energy and have better results and create a  
4108 lot of green jobs in the process.

4109           I would like to ask the other panel members that I  
4110 haven't asked yet if they agree with that optimism. Do you  
4111 think we can reduce energy costs and have a better quality of  
4112 life and create jobs at the same time? Starting with Mr.  
4113 Cavaney.

4114           Mr. {Cavaney.} I believe on the front end, one of the  
4115 things that is particularly important about looking at a  
4116 framework as USCAP has pulled together, it has a number of  
4117 linked elements that help reduce the higher costs and the  
4118 more volatility that we are likely to see in the earlier

4119 years. But as time goes on, as my colleague had mentioned,  
4120 what you will find is you find over time the efficiencies  
4121 will get better, and better, and better, and therefore, there  
4122 is less need and less volatility in the system, and then, you  
4123 will end up having made that transition in the most effective  
4124 way.

4125 Mr. {McNerney.} Thank you. Mr. Rogers?

4126 Mr. {Rogers.} I think, over time, you are going to see  
4127 the price of electricity rise. I think that is inevitable,  
4128 and that is why it is critical that we get the regulatory  
4129 models correct so that there are adequate investments in  
4130 energy efficiency so that we are able to give consumers  
4131 control over their use of electricity, and over time, they  
4132 can reduce their bills by reducing their usage levels and  
4133 productivity gains.

4134 But it is inevitable that the price of electricity is  
4135 going to rise over the coming decades, and that comes off a  
4136 decade-and-a-half where the real price of electricity has  
4137 actually fallen.

4138 Mr. {McNerney.} Well, that is going to happen.  
4139 Electricity prices are going to rise anyway, but I believe we  
4140 can get ahead of that cost curve with efficiency gains, and  
4141 that is the point that I am trying to make.

4142 Mr. {Rogers.} I don't want to mislead you. I think the

4143 price of electricity is going to rise in every event. It  
4144 will rise in compliance with carbon legislation, but the way  
4145 we address that is with productivity gains in its use,  
4146 because what I envision is not only do we retire and replace  
4147 existing plants with new plants that will drive prices up,  
4148 but as we go from an analog grid to a smart grid, that will  
4149 drive prices up. In 30 states where they have adopted  
4150 renewable portfolio standards, that will drive prices up, and  
4151 over time, you are going to see prices continue to rise.

4152         The big question is can we incent energy efficiency  
4153 investments to control usage and get productivity gains.

4154         Mr. {McNerney.} Thank you. Ms. Beinecke?

4155         Ms. {Beinecke.} I would just like to emphasize that  
4156 there are tremendous opportunities in energy efficiency. In  
4157 California, you've had great experience. Even though the  
4158 cost may be higher per kilowatt hour, the usage is left  
4159 because of the very great mandate for energy efficiency  
4160 there, so energy efficiency is the cheapest, fastest way to  
4161 get real reductions in carbon emissions and that will  
4162 decrease the direct cost to the consumer, so the quicker that  
4163 we can unleash that opportunity, the better it will be for  
4164 the consumers across the country. And there's just huge  
4165 opportunities in the building sector, in the appliance  
4166 sector, in commercial buildings, at home, et cetera, so there

4167 is a huge opportunity there.

4168           Mr. {McNerney.} Mr. Crane, you've got about six  
4169 seconds, but they will give you another 30, maybe.

4170           Mr. {Crane.} Thank you, Chairman. Congressman, to me,  
4171 the answer to your questions depends on what your view of  
4172 future fossil fuel prices are. Our company's view is that  
4173 they are more likely to be like they were last June than they  
4174 are right now. And if you think about that, and you think  
4175 about where there money for fossil fuels goes, that there is  
4176 no doubt in my mind that the American public will be more  
4177 prosperous with the adoption of the type of technologies that  
4178 will be incented by this legislation.

4179           Mr. {McNerney.} Thank you.

4180           Mr. {Markey.} The gentleman's time has expired. The  
4181 chair recognizes the gentleman from Texas, Mr. Barton.

4182           Mr. {Barton.} Mr. Chairman, are there members on that  
4183 side that haven't asked any questions yet? Have we  
4184 recognized all of them?

4185           Mr. {Markey.} No, we have not.

4186           Mr. {Barton.} Then, let us recognize that.

4187           Mr. {Markey.} Thank you. We appreciate that. That's  
4188 very generous. Thank you.

4189           We will recognize next the gentleman from Maryland, Mr.  
4190 Savanes.

4191 Mr. {Savanes.} I appreciate it very much, and I  
4192 appreciate that courtesy as well.

4193 Mr. {Barton.} Just give me a vote when we go to mark  
4194 up.

4195 Mr. {Savanes.} There's no free lunches anymore in  
4196 America are there?

4197 Thanks for your testimony. I want to come back a little  
4198 bit to the discussion you just had about the extent to which  
4199 the expectations about consumer efficiency effect the models  
4200 or the projections. And obviously, my view of the auction  
4201 question, in other words how much free distribution there  
4202 should be, at what levels and for how long, versus auctioning  
4203 these allowances, as well as my view of what percentage of  
4204 the proceeds ought to be coming back to the ratepayers, is  
4205 significantly affected by my confidence of lack of confidence  
4206 in the consumer, with some kind of rapidity, put these  
4207 efficiencies in place. And I assume that the models that you  
4208 have done are putting kind of assumption in place as to how  
4209 quickly you can move with respect to the consumers  
4210 efficiencies.

4211 But it is very elusive, and there is a kind of leap-of-  
4212 faith element in many different aspects of this issue. I was  
4213 curious of what the incentives are that you are thinking of  
4214 offering to your ratepayers to become more efficient

4215 themselves, to take ownership of this, beyond, simply, their  
4216 desire to escape the added burden that's going to come from  
4217 increased electricity cost as you indicated. I mean what  
4218 kind of partnerships are you going to enter into? What sort  
4219 of programs will there be? And anybody can answer that.

4220 Mr. {Rogers.} I think what is going on in virtually  
4221 every state that we operate in, there is a total rethink of  
4222 the regulatory model. In California, they adopted  
4223 decoupling, but quite frankly, that leaves companies just  
4224 economically indifferent and not much gets achieved through  
4225 economic indifference. What will fundamentally change  
4226 investment in energy efficiency will be a model that incents  
4227 companies to invest in reducing megawatts in the same way we  
4228 are incented to meet the growing demand to building a  
4229 megawatt.

4230 So we have proposed in each of the states we operate in  
4231 a save-a-watt approach, which basically compensates us in the  
4232 same way for reducing megawatts, so what you can see is that  
4233 we will take hundreds of millions and billions of dollars  
4234 over time, once the regulatory model is in place, to actually  
4235 invest in our customers, to help them have productivity gains  
4236 in their use of electricity, and I believe what will come, if  
4237 we look back five to ten years from now, what we call energy  
4238 efficiency today will be very primitive compared to what will

4239 be done over the next decade. And I believe that will be  
4240 driven at the state level. That will be driven by changing  
4241 the regulatory models.

4242 Mr. {Savanes.} So your investment could be seen as  
4243 another way as giving the consumer kind of a rebate or a  
4244 reward for being more efficient, and then, it kind of feeds  
4245 on itself.

4246 Mr. {Rogers.} Well, I actually think that technology is  
4247 really the key here. I have come to believe to that putting  
4248 a list of 15 things on the refrigerator for a family to do to  
4249 reduce their usage is going to get the job done. Yes, there  
4250 will be 10 percent of the people or 15 percent of the people  
4251 that would do that, but the ability to deploy technology,  
4252 where you are writing software for the home, software for  
4253 business, so you are using technology to match up to the  
4254 comfort and convenience of the customer, and that  
4255 automatically happens, so it is back of mind in the same way  
4256 when somebody walks into a room and throws a switch, the  
4257 lights come on. Nobody asks is that nuclear? Is that coal?  
4258 Is that wind?

4259 We hope that the technology will evolve and the software  
4260 will be written that it automatically occurs, and those  
4261 energy efficiency gains occur in the home by the way is been  
4262 programmed.

4263 Mr. {Savanes.} Okay, my time is up. I just wanted Mr.  
4264 Chairman to note, for the record, this morning, I was at the  
4265 U.S. Coast Guard yard in Baltimore, which, today, became the  
4266 only U.S. Coast Guard facility in the world that is now going  
4267 to be powered 100-percent by renewable energy. It is a  
4268 landfill. They are capturing methane, piping it under the  
4269 highway and bringing it into the Coast Guard Yard, and it is  
4270 a real model for the federal government in partnership with  
4271 private enterprise to take the lead. Thank you.

4272 Mr. {Markey.} I thank the gentleman very much, and we  
4273 now turn and recognize the gentleman from Vermont, Mr. Welsh.

4274 Mr. {Welsh.} Thank you, Mr. Chairman and Chairman  
4275 Waxman. I thank the panel members for your leadership on  
4276 this.

4277 As we have been having discussions and getting questions  
4278 from both sides of the aisle, a major concern is the economy  
4279 and what the impact is of taking action. And I would say  
4280 there is two schools of thought here. One is that if we take  
4281 action, it actually will threaten jobs, and I think many of  
4282 people who take that position, it is not just political. It  
4283 is a legitimate concern. And the other, and I think this is  
4284 embodied by the bill that Mr. Waxman and Mr. Markey have  
4285 presented to us for discussion, embraces the confidence that  
4286 we can actually create jobs, and it is the better way for our

4287 economy.

4288 I want to get your comments on that and how we address  
4289 these concerns that some people are making about jobs,  
4290 because we can either get stalled or answer the legitimate  
4291 concerns that are raised. And I will start, Mr. Holliday,  
4292 with you. I mean you have heard all of the concerns, and  
4293 probably, you have had those discussions within your own  
4294 company.

4295 Mr. {Holliday.} Exactly, and that is why we think in  
4296 our Blueprint, the way we have talked about phasing things  
4297 in, taking into account how the allowances are allocated so  
4298 we don't have a sudden shock to the system is very important.

4299 What I see from our company is in solar systems,  
4300 biofuels, energy efficient systems for home, there are so  
4301 many opportunities, if we had the market here, we would  
4302 develop the manufacturing and new jobs here. It is a very  
4303 complex situation. I don't want to say it is simple, but I  
4304 think it is very possible.

4305 Mr. {Welsh.} But your company is affected. I mean if  
4306 we get it wrong, then employment could be adversely affected  
4307 in your company, and obviously, you have got a responsibility  
4308 to maintain your bottom line for your shareholders, so you  
4309 have come to this conclusion that it is better to act.

4310 Mr. {Holliday.} Absolutely, without question.

4311 Mr. {Welsh.} And Mr. Rogers, how about you? Same  
4312 thing, I mean you are in an industry where the more you  
4313 produce and sell, the better your bottom line, and you are  
4314 talking about a new way of doing business.

4315 Mr. {Rogers.} We believe now is the time to act.  
4316 First, we are going to get more bang out of the buck that is  
4317 spent in that part of the stimulus, the Green Stimulus, if we  
4318 have a price of carbon and a roadmap going forward. So we  
4319 think that gives us a chance to amplify on the dollars that  
4320 have been spent.

4321 Secondly, I believe it is not shovel-ready jobs that we  
4322 are going to produce. We are going to produce real 21st  
4323 century jobs. As you start to look at deployment, in  
4324 Indiana, we are building a coal gasification facility, and  
4325 that will be the cleanest coal plant, but it also will become  
4326 a site where we can do carbon capture and sequestration and  
4327 start to scale it. So in my judgment, there will be lot of  
4328 jobs developed and tied to having a price on carbon and  
4329 having a clear vision with respect to the roadmap forward.

4330 Mr. {Welsh.} Thank you. Ms. McDonald, how about Alcoa?  
4331 They have considered this, obviously.

4332 Ms. {McDonald.} Yes, we have, and we think that the  
4333 long-term certainty that this legislation can provide is  
4334 really important in providing that sort of confidence over

4335 the long term, because we believe that this is an issue that  
4336 really requires action and requires U.S. leadership. And we  
4337 believe the sort of technology that will be unleashed if we  
4338 get the framework right will provide a basis for us to invest  
4339 and for the lightweight technology has to be a market-faring  
4340 product.

4341 Mr. {Welsh.} I want to get your opinion on a thought  
4342 that came to me as I was listening to the concerns raised by  
4343 folks who were worried about us taking action. It is about  
4344 jobs, and the people have their points that this will help or  
4345 will hinder. And I share the view that you have expressed  
4346 that it will help.

4347 But will there be any problem, as people on the panel  
4348 see it, if we put into the bill some mechanism by which we  
4349 could do an assessment every six months or so about what the  
4350 impact was of renewable electricity standards or what the  
4351 impact was of the cap and trade so we are answering the  
4352 question specifically as we go along and building into the  
4353 legislation some capacity to make adjustments that in the  
4354 implementation of anything complicated will require  
4355 adjustments?

4356 I'll start, Mr. Crane, with you.

4357 Mr. {Crane.} I don't exactly about the six-month thing,  
4358 but I think the USCAP blueprint talks specifically about

4359 cost-control mechanisms to make sure that you are moderating  
4360 the system as it goes along and looking at impact.

4361 Mr. {Welsh.} Okay, Mr. Beinecke?

4362 Ms. {Beinecke.} I think it is a good idea. I think  
4363 that there has been a lot of studies done by different  
4364 organizations, looking at what the job potential is. There  
4365 certainly a lot of believe that the jobs are there,  
4366 documenting it, and then calibrating areas that need  
4367 incentives and those that don't. It is a good thing to note.

4368 Mr. {Welsh.} Thank you. I think my time is up. I will  
4369 yield back. Thank you all very much.

4370 The {Chairman.} [presiding] Thank you, Mr. Welsh. Mr.  
4371 Blunt?

4372 Mr. {Blunt.} Thank you, Mr. Chairman. I don't want to  
4373 unnecessarily repeat anything that has already been done  
4374 here, but I do have some questions. I know Mr. Rogers, in  
4375 his submitted testimony, raised the issue about the renewable  
4376 electricity standards that were included and had concerns  
4377 about those. Does anybody else share the concerns about the  
4378 renewable standards?

4379 Mr. Rogers, can you talk to me just a little bit more  
4380 about that, how you think those standards could better serve  
4381 the purpose of the bill here?

4382 Mr. {Rogers.} My judgment is, as a cap and trade, once

4383 you let the market work, the market will select the right  
4384 technologies, and the price on carbon will allow that to  
4385 happen. We already have 30 states with a renewable portfolio  
4386 standard, so we are on the way to that happening. And what  
4387 you will note is every one of them is different, because  
4388 every state is different in terms of the availability of  
4389 renewables.

4390         The other point I would make is, in a sense, a renewable  
4391 portfolio standard, the way it is designed, it is picking  
4392 technologies when those technologies have already got  
4393 significant tax stimulus that are investment tax credits,  
4394 bonuses. We are all aware of that as a wind producer, the  
4395 availability of those incentives. So I think, in a sense,  
4396 having a cap and trade system and a renewable portfolio  
4397 standard, in a sense, is belt and suspenders, and a picking  
4398 of technologies is not needed under a robust cap and trade  
4399 system.

4400         Mr. {Blunt.} Should nuclear be one of the available  
4401 renewables?

4402         Mr. {Rogers.} If the goal line is a low-carbon future,  
4403 you would expand and transform the renewable portfolio  
4404 standard into a low-carbon standard. But now, we are on the  
4405 road to command and control, and it raises a fundamental  
4406 question about whether you really need a market approach cap

4407 and trade if all of a sudden you are moving to a 60-percent  
4408 renewable low carbon portfolio because you are picking the  
4409 technologies rather than letting the market pick it.

4410         Mr. {Blunt.} Now, you think it would be practical at  
4411 all for the states to determine in their state what their  
4412 renewable standard should be for their states? I thought I  
4413 heard you almost suggest that that was a workable  
4414 alternative.

4415         Mr. {Rogers.} I think it is a workable alternative, and  
4416 that is why 30 states have stepped up and done it, but you  
4417 will notice in many of the states, what they have done is  
4418 they have included energy efficiency as a component. The  
4419 other thing they have done is they have a provision that  
4420 provides an economic out because people on the state level  
4421 are concerned because they are closer to the consumer. They  
4422 are concerned about the price impact of a renewable portfolio  
4423 standard, particularly if the prices are extremely high and  
4424 will drive the price of electricity up in a sharp and  
4425 unyielding way for consumers.

4426         Mr. {Blunt.} Thank you. Mr. Holliday or anybody else  
4427 can address this as well. Do you have any sense as where w  
4428 move into where we are less competitive because of our  
4429 utility rates that the two huge developing nations, India and  
4430 China, would not try to move in and take advantage of that

4431 option, and is there any evidence that they have ever held  
4432 back to not compete in a way that takes advantage of their  
4433 new situation?

4434 Mr. {Holliday.} Well, I think we ought to see China and  
4435 India as serious competitors to the country, and that is why  
4436 I believe this action that we are talking about today is the  
4437 right step if we can become leaders in more efficient energy.  
4438 The overall equation is how efficient is our energy? How  
4439 about the cost of our energy versus the cost in China or the  
4440 cost in India? So we have to make sure that that is the  
4441 case. Very much, they are our competitors.

4442 Mr. {Blunt.} And is the timeframe that we are getting  
4443 there the right timeframe in your opinion?

4444 Mr. {Holliday.} I think we need to lay out the game  
4445 plan, and the industries will know what the opportunities  
4446 are. My judgment is that science and the technology will  
4447 come along faster than we currently think once we know  
4448 exactly where the goal line is.

4449 Mr. {Blunt.} So how long do you think it would take us  
4450 to get to the point that we were a lower-cost energy  
4451 producer? The transition here is actually what bother me the  
4452 most. It is not the goal. It is getting there at a time  
4453 that doesn't create a competitive disadvantage for us.

4454 Mr. {Holliday.} We are working on solar technology now.

4455 Solar is only 15 percent efficient. Fifty percent of the  
4456 solar cells are made in China. They are my customers. I  
4457 make the raw materials here for those solar cells. So if we  
4458 could put in the right systems, I don't see why we couldn't  
4459 move that solar cell manufacture here very fast and start  
4460 making a difference with only a 15 to 30 percent efficiency.  
4461 I can't give you an exact timeline how long that will take,  
4462 but it will be over a decade.

4463 Mr. {Blunt.} Well, how does cap and trade make this  
4464 more utility efficient?

4465 Mr. {Holliday.} If cap and trade does as Jim Rogers  
4466 described, lets the resources move to the most efficient  
4467 system, which is what is critical about it. That is what we  
4468 have done inside our company, but it will take time. This is  
4469 not a one- or two-year fix.

4470 Mr. {Blunt.} But aren't' you adding cost to the system?  
4471 I guess that is the timeline that I am most concerned about.  
4472 And Mr. Rogers, I am going to let you answer this, too,  
4473 because you obviously have an answer here, but go ahead, Mr.  
4474 Holliday.

4475 Mr. {Holliday.} Yes, I think there will be some  
4476 increase in the costs in the system, just as Jim described.  
4477 I think it is critical that as you enact this legislation  
4478 that it have the right safeguards that if China and India

4479 don't ultimately follow, we have got some ways to make  
4480 adjustment.

4481 Mr. {Blunt.} And is it your opinion are any of those  
4482 safeguards in the legislation now as you have looked at it?

4483 Mr. {Holliday.} What we have proposed in our Blueprint  
4484 from USCAP, there is. I haven't studied the detailed  
4485 legislation to be 100-percent sure.

4486 Mr. {Blunt.} Mr. Rogers?

4487 Mr. {Rogers.} Congressman, I think that you have really  
4488 focused on one of the key issues, and that is this: we have  
4489 go to get the transition right, and that is to smooth out the  
4490 cost impact on consumers on a long enough period, and we have  
4491 got to map up the transition period to our technology  
4492 roadmap and the availability of technologies at prices that  
4493 make sense. And I think we can do that.

4494 And I would say one other thing, and this really goes to  
4495 the earlier question. I believe now is the time to address  
4496 carbon legislation, when the economy is in a recessionary  
4497 period, because we will be more focused on the economics of  
4498 this than the theology of it. And what I mean by that is  
4499 this: we can address climate. We can put a price on carbon.  
4500 We can put a cap on emissions and let it decline over time.  
4501 The key is to get the transition right, and that is a longer  
4502 discussion about allocation of allowances.

4503 Mr. {Blunt.} Thank you.

4504 The {Chairman.} Thank you, Mr. Blunt. We have several  
4505 members who should be recognized next, because they didn't  
4506 get a chance to ask questions of the last panel, but I would  
4507 their permission, since I have leave for another appointment  
4508 to be able to say some points and ask some question first.

4509 Without objection, I am grateful to my colleagues for  
4510 this opportunity.

4511 Let me just say I have been involved in environmental  
4512 battles for all of the time I have been in Congress, and I  
4513 have never seen anything like USCAP and this panel that is  
4514 making this presentation today. So often what we have seen  
4515 is one side environmentalist and the other side is industry,  
4516 and then they fight it out. What you have done is come  
4517 together over a two-and-a-half year period and discussed  
4518 these issues and tried to figure out some way to accomplish  
4519 the economic goals and the low-carbon future that we are  
4520 going to need, so I want to thank you very much for the work  
4521 you have done.

4522 Mr. Rogers, just to follow up on some of the points that  
4523 came out in your answers to Mr. Blunt's questions, when  
4524 Secretary Chu was asked why do we need a renewable portfolio,  
4525 and why don't we just have the cap and trade get us to where  
4526 we want to do, his response was that it would take awhile for

4527 cap and trade to get us to some of these points. It would be  
4528 quite a while down the road, and he though a renewable  
4529 portfolio, which doesn't specific whether it is solar or wind  
4530 but specifies among different renewables, that would get us  
4531 some reductions right away. Do you disagree with that?

4532 Mr. {Rogers.} I listened carefully to Secretary Chu's  
4533 answer this morning that you suggested, and my point of view  
4534 kind of rolls out like this: one is, if you look at the study  
4535 by EPA, you see a significant increase in wind already. And  
4536 that is driven, and I say that as someone who is in the wind  
4537 business, by the tax incentives that exist today, and with  
4538 the new incentives, we are driven even more to invest.

4539 I think the key point from my standpoint, you have got  
4540 30 states with renewable portfolio standards. An approach  
4541 would be to say every state should have a renewable  
4542 portfolio, but leave it up to the states to determine what  
4543 makes the most sense for them. And a way forward to that  
4544 would be have a date certain for the states to design one,  
4545 because quite frankly, not one size fits all, and the fact  
4546 that you have 30 very different renewable portfolio standards  
4547 today reflects the differences that exist in the different  
4548 geographies and the different sensitivities around the  
4549 country.

4550 So we can achieve what Secretary Chu is talking about by

4551 having every state have a renewable portfolio standard, but  
4552 let each of them design their own.

4553       The {Chairman.} Well, that is an interesting concept.  
4554 Would you also allocate some help to the ratepayers in all of  
4555 those states where there is a renewable portfolio standard  
4556 driving up the cost.

4557       Mr. {Rogers.} What do you mean by help?

4558       The {Chairman.} Well, under the USCAP proposal, the  
4559 utility would be able to lower the rate for the ratepayer as  
4560 a result of the increase of cost from the cap and trade.  
4561 Here we would be talking about an increase in costs as a  
4562 result of the renewable portfolio. Do you think that the  
4563 ratepayers ought to get some assistance from the money  
4564 generated from the cap and trade system?

4565       Mr. {Rogers.} It would be my judgment, and maybe I am  
4566 just a purist, but to the extent you have a cap and trade  
4567 system, and you did the allocation of allowances, I would tie  
4568 it to the cap and trade system, and I wouldn't try to add or  
4569 subtract from it, because it puts us on a slippery slope that  
4570 if you are going to do it for that, why not for this, or why  
4571 not for the next thing. Or as we have seen, some people have  
4572 suggested using these revenues for purposes far beyond  
4573 solving our climate challenge. I am a purist when it comes  
4574 to--

4575           The {Chairman.} Well, I would object to that, but this  
4576 is related to our climate problems.

4577           Dr. Beinecke, what are your thoughts on both of the  
4578 issues?

4579           Ms. {Beinecke.} I think that one of the things that we  
4580 have seen, particular in the renewable area is that the  
4581 uncertainty with sort of stop-and-start annual tax credits,  
4582 and one of the things that Secretary Chu said and I think is  
4583 really important is long-term consistent signals to allow  
4584 investors to really make a commitment in the sector of  
4585 renewal. And I think a renewable electricity standard  
4586 actually does that because it provides a long-term,  
4587 consistent signal to the investor to allow major investment  
4588 in that are and increase the percentage that renewables  
4589 provide.

4590           We have seen, just over the last year, sort of stops and  
4591 starts and uncertainty in investments, and if we are really  
4592 thinking about unleashing clean energy over the long term, a  
4593 signal for that long-term consistency is important, and I  
4594 think a renewable electricity standard does that.

4595           The {Chairman.} Well, I see my time is about to expire,  
4596 but we have heard repeatedly today concerns that passing  
4597 legislation like the discussion draft would cripple the  
4598 economy, yet you represent the core of our economy,

4599 manufacturing, utilities, and energy, so you are giving us  
4600 the exact opposite message. You are saying that our economy  
4601 and your company's success depends on the passage of our  
4602 legislation. Is that the conclusion I am to draw? And I  
4603 guess that could be a yes-or-no answer.

4604 Mr. {Rogers.} If you get the transition right, I think  
4605 the answer is yes.

4606 Mr. {Holliday.} Yes.

4607 Mr. {Cavaney.} Transition, yes.

4608 Ms. {McDonald.} Transition is the key. That is why we  
4609 are here, but certainly, as well, it is critical that we have  
4610 legislation which provides long-term certainty.

4611 Mr. {Crane.} I agree with my colleagues, yes, on the  
4612 transition.

4613 The {Chairman.} Thank you.

4614 Mr. Sullivan, you didn't get a chance to ask questions,  
4615 so I am going to recognize you next.

4616 Mr. {Sullivan.} Thank you, Mr. Chairman. My question  
4617 is for Mr. Cavaney. How are you doing?

4618 The Waxman-Markey Discussion Draft would include  
4619 petroleum refiner within the definition of covered entities  
4620 in the cap and trade provision of this bill. Recognizing  
4621 that the legislation is currently silent on the choice  
4622 between allocation and auction, can you please provide your

4623 thoughts on this issue?

4624           Mr. {Cavaney.} We are covered, and we are also unique  
4625 in our classification. We are covered for both our own  
4626 greenhouse gas emissions that our refineries and other  
4627 facilities make, but we are also, if you will, the point of  
4628 regulation for the end users of our products that we  
4629 manufacture for all of their greenhouse gas emissions, so we  
4630 really dip in two buckets like no one else does.

4631           One of the challenges that we have is that unlike LDCs  
4632 and others, we don't have any legal mechanism where we can  
4633 pass along costs or talk among colleagues. That's basically  
4634 prohibited by law. There are a number of studies that have  
4635 been out in the public that would indicate that if we got  
4636 zero allocation, that would assume we are able to pass along  
4637 100 percent of our costs, and that is just not the case.

4638           There are only two conditions where you can assume you  
4639 might be able to pass along all of your costs. One is that  
4640 you have perfectly inelastic demand, and the other is if you  
4641 have totally elastic supply, and the U.S. refining industry  
4642 has neither of those, so what we are trying to do is working  
4643 with the staff and trying to update some studies, because any  
4644 former studies really don't reflect the world that we are  
4645 going to be in. And we believe that we will come up with  
4646 some situation that we would like to present that will show

4647 there is some merit to considering us in an allowance  
4648 allocation system as a result of our uniqueness.

4649 Mr. {Sullivan.} And one other question, Mr. Cavaney,  
4650 retention of good-paying American jobs is at the forefront of  
4651 policymakers minds as we debate this bill. The Waxman-Markey  
4652 discussion draft contains a provision that would supply  
4653 additional credit, known as rebates, to energy-intensive  
4654 industries that produce products that re heavily traded in  
4655 the international commerce. However, it is unclear whether  
4656 petroleum refining would qualify for these rebates in the  
4657 discussion draft. Your thoughts on this?

4658 Mr. {Cavaney.} We are the second most energy intensive  
4659 industry in America. We employ really good-paying jobs, and  
4660 it is not quite clear to us whether we are qualified under  
4661 that, but certainly, we would think we should be, because as  
4662 a result, right now, there is about 6,500,000 barrels of oil  
4663 of refining capacity that is being built outside of our  
4664 borders, much of which is being targeted to come into this  
4665 country, so if we don't have some similar protections and  
4666 some guidelines, we are concerned about leakage and  
4667 ultimately increasing imports at the expense of our domestic  
4668 production.

4669 Mr. {Sullivan.} Thank you, Mr. Cavaney.

4670 The {Chairman.} Mr. Braley?

4671           Mr. {Braley.} Thank you, Mr. Chairman. I want to  
4672 apologize for my voice. But I want to share the chairman's  
4673 enthusiasm for seeing such a diverse group of people here  
4674 today, talking about such an important issue to the future of  
4675 our economy, our national security, and our country.

4676           I was very pleased, Ms. McDonald, to see Alcoa's  
4677 presence with the USCAP. They have a huge production  
4678 facility in Bettendorf, Iowa, which I am very proud of, and I  
4679 am proud of the jobs they create, and the incredible  
4680 contribution they make to our national defense. But I am  
4681 also very proud of companies like John Deere, who also has a  
4682 presence in my district, saw fit to exercise a leadership  
4683 role in this important topic. And I think nothing brings  
4684 that home more than the reason I was late getting here is  
4685 because I was meeting with representatives IBM in the city of  
4686 DeButte, which is the oldest city in Iowa and is my district,  
4687 and IBM and DeButte are embarking on an important new  
4688 partnership that grew out of IBM's decision to locate a  
4689 global delivery facility in DeButte, creating 1,300 jobs.  
4690 And because DeButte has been at the forefront of some  
4691 innovative leadership in a small to medium-sized city in  
4692 sustainability, there is a perfect combination of forward  
4693 thinking by corporate America and a progressive community  
4694 that want to completely change the way they look at their

4695 energy footprint.

4696           What I would like the panel to do is start by sharing  
4697 some of the vision that each of your companies embarked upon  
4698 to lead you this table today and why this bill is so  
4699 important to the future of corporate America. Mr. Crane?

4700           Mr. {Crane.} I thought with such a far-reaching  
4701 question I would maybe get to go at the end. But our vision  
4702 starts from the fact that we recognize that we are a major  
4703 emittable of carbon, and that was not sustainable in the  
4704 future, and we expect to be around for a long time, and we  
4705 needed to get there.

4706           But to us, again being the capitalist and believe in  
4707 free market solutions, the opportunity here to sort of change  
4708 the society we live in and to create, for us, what is  
4709 essentially a low-growth industry, the electric industry as  
4710 it is now, this is a high-growth opportunity for us, and  
4711 particular when you look at the electric car, which for our  
4712 industry is really the air conditioner of the 21st century in  
4713 terms of electricity demand, we could be the solution, not  
4714 only for our sector, but for the transportation sector, so  
4715 that is what brought us to this place in time.

4716           Mr. {Braley.} Ms. McDonald?

4717           Ms. {McDonald.} We have had a similar journey, because  
4718 we recognize that by its primary production, it is a very

4719 energy-intensive process, and we have found that we could  
4720 successfully reduce our own process emissions, particularly  
4721 in our smelting business, and engage in a lot of energy-  
4722 efficiency projects. And we saw that this is something on  
4723 which we must act, and there were ways of doing so which  
4724 would be beneficial. And like Mr. Crane, we can see that  
4725 moving to a world where there is increased emphasis on  
4726 recycling, saving energy, using more recycled aluminum, and  
4727 it is an opportunity for us to reduce our energy demand, but  
4728 also to lower the resource overall. And so we can see growth  
4729 in using recyclable aluminum, using more aluminum in  
4730 transport for lightweight vehicles to save energy, to use  
4731 aluminum in buildings, not only because it is recyclable, but  
4732 also because it can create some more highly energy efficient  
4733 buildings, and so we see the opportunity for setting up a  
4734 long-term framework that will actually award those sorts of  
4735 energy efficiency and lower resource used, and so we can see  
4736 that that is going to be good for our company long-term and  
4737 help us restructure into that world and keep locations like  
4738 Bettendorf healthy and growing.

4739       Ms. {Beinecke.} There are so many clean tech companies  
4740 around the country who come into our company every day with  
4741 new ideas, new inventions, new technology. You see a huge  
4742 opportunity to unleash. And what they want to know are what

4743 are the rules? What is the system that we can do this under.

4744 There is just a clamor out there right now.

4745 Mr. {Braley.} Mr. Rogers?

4746 Mr. {Rogers.} In the 20th century, it was our company  
4747 and our industry's mission to provide universal access to  
4748 electricity. The reason we joined USCAP is because we  
4749 believe in the 21st century, our mission will be  
4750 fundamentally different. One will be to decarbonizes our  
4751 supply. Two will be to help our communities be more energy  
4752 efficiency. And thirdly, we believe that this translates  
4753 into energy security. Two statistics: 40 percent of the  
4754 emissions today comes from the power sector; 30 percent comes  
4755 from the transport sector. I can envision a world where you  
4756 decarbonizes the generation fleets in this country. With  
4757 plug-in hybrids and electric vehicles, we will have weaned  
4758 ourselves from foreign oil, and we will have the energy  
4759 security and independence that we all have dreamed about, and  
4760 I believe our industry can play a role in making that happen.  
4761 This is a first step on that journey.

4762 Mr. {Markey.} [presiding] The gentleman's time has  
4763 expired. The chair recognizes the gentleman from Texas, Mr.  
4764 Barton.

4765 Mr. {Barton.} Thank you, Mr. Chairman. Mr. Crane and  
4766 Mr. Rogers, the current draft has a renewable portfolio

4767 standard for electricity generation that does not include  
4768 nuclear power. It doesn't include new hydro, I believe, or  
4769 old hydro, and it doesn't include clean coal. Would you  
4770 gentleman support a clean energy standard that included those  
4771 energy sources?

4772 Mr. {Crane.} I would, yes.

4773 Mr. {Barton.} Okay, Mr. Rogers?

4774 Mr. {Rogers.} It would be my judgment with a cap and  
4775 trade system you don't need a renewable portfolio standard or  
4776 a clean technology standard, but if you are going to embrace  
4777 and pick wind, and solar is a winner because of their low  
4778 carbon, you should include nuclear as part of the low-carbon  
4779 standard.

4780 Mr. {Barton.} So your preference, Mr. Rogers, is to  
4781 have no renewable standard at all.

4782 Mr. {Rogers.} My preference is to leave it to the  
4783 states to make judgments about whether they need a renewable  
4784 portfolio standard in their state.

4785 Mr. {Barton.} Okay, Dr. Beinecke, do you have a  
4786 position on that?

4787 Ms. {Beinecke.} Yes, I should just say that USCAP  
4788 doesn't have a position on the renewable electricity  
4789 standard, so we are all speaking individually on this point.  
4790 We actually support the renewable electricity standard for

4791 the reason that I said earlier, which is predictability of  
4792 investment, long term.

4793 Mr. {Barton.} Would you expand the definition to  
4794 include some other things?

4795 Ms. {Beinecke.} I like the definition that is in the  
4796 bill now.

4797 Mr. {Barton.} So you don't want to include nuclear and  
4798 you wouldn't include clean coal?

4799 Ms. {Beinecke.} I wouldn't, no. I wouldn't.

4800 Mr. {Barton.} That is fair. Now, here is the \$64  
4801 question. All of you gentlemen and ladies that support this  
4802 cap and trade system, do you support it if they keep the  
4803 current draft and there are no free allowances? It is a pure  
4804 auction system. Mr. Crane?

4805 Mr. {Crane.} If it was 100-percent auction from the  
4806 first year, no, we would not.

4807 Mr. {Barton.} All right, Ms. McDonald.

4808 Ms. {McDonald.} Likewise, no, we would not support.

4809 Mr. {Barton.} Dr. Beinecke?

4810 Ms. {Beinecke.} We support what I talked about earlier  
4811 which is in USCAP, we designed an allocation system which the  
4812 free allowance is going to--

4813 Mr. {Barton.} I just need to know whether you want a  
4814 total auction like they current have or you think there

4815 should be allowances. I don't need a lecture on--

4816 Ms. {Beinecke.} No, I am just saying that we designed a  
4817 model, and that is what we support, the model in USCAP.

4818 Mr. {Barton.} So you do not support the current draft  
4819 because it doesn't have any free allowance.

4820 Ms. {Beinecke.} My understanding was that current draft  
4821 hadn't really defined how the allowances would get allocated,  
4822 and that was one of the discussions which is why we were  
4823 proposing USCAP's--

4824 Mr. {Barton.} I guess that is fair. Mr. Rogers?

4825 Mr. {Rogers.} I would oppose any legislation that had  
4826 100-percent auction.

4827 Mr. {Barton.} Okay, Mr. Cavaney?

4828 Mr. {Cavaney.} Oppose 100-percent auction.

4829 Mr. {Barton.} And Mr. Holliday?

4830 Mr. {Holliday.} Oppose 100-percent auction.

4831 Mr. {Barton.} All right, how many of you are CEOs or at  
4832 least decision makers in your company? I know Mr. Crane is  
4833 and Mr. Holliday is. I think Mr. Rogers is. How many  
4834 allowances does DuPont need, Mr. Holliday, either in tons or  
4835 in millions or billions of dollars?

4836 Mr. {Holliday.} I don't have a specific number, but  
4837 they are not nearly as critical to us as they would be to  
4838 some other companies in the equation.

4839 Mr. {Barton.} Okay, Mr. Rogers?

4840 Mr. {Rogers.} As I started the testimony, because of  
4841 the fact that we are regulated in the five states we operate  
4842 in, I am really speaking on behalf of my customers, and I  
4843 would say that any cap and trade system that allocates  
4844 allowances would start with a base period, and I would be  
4845 looking at 100-percent allowance allocation, year one.

4846 Mr. {Barton.} Okay, that's fair. Total free allowance,  
4847 year one. Mr. Crane?

4848 Mr. {Crane.} You know, we operate in competitive power-  
4849 generation markets like Texas.

4850 Mr. {Barton.} We love that you are in Texas and that  
4851 Mr. Roger's company. I am all for you guys being in Texas.

4852 Mr. {Crane.} The USCAP approach is based on net  
4853 compliance costs, so we produce, as an overall company in the  
4854 U.S., 64 million tons of carbon a year. We don't need carbon  
4855 allowances to cover all that because the cost of electricity  
4856 will rise to cover part of that. But the European system,  
4857 which as you know--

4858 Mr. {Barton.} Doesn't work.

4859 Mr. {Crane.} --lead to some windfalls, we can learn  
4860 from that and do it in such a way so there are no windfalls,  
4861 and all we are seeking in the early years is to cover our net  
4862 compliance costs and then to ratchet down on a transitional

4863 basis.

4864 Mr. {Barton.} My time is about to expire, Mr. Chairman.

4865 But there is a dichotomy. To go back to what Mr. Holliday

4866 said, you cannot have a system that puts a price on carbon

4867 and doesn't raise costs. If you have these free allowances,

4868 whether it is for a little bit of time or all of the time,

4869 then you don't get any benefit because you don't price it,

4870 and you don't bring the usage down.

4871 Now, there is another way to do it, and that is to use

4872 the Clean Air Act model where you set a regulatory

4873 compliance. You actually set a performance-based standard,

4874 do away with cap and trade, and there will be a Republican

4875 alternative that puts that on the table here in the very near

4876 future, Mr. Chairman. With that, I yield back.

4877 Mr. {Markey.} The gentleman's time has expired. The

4878 chair recognizes the gentleman from Arkansas, Mr. Ross.

4879 Mr. {Ross.} Thank you Mr. Chairman, and thank all of

4880 you for coming today. While I believe there are some good

4881 things in this bill, there are others that cause me to pause

4882 and give me concern, and hopefully, some of you in these

4883 panels can help me with some of that.

4884 I am going to speak first about the shorter the answers,

4885 the more questions I can ask, but I value your opinion, and I

4886 want to hear it.

4887           Renewable electricity standard, if the whole point to  
4888 this bill is to get carbon neutral, then, should it really  
4889 matter where the energy comes from; and therefore do we need  
4890 a renewable electricity standard? To any of you. Don't be  
4891 shy.

4892           Ms. {Beinecke.} I think there is a real opportunity to  
4893 unleash new technologies. As Secretary Chu mentioned  
4894 earlier, even with the cap, the cap is not going to get going  
4895 until after 2012, and we need to unleash technologies now.  
4896 We need to figure out how to incentivize them. That is one  
4897 way to do it. And certainly, we need more renewables to get  
4898 to a clean-energy economy, so that is a design to do it.  
4899 There may be other mechanisms, too, but unleashing that  
4900 renewable opportunity, I think, is key.

4901           Mr. {Rogers.} I would suggest, Congressman, that with  
4902 the tax incentives we have, that is going to stimulate  
4903 investment in renewables. The fact that 30 states have  
4904 renewable portfolio standards and other states are looking at  
4905 it, that is going to unleash investment in these  
4906 technologies, and in a sense, we don't need a national  
4907 standard for a variety of reasons that I have discussed that  
4908 is included in my testimony.

4909           Mr. {Ross.} Let me ask you this. You know, I believe  
4910 that in states where renewable works, we should be doing it.

4911 Unfortunately, I come from a state that is not a wind state.  
4912 Our options for renewable electricity are limited, which  
4913 means they would largely have to be imported at a higher cost  
4914 to our consumers.

4915         Let me ask you as it relates to the renewable  
4916 electricity standard, what you do think that means for those  
4917 of us in the Southeast, those of use in States like Arkansas,  
4918 where we are not wind states? Would it mean higher electric  
4919 bills for our working families and seniors, or how would we  
4920 go about trying to meet such a standard. I mean there is a  
4921 reason why the states that do not have one don't have one, as  
4922 it relates to a renewable electricity standard. You know, if  
4923 you were a working family, a senior in Arkansas, what would  
4924 this mean if the standard is passed? What would it mean, do  
4925 you believe, for them?

4926         Mr. {Rogers.} Congressman, I recently spoke at the  
4927 Clinton school, and this issue came up there in the questions  
4928 and gave me a chance to kind of think about it and respond to  
4929 it. And my judgment is if you look at the 30 renewable  
4930 portfolio standards we have today, they are all different  
4931 because every state has different resources. And clearly,  
4932 our company does business in the Carolinas, in Kentucky, in  
4933 Ohio, and in Indiana, and every state is different in terms  
4934 of the ability to produce wind or the availability of solar.

4935 All you have to look at is a wind map of the United States or  
4936 a solar map to see the uneven distribution of those  
4937 resources.

4938 The short answer to your question is for us that are not  
4939 blessed with wind or the right solar concentration, it is  
4940 going to mean higher prices without the ability to invest in  
4941 the technology within the state.

4942 Mr. {Ross.} I guess my concern is we are not a wind  
4943 state. And I think, you know, where we have wind, we should  
4944 use it. Where we have solar, we should use it. I think we  
4945 need to use more coal, but we need to clean it up and hold  
4946 the company's feet to the fire to invest in the new  
4947 technologies as they become available. We need to do more  
4948 nuclear if we are serious about global warming. There are  
4949 very few cleaner options. Natural gas, we need to do it all,  
4950 and everything we can move from the science lab to the  
4951 marketplace, I think we should.

4952 Anyone on this panel want to speak to how biomass is  
4953 defined in this, and a lot of us believe if the definition  
4954 was expanded that would help us some, but we still think we  
4955 would have a difficult time getting to the required percent  
4956 in the time allowed. Does anyone know anything about biomass  
4957 and how we might be able to expand the definition of that to  
4958 help states like Arkansas that simply don't have enough wind?

4959 No? Wrong panel.

4960 Finally, let me just ask this: I know there is going to  
4961 be some exemptions early on for steel, but I notice they are  
4962 not for refineries, and yet we are too dependent on other  
4963 countries for our energy. Should there be some type of  
4964 exemption on the front end for refiners, just as we have for  
4965 steel today?

4966 Mr. {Cavaney.} Yes, sir, the refineries are the second  
4967 most energy-intensive industry within the country. We now  
4968 currently import 10 percent of our crude oil to use in our  
4969 refineries. There is about 6-1/2 million barrels of world-  
4970 class refinery construction underway, a good measure of it  
4971 targeted for the United States, and if we don't protect those  
4972 150-odd refineries we have here and the good jobs that they  
4973 have, we are going to experience both loss of our own  
4974 production capability here, we are going to significantly  
4975 increase our imports, and we will have some leakage of jobs  
4976 elsewhere as people try to figure out how to compete.

4977 So we would like to work with the committee to take a  
4978 look at how we might be treated. We are unique. We are the  
4979 only covered entity who is both on their own emissions as  
4980 well as consumer emissions.

4981 Mr. {Markey.} Thank you, Mr. Cavaney, and we want to  
4982 work with you and with the gentleman from Arkansas.

4983           The chair recognizes the gentleman from Texas, Mr. Hall.

4984           Mr. {Hall.} Thank you, Mr. Chairman.

4985           I guess I would all of the witnesses this. You know,  
4986 most of us on this side, and most of the people I deal with  
4987 and hear from are convinced that we are going to have a very  
4988 weakened competitive position in the United States under cap  
4989 and trade, and I think you all recognize that and you  
4990 probably observed it from the questions from this side, and  
4991 maybe from folks that you have talked to on the streets that  
4992 think we are really going to be affected by it. I would like  
4993 to as each one of you, what evidence does USCAP have that  
4994 China and other developing nations would not take strategic  
4995 advantage of what is going to be a weakened competitive  
4996 position in the Unites States under cap and trade. You may  
4997 not agree with this. Do you all disagree when I say I think  
4998 we are going to have a weakened competitive position in the  
4999 Unites States under cap and trade? Is there anybody that  
5000 disagrees with that?

5001           Mr. {Holliday.} We must have provisions in the bill you  
5002 are preparing to take into account if China and India and  
5003 other key countries don't follow in a significant way that  
5004 keeps us competitive to make adjustments. But I think just  
5005 the opposite is true. If we start first, we have a much  
5006 better lead than letting them start first, and I think in the

5007 long run it will help us to be more competitive.

5008           Mr. {Hall.} But however we start, if it goes in the  
5009 direction it is going now, do you see any way in the world  
5010 that it can't present us with a very weakened competitive  
5011 position under cap and trade?

5012           Mr. {Holliday.} Absolutely, I think it will mean that  
5013 we will be the leaders in developing the new technologies.

5014           Mr. {Hall.} WE ill be paying, too.

5015           Mr. {Holliday.} Absolutely, and that is what creates  
5016 the incentives to create the new technologies, but I think  
5017 there is a real opportunity for us, but there will be  
5018 dislocations in doing that, and we must take that into  
5019 account for the retraining of people for the new jobs.

5020           Mr. {Hall.} For any of you that have ever been in Sears  
5021 or Wal-Mart or anywhere, when you bought something, you  
5022 noticed a piece of equipment there between you and the door  
5023 that you had to go buy, and it is called a cash register, and  
5024 you have to pay for what you get. And the United States is  
5025 going to have to do that, and there is just one way to do of  
5026 that I know, and that is in continued and increased taxes on  
5027 a generation not even born yet if we carry out the program  
5028 that this bill sets in motion.

5029           So if you don't agree that we are in a weakened  
5030 competitive position, just assume that we are going to be in

5031 a weakened competitive position. Give me some evidence that  
5032 you might have that USCAP has that China and other developing  
5033 nations wouldn't take strategic advantage of it.

5034 Mr. {Crane.} Congressman, again, we think safeguards  
5035 should put in against that. But I would also say there is an  
5036 opportunity cost here and that is there is very strong  
5037 evidence right now that China, as an industrial entity and as  
5038 an exporter, is moving right now to take the lead in the  
5039 electric gar, to take the lead in gasification, to take the  
5040 lead in nuclear power. These are all areas that are  
5041 partially driven by concern about carbon, so in a sense by  
5042 moving forward from where we sit, this give us, as a country,  
5043 and opportunity to lead.

5044 Mr. {Hall.} You mean you think we have a good  
5045 opportunity under cap and trade? You think the United States  
5046 does as this proposes?

5047 Mr. {Crane.} I absolutely thin that a well-thought-out  
5048 cap and trade system will create incentives for innovation  
5049 that this country is still the best at that can lead to  
5050 development of great export opportunities.

5051 Mr. {Hall.} Do you think China is gong by the cash  
5052 register?

5053 Mr. {Rogers.} Congressman, if I may, I would suggest to  
5054 you that if we design this bill right, we get the transition

5055 right, it will not weaken our economy. It will put us in a  
5056 position to be stronger over time. And I say that as someone  
5057 who, about 50 percent of the customers that I serve make less  
5058 than \$40,000 a year, and they are in those Wal-Marts, and  
5059 they are in Target, and they are looking for low prices, and  
5060 they are concerned about increases, and their disposal income  
5061 in the states that I serve are lower than the national  
5062 average per capita. So I wouldn't be sitting here today if I  
5063 thought a cap and trade bill would hurt them. One that is  
5064 poorly designed could hurt them. One that is poorly designed  
5065 could hurt our country vis-à-vis China or other evolving  
5066 countries, but the reality is, we need to get the design  
5067 right. If we get it right, it will make us stronger.

5068 Mr. {Hall.} But haven't you testified or someone  
5069 testified that your customer's rates would go up under the  
5070 cap and trade as you see it in this bill.

5071 Mr. {Rogers.} It is my judgment that our rates are  
5072 going to go up anyway as a consequence of aging  
5073 infrastructure and the need to reinvest in it. It is a  
5074 consequence of certain other factors.

5075 Mr. {Markey.} The gentleman's time has expired. The  
5076 chair recognizes--

5077 Mr. {Hall.} Mr. Chairman, may I just ask unanimous  
5078 consent to an article by the Washington Post on China Hopes

5079 Climate Deal Omits Exports. I ask unanimous consent to put  
5080 this in the record.

5081       Mr. {Markey.} A unanimous consent request has been made  
5082 by Mr. Hall in an unprecedented gesture by Mr. Hall to ask an  
5083 article from the Washington Post be put into the record, and  
5084 without objection, I want us all to be eyewitnesses to this  
5085 historical moment. So without objection, so ordered.

5086       [The prepared statement follows:]

5087 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

5088 |

5089           Mr. {Hall.} If you are going to accept it, I may just  
5090 withdraw it.

5091           Mr. {Markey.} It will be included in the record.

5092           The gentleman from Ohio, Mr. Space, is recognized.

5093           Mr. {Space.} Thank you, Mr. Chairman, and I would like  
5094 to thank the panel members for being here today and your  
5095 testimony today, but more so for your efforts with regards to  
5096 USCAP. I think it really represents a huge step forward in  
5097 approaching these very challenging issues. I am convinced  
5098 that there may be no more difficult issue for Congress to  
5099 deal with this term, of all of those compelling issues out  
5100 there, than climate change and would agree that something  
5101 must be done.

5102           A lot of us are concerned about the effects it is going  
5103 to have, clearly and I just heard some testimony about the  
5104 international marketplace and how this may affect our ability  
5105 to compete internationally. I agree with Mr. Rogers when he  
5106 says if it is done right, it may enhance our ability to  
5107 compete internationally. My question, however, relates to  
5108 domestic marketplaces issues, and specifically, I think most  
5109 of us who come from Middle America, from coal-producing  
5110 states, from heavy manufacturing states, have some concerns  
5111 about the regional discrepancies and inequities that this may

5112 occasion.

5113           Mr. {Rogers.} Well, one of the things that USCAP  
5114 Blueprint embodies is a focus on making the transition and  
5115 the allocation of allowances to help make the transition. We  
5116 spent a lot of time talking about that and recognized the  
5117 linkage between cost containment, and the transition so that  
5118 it doesn't hurt our economy during the transition, and we  
5119 each can speak to that.

5120           But I think what is missing in the bill today is really  
5121 is not addressed is the whole transition issue. How is that  
5122 done? I mean President Obama talk about 100-percent appears  
5123 to have pivoted off that a little. There is allocation of  
5124 allowance approach, and there are many approaches. So I  
5125 think the important thing that needs to get done is have a  
5126 robust conversation about the impact. In your state, 86  
5127 percent of the electricity in Ohio comes from coal. It would  
5128 be one of the most directly impacted of all of the states of  
5129 the country with respect to an auction system, for instance.

5130           Mr. {Space.} Let me stop you, Jim, because I have a  
5131 limited amount of time. I have only one more minute, and  
5132 there was one more issue I wanted to talk about, and that is  
5133 carbon capture and sequestration. The money that is devoted  
5134 to CCS in the bill, it is my hope, will help offset some of  
5135 those regional discrepancies that occur. Is that sufficient

5136 in your mind to help take care of some of those regional  
5137 discrepancies?

5138 Mr. {Rogers.} I think it is great to have obey invested  
5139 in carbon capture and sequestration, and over time, it will  
5140 make a difference in terms of developing the technology, but  
5141 the short answer is, what is going to solve the impact on  
5142 different regions is how you allocate the allowances, and  
5143 that needs to be addressed. That is the key to getting it  
5144 right.

5145 Mr. {Space.} I have got 30 seconds. Does anyone want  
5146 to weight in? All right, thank you. I yield back my time.

5147 Mr. {Markey.} The gentleman's time has expired. The  
5148 chair recognizes the gentleman from Pennsylvania, Mr. Pitts.

5149 Mr. {Pitts.} Thank you, Mr. Chairman.

5150 Mr. Holliday, you said there could be dislocations or  
5151 there would be dislocations as a result of cap and trade.  
5152 What industry groups might suffer dislocations? I assume you  
5153 mean job losses.

5154 Mr. {Holliday.} I think the opportunities is what I was  
5155 focusing on, and I believe that is for solar. I believe that  
5156 is for bio-produced fuels that can come from switch grass and  
5157 corn or products from this country that we are not using  
5158 productively today. And what we will need to do is take  
5159 people that are not employed or need retraining and be

5160 trained for these industries. So I think a companion piece  
5161 of this legislation should be the training to help people  
5162 move into the new industries that will be growing.

5163         Mr. {Pitts.} Well, how climate legislation treats the  
5164 manufacturing sector is a critical issue that is sometimes  
5165 overlooked. One specific concern of mine is how legislation  
5166 avoids unintended consequences in the manufacturing sector.  
5167 We can't pass a bill that creates huge disincentives against  
5168 future growth and manufacturing. How would you propose to  
5169 guard against a rapid rise in energy costs for the  
5170 manufacturing sectors?

5171         Mr. {Holliday.} First, I agree with you completely that  
5172 is very critical, and one thing we must watch very closely is  
5173 natural gas, because it is a key feedstock to so many  
5174 manufacturing plants in your state and across the country,  
5175 and we have got to find a way that the existing U.S. industry is  
5176 not totally disadvantaged, versus some places in the Middle  
5177 East. We need to take that into account in the bill.

5178         Mr. {Pitts.} I think it is well accepted that a cap and  
5179 trade program would make our energy costs and production  
5180 costs rise relative to countries without similarly stringent  
5181 emissions controls systems, namely China and India.

5182         There would be leakage. We had testimony in the hearing  
5183 earlier. There would be leakage of emissions in jobs to less

5184 rigorous regimes. What would your recommendations be for  
5185 reducing this leakage, anybody?

5186 Mr. {Crane.} I think we sound a bit like a broken  
5187 record, but I think getting the transition right, we have a  
5188 very adaptable economy with very adaptable companies in it,  
5189 and avoiding a shock to the system. And that is why we think  
5190 the committee should be very much focused on the transition  
5191 period, and then, we think the consequences that you are  
5192 referring to would not happen to significant extent.

5193 Mr. {Rogers.} One of our companies is in Indiana, and  
5194 we the largest utility in Indiana, and Indiana is one of the  
5195 largest steel producing industries, and NewCorp is one of our  
5196 largest customers. And if prices went up there dramatically,  
5197 and they could if the transition isn't done right, that could  
5198 lead to a shutting down of plants and a loss of jobs, so I  
5199 come back and say we have go to get the transition right, or  
5200 it could have a devastating impact on our economy. The whole  
5201 sport is around the transition and protecting our economy.

5202 Mr. {Pitts.} Well, if we pass the bill, as drafted, do  
5203 you foresee an increase in gasoline and electricity process,  
5204 Mr. Rogers?

5205 Mr. {Rogers.} I think without seeing what I described  
5206 in my testimony as the elephant in the room, no conversation  
5207 around how the transition is going to work, I can't answer

5208 that without seeing what that transition looks like. But I  
5209 do believe, over time, electric prices are going to rise in  
5210 every event, whether there is carbon legislation or not, and  
5211 I believe a renewable portfolio standard will add to pricing.  
5212 I think going to a smart grid will add to prices of  
5213 electricity. And I think, over time, carbon legislation will  
5214 lead to increase in prices. I think that is inevitable, and  
5215 as I said a few moment ago, it is not going to be cheap, and  
5216 we just need to face up to that and find a way to mitigate  
5217 the impact during the transition and find a way to create new  
5218 technologies and new jobs along the way.

5219 Mr. {Pitts.} Dr. Beinecke, you wanted to say something?

5220 Ms. {Beinecke.} Just to follow up to what Jim said, in  
5221 USCAP, we actually dealt with the issue of the transition,  
5222 and that is why we made the proposal that we did for how the  
5223 allocation of the allowances could take place. I mean the  
5224 issue of going to gas or disruption, regionally, additional  
5225 increased energy costs, we addressed those directly, and the  
5226 Blueprint, actually, is designed to provide a blueprint, in  
5227 fact, to address how that transition could take place. I  
5228 think that, in many respects, looking back at the document  
5229 gives our best thinking on how to have that transition occur  
5230 most smoothly.

5231 Mr. {Pitts.} And did you come up with a price cost to

5232 remove a ton of CO2 in the study?

5233 Ms. {Beinecke.} We didn't come up with a price, but we  
5234 came up with both how the allowances could be allocated, and  
5235 then what cost-containment mechanisms would be with offsets  
5236 and other mechanisms that are designed to do that, and  
5237 included a major investment in efficiency to lower the cost  
5238 of the consumption, so all of these things are linked, and I  
5239 guess that is another important aspect is the linkage.

5240 Mr. {Pitts.} Thank you. My time is up.

5241 Mr. {Markey.} The gentleman's time has expired. Just  
5242 for the record, it is Dr. Berneke for the banking crisis, and  
5243 it is Dr. Beinecke for the climate and energy crisis. They  
5244 are two different doctors for two different problems.

5245 The chair will recognize himself. We are waiting, by  
5246 the way, for two roll calls to be called imminently on the  
5247 House floor, at which point we will end the questioning for  
5248 this panel. We will then break for those roll calls, and  
5249 then we will move onto the next panel.

5250 I am going ask each one of you, if you could, quite  
5251 briefly, just give us a brief response to the foundation  
5252 principle of USCAP, which is that action is needed now.  
5253 Could you give your brief individual perceptions of what the  
5254 consequences are for failing to act now in your opinion over  
5255 the next generation.

5256 Mr. {Crane.} We are sitting on \$1.5 billion that we  
5257 want to invest in low- and no-carbon technology, and our  
5258 assets tend to be 50- to 60-year assets, so we need  
5259 certainly, and so we can start on this problem right now, but  
5260 we need what the guidelines are in the Waxman-Markey Bill.

5261 Mr. {Markey.} Thank you, Ms. McDonald?

5262 Ms. {McDonald.} Like Mr. Crane, our business is a long-  
5263 term business, and we certainly believe that this is an issue  
5264 that is a global issue. We are experiencing a lot of  
5265 regulatory movement in Europe and elsewhere around the world,  
5266 and so we believe that it is important for the United States  
5267 to act as well, and we are looking for the certainty that  
5268 that would provide for our own long-term investments as well  
5269 as the market stimulus that it would have for a lot of our  
5270 products.

5271 Mr. {Markey.} Thank you. Dr. Beinecke?

5272 Ms. {Beinecke.} We are part of USCAP because we think  
5273 that the science on global warming is powerful and  
5274 overwhelming and we need action soon. We recognize that a  
5275 solution that works for the environment has to work for the  
5276 economy, too, and that business has to be part of it, which  
5277 is why we were willing to sit at the table with these companies  
5278 and many more to try to work out our differences and come up  
5279 with a proposal that we think can move us aggressively to

5280 reduce carbon emissions and address the economic issues that  
5281 have been raised today in this hearing.

5282 Mr. {Markey.} Mr. Rogers?

5283 Mr. {Rogers.} Mr. Chairman, I adopt all of the  
5284 statements that have been made to date and would add to it by  
5285 saying that by starting now, it will translate into a lower  
5286 cost of compliance over time and a better ability to smooth  
5287 out the cost impact on consumers.

5288 Mr. {Markey.} Mr. Cavaney?

5289 Mr. {Cavaney.} Mr. Chairman, we are energy providers to  
5290 the consumer, and we need investment certainty because the  
5291 energy business is very long lead times and long investment  
5292 cycles. We think a national approach gives us an opportunity  
5293 to provide products without the variability of many states.  
5294 We think that is important, and we feel that at the end of  
5295 the day, the competitiveness that we will have globally,  
5296 having gone through this period and adopting a program like  
5297 outlined in the Blueprint makes great sense.

5298 Mr. {Markey.} And Mr. Holliday?

5299 Mr. {Holliday.} Two points: if we don't act, China will  
5300 take the lead from us in the technology, and that is serious.  
5301 Second, I lead, I lead a group of scientists, and they remind  
5302 me every day, this science is real, and we need to act now.

5303 Mr. {Markey.} Thank you. And Mr. Rogers and Mr. Crane,

5304 very briefly, what additional partnerships beyond USCAP do  
5305 you think your industries will have to reach with the  
5306 automotive industry, with the building industry, with energy-  
5307 efficiency industries, in order to put together partnerships  
5308 to solve the problem.

5309         Mr. {Crane.} Well, I think where the electric industry  
5310 has come up a little short is working on the transportation  
5311 sector, because again, we are focused on solving our own  
5312 problem, which is important, but the fact that we can solve  
5313 the transportation industry's problem is a big opportunity  
5314 for us, and I would like to see our industry do more in that  
5315 area.

5316         Mr. {Markey.} Great, Mr. Rogers?

5317         Mr. {Rogers.} I would say that in USCAP, many of those  
5318 industries are represented and have been part of this  
5319 discussion, and I would say that we are investing with  
5320 respect to the auto industry, and our own company has  
5321 invested significantly so that our grid will be ready when  
5322 the plug-in hybrid is available.

5323         Mr. {Markey.} And what does that future portend, Mr.  
5324 Rogers, in terms of the viability of the plug-in hybrid  
5325 future of our country?

5326         Mr. {Rogers.} I believe, first, we need to transform  
5327 our grid from an analog grid to a smart grid. We are on the

5328 way to do that. And secondly, I believe that produces an  
5329 opportunity with a plug-in hybrid, and I think it is sooner  
5330 rather than later because the amount of work that is going  
5331 into this is remarkable across the country. And as I talk to  
5332 many auto companies, they are at work with respect to this,  
5333 and so I believe it is in the future, and it will give us a  
5334 greater utilization of our fleet, and will lower cost over  
5335 time on a per-unit basis.

5336 Mr. {Markey.} Great, thank you, Mr. Rogers. And Mr.  
5337 Cavaney, we'll give you the final word.

5338 Mr. {Cavaney.} I think one of the key things is to  
5339 establish a price of carbon that will work across industries  
5340 that allows people to have metrics that are coming even  
5341 though you have to cooperate rather than produce the same  
5342 products, and I think that the efforts that are underway here  
5343 now are the beginning to try to identify what that is, I  
5344 commend you on it.

5345 Mr. {Markey.} Thank you, Mr. Cavaney, very much. The  
5346 chair's time is expired. I now turn and recognize the  
5347 gentleman from Michigan, the ranking member on the  
5348 subcommittee, Mr. Upton.

5349 Mr. {Upton.} Thank you, Mr. Chairman. As I indicated  
5350 earlier today, I am mostly concerned about jobs and the job  
5351 loss, particularly with a cap and trade bill. And Mr.

5352 Cavaney, you talked a little bit about the cost, multibillion  
5353 compliance cost that you will all suffer under. And you  
5354 know, that I think Aruba has got the largest refinery in the  
5355 world, Venezuela. Something tells me that Aruba is never  
5356 going to be underneath this legislation. We may try our best  
5357 to get India and China, but something tells me that Aruba is  
5358 not going to have the off ramp to proceed.

5359         What is going to happen? Can you give some type of  
5360 commitment as you look to produce gasoline for American? If  
5361 you have additional costs in the multibillions to comply with  
5362 this, what is the rest of the industry going to do in terms  
5363 of domestic refinery production here?

5364         Mr. {Cavaney.} Well, that is one of the things that we  
5365 worked on together with our colleagues in USCAP was to create  
5366 these complimentary measures that address situations like  
5367 this. Again, ours is an energy-intensive industry. We are  
5368 going to be susceptible to those threats of increased imports  
5369 if we are too disadvantaged, but there are the allowance  
5370 allocations. There are the opportunities of--

5371         Mr. {Upton.} But at some point, they come due. You  
5372 might have a year or two off, but at some point, they are  
5373 going to come back and hit you.

5374         Mr. {Cavaney.} But our other point is that if we get  
5375 the certainty for investment here, we produce world-class

5376 materials in our industries for creating new opportunities.  
5377 And we are investing very heavily, not only just in oil and  
5378 gas, so we think that given framework similar to this that  
5379 come through the system and giving that powerful signal is  
5380 going to be our best effort to compete against, as Mr.  
5381 Holliday as said, foreign nations which are not standing  
5382 still.

5383           Mr. {Upton.} Ms. McDonald, same question for you.  
5384 Alcoa produces primary new aluminum and recycled aluminum in  
5385 a pretty good quantity, I think, in this country. Is that  
5386 right?

5387           Ms. {McDonald.} Indeed.

5388           Mr. {Upton.} What is going to happen to Alcoa as it  
5389 relates to the percentages now, versus other countries where  
5390 you might have sizable operations? Isn't there going to be a  
5391 magnet to take those jobs someplace else if we impose these  
5392 new cost burdens on them?

5393           Ms. {McDonald.} I think our experience is very similar  
5394 to what has been described. The producers of aluminum in  
5395 Russian and China, now, are large because they have their own  
5396 markets. And there is going to be a global regime impacting  
5397 greenhouse gas emissions. Each country is going to be  
5398 regulating it differently, but we think that for the United  
5399 States to start to move now to provide that sort of long-term

5400 certainty and to provide the sort of transition and cost  
5401 containment that we proposed as part of the USCAP Blueprint  
5402 would be the required conditions for us to get ahead of that  
5403 game and to reduce the costs over the long term.

5404 Mr. {Upton.} Okay, I am running out of time. Thank  
5405 you. Mr. Rogers, you confessed that you are the third-largest  
5406 emitter. What percentage of electricity, now, do you produce  
5407 that would be considered under a sort of Upton-Rogers  
5408 definition of renewable?

5409 Mr. {Rogers.} We are producing about 500 megawatts of  
5410 wind.

5411 Mr. {Upton.} But as a percentage?

5412 Mr. {Rogers.} It is a very small percentage. I think,  
5413 nationally, wind represents about one percent of the total.

5414 Mr. {Upton.} So are you below one-percent wind now?

5415 Mr. {Rogers.} We are, but if you look at our nuclear,  
5416 about 96 percent of our electricity comes from coal and  
5417 nuclear, 70 percent from coal and the remainder from nuclear.

5418 Mr. {Upton.} As you know, I am one that supports using  
5419 nuclear, which is greenhouse-gas emission free, to be  
5420 counted, let the market work to that end. But say we are not  
5421 able to get that provision in. We are going to try, but let  
5422 us say we are not able to get that in, and we have the  
5423 definition that passed as the Udall-Platts Amendment in the

5424 last Congress. How much will it cost you, Duke Energy, to  
5425 meet a 25-percent standard by 2025?

5426 Mr. {Rogers.} I don't have that number at my  
5427 fingertips, but I will send it to you and submit it for the  
5428 record.

5429 Mr. {Upton.} Would it be sizable?

5430 Mr. {Rogers.} It will.

5431 Mr. {And the last question that I have, I have four  
5432 seconds left. I had breakfast this morning with the Chairman  
5433 of DTE. One in three customers in that region of Michigan  
5434 are in arrears on their bills. Hundreds of millions of  
5435 dollars will be uncollected. It is the same with other  
5436 utilities around the country, more than 20 percent. What is  
5437 the percentage today for Duke Energy that is uncollectable?

5438 Mr. {Rogers.} It is much lower than that, but it varies  
5439 from state to state, but I would be delighted to submit that  
5440 number to you, also.

5441 Mr. {Markey.} The gentleman's time has expired. The  
5442 chair recognizes the gentleman from Texas, Mr. Green.

5443 Mr. {Green.} Thank you, Mr. Chairman, and I appreciate  
5444 the opportunity for the hearing. Mr. Cavaney, I know a lot  
5445 of these questions may have been asked by different members,  
5446 and the whole panel, but it's kind of like Congress, we say  
5447 it is not said unless all of us say it, so we may have some

5448 duplication.

5449 I know the USCAP Blueprint for legislative action called  
5450 for the fuel-related GHG performance standards. Does the  
5451 low-carbon fuel standard as written into the draft align with  
5452 the USCAP Blueprint for legislative action that is called  
5453 for, and if not, how is it different?

5454 Mr. {Cavaney.} No, sir, the Blueprint suggest that we  
5455 not have an overlay of a low-carbon fuel standard on top of  
5456 renewable fuel standards, and there is very good reasons why.  
5457 A discussion draft has what I would call a donut hole in  
5458 there. There is a period of time where from 2014 to 2022, we  
5459 are to produce a low-carbon fuel with decreasing amounts, but  
5460 during that entire period, we are not permitted to include  
5461 all of the renewable fuels that we have already incorporated  
5462 and will be incorporating into our renewable fuel standard.  
5463 Also, there is a reach back to 2005, which does not give us  
5464 permission to have a baseline anymore forward. We in North  
5465 American and parts of South America rely on heavier fuels,  
5466 which makes it much, much harder without the use of renewable  
5467 and other things to reduce our standards, so we are going to  
5468 have a very real problem trying to satisfy the consumer  
5469 during that period, so we would suggest a closer look at the  
5470 Blueprint in trying to harmonize that so we end up with one  
5471 fuel.

5472           Mr. {Upton.} Having heard the question from my  
5473 colleague from Michigan for Alcoa, I used to have an Alcoa  
5474 plant in Houston, and it had a number of employees who were  
5475 constituents. The Waxman-Markey discussion drafts contains  
5476 the provision that would supply additional credits. What are  
5477 your thoughts regarding whether refineries should be eligible  
5478 for that, for those rebates? Do you think refineries ought  
5479 to be included with chemicals and aluminum and other  
5480 products?

5481           Mr. {Crane.} My view is you should take a look at each  
5482 of those and look at their exposure, and find out whether or  
5483 not you think that they are going to be somebody who is going  
5484 to have leakage during the process. We think, looking at our  
5485 industry, that we would like to work with the committee and  
5486 try to be able to gain that opportunity.

5487           I don't recall specific conversation about cogen within  
5488 USCAP, but I mean cogen, obviously is an exceedingly  
5489 efficient form of energy, so I think it's something that  
5490 should be supported as a matter of public policy.

5491           Mr. {Upton.} Thank you, Mr. Chairman, and I appreciate  
5492 the time and again the responses, because energy efficiency  
5493 should include cogeneration in some of our plants if we can  
5494 do it. Thank you.

5495           Mr. {Markey.} I thank the gentleman. And did you

5496 exclude the natural gas from the future base load for some  
5497 reason, Mr. Crane?

5498 Mr. {Crane.} I think natural gas plays a role in the  
5499 future base load, but we saw happened when the country  
5500 depends exclusively on natural gas for base load. It leads  
5501 to a price spike that is not good for the economy.

5502 Mr. {Markey.} Okay, thank you, Mr. Crane.

5503 The chair recognizes the gentleman from Florida, Mr.  
5504 Stearns.

5505 Mr. {Stearns.} Thank you, Mr. Chairman. My question is  
5506 for Mr. Rogers and Cavaney. It turned out in Europe, the  
5507 granting of free of allowances led to this huge windfall of  
5508 profits by the utilities. I guess the question is isn't the  
5509 USCAP just sort of a grand bargain to the get the business  
5510 support in exactly the same way? I mean that is what it  
5511 looks like to us on this side, anyway. You might comment on  
5512 that, Mr. Rogers, and then, you, Mr. Cavaney.

5513 Mr. {Rogers.} There are two important points. First of  
5514 all, what happened in Europe was a consequence of not  
5515 following what we did with the cap and trade system for  
5516 sulfur dioxide. One, they didn't have Basher's, so they  
5517 couldn't allocate it on Basher's, and secondly, they had a  
5518 short-term experimental period that created some gaming in  
5519 the process, and it had a fundamentally different regulatory

5520 regime for power companies. They had deregulated, entirely,  
5521 the industry there. So you have a different fact  
5522 circumstances here in the U.S. today.

5523 Mr. {Stearns.} Okay, I appreciate that.

5524 Mr. {Rogers.} But here is the second important point,  
5525 and that is this: under our proposal all of the allowances go  
5526 directly to a local distribution company or a local utility,  
5527 which are regulated by the state, and there are no windfalls  
5528 to utilities or corporations with respect to the granting of  
5529 allowances under our proposals. That is one of the great  
5530 myths that have floated around, and it is just wrong.

5531 Mr. {Stearns.} Okay, and Mr. Cavaney?

5532 Mr. {Cavaney.} Yes, it is called free allocation and  
5533 there is a misnomer there. Really, the intent is that this  
5534 allowance that is made is to cover the unrecoverable costs of  
5535 implementation here so ultimately the beneficiary of this is  
5536 a softening of the volatility and increased prices that the  
5537 consumer may experience about that, and there is an  
5538 opportunity to look at these things and we are not going to  
5539 be repeating, as Mr. Rogers says, the kind of incidences that  
5540 occur in Europe.

5541 Mr. {Stearns.} Dr. Beinecke, we went on your website,  
5542 and your website states, ``New nuclear power plants are  
5543 unlikely to provide a significant fraction of future U.S.

5544 needs for low carbon energy. NRDC favors more practical,  
5545 economical, environmentally sustainable approaches to  
5546 reducing the United States and global carbon emissions.''  
5547 Now, here is a power source that emits zero carbon dioxide.  
5548 Why is this not a solution to reduce carbon emissions based  
5549 on what your website says? I mean, it seems to me that you  
5550 should be at least neutral on this.

5551 Ms. {Beinecke.} I would say we are generally neutral  
5552 because we don't oppose the existing 20 percent that is  
5553 already provided by nuclear power. What we are really saying  
5554 there is that we think there is tremendous opportunity in  
5555 efficiency first and foremost, in renewables, in new  
5556 technologies that need to be unleashed, that nuclear power is  
5557 a mature power source in this country that has, you know,  
5558 been with us for decades and it will continue to be, but what  
5559 we are looking at is, what do we need to unleash in the  
5560 future to really reduce carbon emissions, and those are new  
5561 technologies that and new investments--

5562 Mr. {Stearns.} Well, nuclear--

5563 Ms. {Beinecke.} --that haven't been experienced yet.

5564 Mr. {Stearns.} But nuclear has zero carbon dioxide and  
5565 no carbon emissions and you want to reduce carbon emissions.

5566 Ms. {Beinecke.} Well, what I said is that I wouldn't  
5567 reduce the 20 percent that is there but that what we are

5568 looking for, particularly from NRDC's point of view, is, what  
5569 are the new things that we have to bring online, and the bill  
5570 is really designed to unleash the area of energy efficiency  
5571 and appliances and homes and buildings which is both  
5572 incredibly cost effective, actually earns money rather than  
5573 costs money. So what we are focusing on is what we think the  
5574 solutions are going forward that are not yet on the table,  
5575 and we think, you know, nuclear is on the table and it will  
5576 continue to be on the table and it will be a part of the  
5577 solution--

5578 Mr. {Stearns.} Do you think--

5579 Ms. {Beinecke.} --but we don't have to be the advocate  
5580 for it.

5581 Mr. {Stearns.} Do you think there should be a title in  
5582 this bill for nuclear? Right now there--

5583 Ms. {Beinecke.} I don't think it is necessary. I think  
5584 there is a title in the 2005 energy bill, the 2007 energy  
5585 bill. I don't think that all of the subsidies and programs  
5586 that were developed in those two bills have actually been  
5587 fully implemented yet, so do we need another one right now?  
5588 I would say no.

5589 Mr. {Stearns.} This is in fact based upon we have  
5590 already something that is practical, technologically  
5591 efficient and you don't think that we should have any

5592 encouragement for nuclear. I understand.

5593 Ms. {Beinecke.} That isn't what I said. I am sorry,  
5594 sir. What I am suggesting is that there was a lot of  
5595 encouragement in the last two energy bills and that I don't  
5596 think that it is necessary at this time in this bill.

5597 Mr. {Stearns.} All right. Thank you, Mr. Chairman.

5598 Mr. {Markey.} The gentleman's time has expired. The  
5599 chair recognizes the gentlelady from California, Ms. Harman.

5600 Ms. {Harman.} Thank you, Mr. Chairman. I have been  
5601 sitting here for a few hours. I know you have too and so  
5602 have the witnesses but I want to say that the testimony of  
5603 this panel as far as I am concerned is the central testimony  
5604 that we need, and their ongoing advice is exactly for me the  
5605 roadmap forward for this committee for a couple of reasons.  
5606 Number one, most of you on the corporate side are in the  
5607 business of producing materials and fuels that are going to  
5608 be regulated under whatever we do. You know exactly  
5609 precisely what the impact of this regulation will be on you,  
5610 and I have listened carefully and all of you are saying that  
5611 you want certainty so that you can plan forward, and I have  
5612 also heard you say, or at least I heard Mr. Rogers say, and I  
5613 applaud it, that at a time of economic downturn, which we are  
5614 in, no one would quarrel with that, we can do this better  
5615 because we are more focused on the economics than the

5616 theology. Does anyone want to quibble with anything I just  
5617 said? No? Good.

5618         So my next idea, Mr. Chairman, is, instead of going to  
5619 the vote, we ought to lock the doors and get our members here  
5620 and sit down with these folks and with the kids in the green  
5621 tee shirts for our inspiration and finish this. What do you  
5622 think, Mr. Chairman?

5623         Mr. {Markey.} We will be here late tonight so we might  
5624 have to--I don't think we are going to have a problem. We  
5625 have every member's attention for 5 hours.

5626         Ms. {Harman.} I have been, and I think none of you has  
5627 missed it, carrying this prop around with me and holding it  
5628 up at all occasions. It is at the top of my little folder of  
5629 materials and I have had a chance today to read it more  
5630 carefully than I had, and I would observe that it is a much  
5631 more detailed blueprint than some who have been asking  
5632 questions might know. It is not a bill but it surely has at  
5633 least what I would use, if I were a thoughtful legislator,  
5634 which I hope I am, to craft a bill, and guess what? The  
5635 draft bill that we have has been based on these principles.  
5636 Everybody agree with that? Good.

5637         Let me finally say, because maybe there are a few more  
5638 members who want to ask questions before we have to go, that  
5639 I have made another point which is that the composition of

5640 U.S. CAP is bipartisan. I don't want to ask anyone your  
5641 party affiliation but I do want to ask the group, is that  
5642 statement of mine correct? Are some of the members of U.S.  
5643 CAP, the leaders of these organizations, Republicans and some  
5644 of them Democrats? Is that true?

5645 Mr. {Crane.} Yes, that is very true.

5646 Ms. {Harman.} That is very true? Well, good. So let  
5647 me just finally say that, Mr. Chairman, I think we should  
5648 regularly call on these people and the other 20 members of  
5649 U.S. CAP who have participated in this work product and I  
5650 really want to commend you again for using this consensus  
5651 document as the basis for the legislation. I think we are  
5652 going to end up somewhere right about here and we are going  
5653 to do some very good work this year and provide the certainty  
5654 that industry needs. I yield back.

5655 Mr. {Markey.} We are going to follow the gentlelady's  
5656 advice and the U.S. CAP as well.

5657 To the gentlemen from Illinois, Louisiana and  
5658 Connecticut, here is where we are. The gentlemen from  
5659 Louisiana and Connecticut have yet to ask questions. There  
5660 is about 12 minutes left to go. If the gentleman from  
5661 Illinois would agree to this, I would like to divide the time  
5662 in 4-minute segments between the three of you, if that would  
5663 be acceptable, and then we can adjourn with this panel being

5664 dismissed. Would you mind?

5665 Mr. {Shimkus.} I think I can do it that way, Mr.  
5666 Chairman.

5667 Mr. {Markey.} Thank you. The gentleman is recognized.

5668 Mr. {Shimkus.} Thank you. Let me--the devil is in the  
5669 details, and with respect to my colleague from California,  
5670 who we all have great respect for, there is a gaping hole in  
5671 this bill, which is the credits, which is the allocations,  
5672 and what we fear is a stimulus-type proposal that gets dumped  
5673 for markup at 11:00 the night before a 10:00 markup in which  
5674 you all don't know whether you will be incentivized or harmed  
5675 and it will get rammed through. Would you not agree that  
5676 airing out the allocation issue in a transparent process in a  
5677 hearing just like this would be helpful? Mr. Crane?

5678 Mr. {Crane.} Well, the allocation auction issue I think  
5679 took up the most of the U.S. CAP's time over the 2-1/2 years  
5680 so I agree, we all agree, I think that is a very--

5681 Mr. {Shimkus.} Well, let us ask everyone. Ms.  
5682 McDonald?

5683 Ms. {McDonald.} We certainly support the whole approach  
5684 that is contained in the blueprint, which is the allocation  
5685 process.

5686 Mr. {Shimkus.} But I am talking about, don't you think  
5687 we as a Nation would be better if we had these credits here

5688 that we could have a hearing on over a period of days to  
5689 discuss this allocation process? How long did it take you  
5690 all to do it?

5691 Ms. {McDonald.} We certainly said that we want to work  
5692 with the committee on that basis.

5693 Mr. {Shimkus.} Well, the question is, would we not be  
5694 better to have a hearing on the credits and the allocations  
5695 so that you would know and the public would know what is in  
5696 the details of this bill, yes or no?

5697 Ms. {McDonald.} It is not up to us I guess to--

5698 Mr. {Shimkus.} It is up to you. You are testifying.  
5699 My question is to you as an individual, would it not be  
5700 beneficial to your company to know the details in a  
5701 transparent process in a hearing on the bill, yes or no? You  
5702 don't know what to know?

5703 Ms. {McDonald.} We certainly want to know and--

5704 Mr. {Shimkus.} So would it be helpful to have a hearing  
5705 on the credit allocations on a global climate change bill,  
5706 yes or no?

5707 Ms. {McDonald.} We would certainly participate in the  
5708 process.

5709 Mr. {Shimkus.} Why don't you say yes or no, yes or no?

5710 Ms. {McDonald.} If we were invited to a hearing, we  
5711 would certainly--

5712 Mr. {Shimkus.} Would it be helpful to your shareholders  
5713 to know the cost of doing business prior to us voting on a  
5714 bill?

5715 Ms. {McDonald.} Yes, we would certainly--

5716 Mr. {Shimkus.} And could we not have that if we had the  
5717 allocations published?

5718 Ms. {McDonald.} We would certainly want it published,  
5719 yes.

5720 Mr. {Shimkus.} Thank you.

5721 Doctor?

5722 Ms. {Beinecke.} If there was a hearing, we would love  
5723 to come and discuss it just as we have today with the  
5724 allocations.

5725 Mr. {Shimkus.} And that would be helpful in us clearing  
5726 up a lot of this issue since there is a gaping hole, a  
5727 glaring hole in this bill about who is paying for what?

5728 Ms. {Beinecke.} I think a transparent process would be  
5729 helpful and--

5730 Mr. {Shimkus.} Thank you very much.

5731 Mr. Rogers.

5732 Mr. {Rogers.} On behalf of my customers, I would  
5733 recommend a hearing on that specific issue.

5734 Mr. {Shimkus.} Great. Mr. Cavaney?

5735 Mr. {Cavaney.} If transparent is possible, we will be

5736 there anytime, anyplace, and I think you should publish  
5737 afterwards how the allocation was distributed.

5738 Mr. {Shimkus.} Thank you.

5739 Mr. Holliday?

5740 Mr. {Holliday.} It is critical you get this part right,  
5741 whatever process works.

5742 Mr. {Shimkus.} And obviously if we had a hearing and it  
5743 was transparent, that would be helpful to you?

5744 Mr. {Holliday.} Yes.

5745 Mr. {Shimkus.} Let me just finish because I have  
5746 limited time, Mr. Chairman. For ConocoPhillips, the section  
5747 526 of the 2007 energy bill provides a prohibition. Now, I  
5748 have a great refinery collocated near my Congressional  
5749 district that is really relying on the ability to use oil  
5750 sand from Canada. Section 526 of the 2000 energy bill is a  
5751 prohibition. Do you think that that should be addressed?

5752 Mr. {Markey.} I ask the gentleman to allow it to be  
5753 submitted for the record so the other members can get their 4  
5754 minutes. Is that possible? I thank the gentleman. I  
5755 appreciate it.

5756 The gentleman from Louisiana is recognized.

5757 Mr. {Melancon.} Thank you, Mr. Chairman. I appreciate  
5758 the opportunity to ask questions.

5759 Mr. Cavaney, if I could, one of the things that I am

5760 concerned about with the refining section of the bill has to  
5761 deal with, Mr. LaHood insisted that the bill was not going to  
5762 harm the refiners, but if we are going to try and hold  
5763 refiners responsible for consumer emissions, then do I  
5764 understand that you are going to be able to get 100 percent  
5765 of your money back out of the--

5766       Mr. {Cavaney.} No, sir. Using EIA data for, I would  
5767 say, 2012, and if you use a cost of \$25 a ton for carbon, the  
5768 allocation, our compliance obligation is going to be \$68  
5769 billion. The only way we can pass all of that along, 100  
5770 percent along, is under two conditions: we either have  
5771 inelastic demand or we have elastic supply. Neither one of  
5772 those conditions exists in the United States refining  
5773 business. So therefore zero is not the answer when you talk  
5774 about an allowance allocation for the oil and gas industry.  
5775 We also have to cover our own emissions so we are the only  
5776 industry that is in both of those buckets, so we are in the  
5777 process now. We have looked at all the studies. They don't  
5778 reflect the world going forward. We are doing some work with  
5779 the committee and others but some adjustment needs to be made  
5780 there and we also ought to address the area call for the  
5781 energy-intensive and the trade exposed because we also have a  
5782 lot of opportunities for incoming imports to displace good  
5783 jobs here in United States.

5784           Mr. {Melancon.} And that is one of my major concerns  
5785 right there. So if I am producing oil and gas in south  
5786 Louisiana, primarily oil, and I start shutting down  
5787 refineries because you can't stay in business, then what are  
5788 we going to do, ship oil to foreign refineries and then ship  
5789 gasoline back into the country?

5790           Mr. {Cavaney.} Well, that depends on whether people  
5791 want our oil. We may not be able to get our oil sold at a  
5792 reliable price because other people may want to use different  
5793 grades and so we will be just out in that big bucket of  
5794 worldwide global supply.

5795           Mr. {Melancon.} So instead of us just being dependent  
5796 upon foreign countries for our energy needs in this country,  
5797 we are going to be dependent upon their energy that they  
5798 produced, their refiners and their ability to supply our  
5799 country and keep our economy going?

5800           Mr. {Cavaney.} It doesn't have to be that way if we  
5801 design this properly so that the protections are in place and  
5802 we get to cover our uncoverable costs as we go through this  
5803 implementation period.

5804           Mr. {Melancon.} I would hope that the folks in your  
5805 industry would work with us. I need to find a way to make  
5806 sure that the United States gets as close as it can to energy  
5807 independence in the future because we are definitely not

5808 anywhere close to that. This to me is important about carbon  
5809 emissions but it is even more important to me about economic  
5810 stability and the power of this country to stay an  
5811 independent and strong Nation, and without our own energy  
5812 sources, we are going to be in trouble.

5813 Thank you. I yield back my time.

5814 Mr. {Markey.} And we appreciate the gentleman yielding  
5815 back. The chair recognizes the gentleman from Connecticut.

5816 Mr. {Murphy of Connecticut.} Thank you very much, Mr.  
5817 Chairman. I thank the panel for sticking with us this long.  
5818 You know, we are all very proud of the clean new technology  
5819 companies that we have in our districts but they  
5820 unfortunately are I think rapidly becoming the exception  
5821 rather than the rule. We used to lead the world on solar and  
5822 wind development and now places like China and Japan are  
5823 vying for the top spot in photovoltaic production, and so I  
5824 wanted to ask just one question to the panel, which is, this  
5825 bill posits that by creating new market mechanisms through an  
5826 RES and a cap-and-trade system that you are going to command  
5827 the kind of private investment in clean new technologies that  
5828 we want and need. There is also the route that countries  
5829 like Korea and China have gone in making major public  
5830 investments. I think 80 percent of Korea's stimulus bill was  
5831 directly invested into these technologies.

5832           So the question is, do you believe that the market  
5833 mechanisms in this bill really are going to provide real  
5834 stimulus to that clean energy industry or are we going to  
5835 also need a real mix of direct subsidy to try to back up the  
5836 market mechanisms that we have included here?

5837           Mr. {Crane.} Jim and I just came back from a green  
5838 energy technology conference in California, and the  
5839 entrepreneurs are alive and well but what is happening now  
5840 is, they actually have the product that they didn't have 1 or  
5841 2 years ago but the market has dried up and the market has  
5842 dried up because people like us aren't ready to invest until  
5843 we know what the system is going to be. So I actually  
5844 believe completely that a well-drafted bill will unleash--it  
5845 will create the market that will allow that innovation  
5846 advantage to actually continue in this country.

5847           Mr. {Murphy of Connecticut.} Any other comments? Let  
5848 me then ask more specifically, one of the queries and  
5849 concerns in the last panel was whether we are going to  
5850 harness that technology and those industries domestically or  
5851 whether the market mechanisms in this bill is just going to  
5852 provide incentive for the production of these technologies  
5853 somewhere else. Are there other things we can do in this  
5854 bill to try to incentivize domestic production or is that  
5855 going to happen naturally?

5856 Mr. {Holliday.} I think speaking from our perspective  
5857 at DuPont, we do a lot of research, I would study how other  
5858 countries are incentivizing to make sure the technology is  
5859 not only developed in this country but commercialized first  
5860 in this country. I think there are mechanisms you can put in  
5861 place the way you allocate your R&D dollars that could help  
5862 that greatly.

5863 Mr. {Murphy of Connecticut.} Thank you very much.  
5864 Thank you, Mr. Chairman.

5865 Mr. {Markey.} Thank you, and we thank this very  
5866 distinguished panel. Your work is the basis for the product  
5867 that Mr. Waxman and I have put before the members. We will  
5868 be consulting with you frequently for your expertise as we  
5869 fill in additional details in the legislation but you are  
5870 providing an enormous service to your country and we thank  
5871 you so much.

5872 With that, the hearing will stand in recess until 4:00  
5873 at which point we will recognize the next panel for their  
5874 opening statements.

5875 [Recess.]

5876 Mr. {Markey.} We welcome you all back to this historic  
5877 hearing, and we apologize once again for the delay. We have  
5878 no control over the length of the roll calls as they are  
5879 conducted on the Floor of the House, but we now are in a

5880 situation since those were the last roll calls on the House  
5881 Floor that we can now have an uninterrupted hearing with  
5882 brilliant witnesses and continue to build out this record on  
5883 how to handle these very important issues that are facing our  
5884 country.

5885 Let me begin by yielding for our first witness to the  
5886 gentleman from Pennsylvania, Mr. Doyle.

5887 Mr. {Doyle.} Mr. Chairman, thank you, and it is my  
5888 pleasure to introduce one of the witnesses we have on our  
5889 panel this afternoon, Mayor John Fetterman from Braddock,  
5890 Pennsylvania. Braddock is a community in Allegheny County,  
5891 and it is Allegheny County's poorest community. This was  
5892 once a thriving blue-collar town of 20,000 people and a place  
5893 where my father spent 20 years of his life working at U.S.  
5894 Steel. Today Braddock has a population of 2,800 people.  
5895 John Fetterman has been someone who has been working  
5896 tirelessly in his first term as mayor of Braddock and playing  
5897 a critical role with youth employment in Braddock through  
5898 green jobs. He had with the assistance of some foundations  
5899 put together urban farming, community gardens. He has been  
5900 assisting residents in Braddock to create vegetable gardens,  
5901 and he is currently working on a program where youth will be  
5902 assisting in the installation of the first green roof in the  
5903 Mon Valley. He is someone who thinks outside the box and is

5904 trying to revitalize a community that is struggling and is  
5905 hopeful that what we do today with this legislation will  
5906 start a revolution in towns like Braddock and get people  
5907 building things again. So it is my pleasure to have him here  
5908 today and my pleasure to introduce him to the committee.

5909           Mr. {Markey.} And whenever you are ready, Mr.  
5910 Fetterman, please begin.

|  
5911 ^STATEMENTS OF JOHN FETTERMAN, MAYOR, BRADDOCK, PENNSYLVANIA;  
5912 PAUL N. CICIO, PRESIDENT, INDUSTRIAL ENERGY CONSUMERS OF  
5913 AMERICA; KEVIN KNOBLOCH, PRESIDENT, UNION OF CONCERNED  
5914 SCIENTISTS; DR. STEVEN HAYWARD, F.K. WEYERHAEUSER FELLOW,  
5915 AMERICAN ENTERPRISE INSTITUTE; DR. DAVID KREUTZER, SENIOR  
5916 POLICY ANALYST IN ENERGY ECONOMICS AND CLIMATE CHANGE, THE  
5917 HERITAGE FOUNDATION; DR. NATHANIEL KEOHANE, DIRECTOR OF  
5918 ECONOMIC POLICY AND ANALYSIS, ENVIRONMENTAL DEFENSE FUND; AND  
5919 MYRON EBELL, DIRECTOR, ENERGY AND GLOBAL WARMING POLICY,  
5920 COMPETITIVE ENTERPRISE INSTITUTE

|  
5921 ^STATEMENT OF JOHN FETTERMAN

5922 } Mr. {Fetterman.} Mr. Chairman, Mr. Barton and members  
5923 of the committee, thank you for inviting me here today. I am  
5924 John Fetterman and I am proud to be the mayor of Braddock,  
5925 Pennsylvania.

5926 My testimony this afternoon will be short and straight  
5927 to the point. I don't pretend to be an expert in economics  
5928 or energy policy but I do know what I have seen with my own  
5929 eyes. The path we are on has failed. In my part of  
5930 Pennsylvania, we have lost a quarter of a million jobs in the  
5931 steel industry in the past decades. Once-thriving towns like

5932 Braddock are facing economic devastation. Communities and  
5933 families face desperate times. We need change and we need it  
5934 now.

5935 For decades we have watched jobs leave America. For  
5936 decades we have heard about the dangers of America's  
5937 addiction to foreign oil. For decades we have seen real  
5938 changed blocked by those who profit from the status quo. If  
5939 there is a silver lining to this current economic crisis, and  
5940 from where I sit, it is awfully difficult to find one, it is  
5941 that America may now finally be ready to find a new path and  
5942 to face the tough questions we have ignored for so long.

5943 I believe that new path starts with a cap on carbon  
5944 pollution. By driving massive new private investment into  
5945 clean energy industries, a cap offers us the chance to create  
5946 jobs, and not just high-tech positions making solar cells or  
5947 exotic technology but the kind of blue-collar jobs that can  
5948 revive a town like Braddock or Akron or Detroit. Jobs making  
5949 250 tons of steel or 8,000 parts it takes to make a wind  
5950 turbine, jobs making new windows like they do in an old  
5951 factory in Vandergrift, Pennsylvania, a factory that was shut  
5952 down but revived to make those very windows, or LED lights  
5953 like they make in North Carolina and export to China or one  
5954 of the thousands of other products it will take to build this  
5955 new energy economy.

5956           The government investment in clean energy in the  
5957 Recovery Act was a good start but we will not truly transform  
5958 this economy until we spur the private sector into action.  
5959 This nation is full of entrepreneurs, investors, inventors  
5960 and steelworkers prepared to jumpstart a true energy  
5961 revolution, and this will only happen once you pass a cap on  
5962 carbon pollution. To win the most jobs and the most economic  
5963 opportunity, we must be a market leader in these new products  
5964 and technologies, and a cap on carbon in the United States  
5965 will spur our companies to be the early movers in these new  
5966 markets supplying solutions at home and selling these  
5967 solutions across the globe.

5968           So I respectfully ask this Congress to please be bold,  
5969 to overhaul our economy and free us from our addiction to  
5970 imported oil. I ask you to ignore the scare tactics of the  
5971 well-funded interests and to answer the call of Braddock to  
5972 build a new energy future and a new American century with the  
5973 ready hands of America's workers.

5974           Thank you for this opportunity.

5975           [The prepared statement of Mr. Fetterman follows:]

5976           \*\*\*\*\* INSERT 9A \*\*\*\*\*

|  
5977 Mr. {Markey.} Thank you, Mr. Fetterman, very much.

5978 Our second witness is Paul Cicio. He is the president  
5979 of the Industrial Energy Consumers of America, a trade  
5980 association of manufacturing-sector companies. Mr. Cicio,  
5981 whenever you feel comfortable, please begin.

|  
5982 ^STATEMENT PAUL N. CICIO

5983 } Mr. {Cicio.} Thank you, Mr. Chairman and Ranking Member  
5984 Upton. Members of the committee, the Industrial Energy  
5985 Consumers of America is the only trade association in the  
5986 United States whose members are exclusively from the  
5987 manufacturing sector, energy intensive and cross sector. Our  
5988 companies employ over 850,000 employees nationwide.

5989 Manufacturing is the only sector of the economy that has a  
5990 long history of significant investment in energy efficiency.  
5991 Our greenhouse gas emissions are only 2.6 percent above 1990  
5992 levels while other sector emissions are up about 30 percent.  
5993 We provide the majority of cogenerated electricity for the  
5994 country, which is over 100 percent more energy efficient than  
5995 electric utility production. We are national leaders in the  
5996 use of recycled steel, aluminum, glass and paper, which is  
5997 also extraordinarily energy efficient. Our products provide  
5998 the building blocks necessary to grow the economy and reduce  
5999 greenhouse gas emissions when our customers use our products.

6000 We are a model for doing the right thing for business  
6001 and the environment. Unfortunately, we do not see provisions  
6002 in the bill that either reward us for our past energy  
6003 efficiency actions, use of combined heat and power or

6004 recycling or encourage us to do more. This is a shortcoming  
6005 of the bill. We have several key points: Number one,  
6006 legislative provisions that are designed to preserve domestic  
6007 competitiveness of the industrial sector and prevent jobs  
6008 from moving overseas will create in our concern about  
6009 retaliatory trade actions. Neither Congress nor the EPA can  
6010 effectively regulate our offshore competitors through their  
6011 actions.

6012         Number two, we should not impose unilaterally on U.S.  
6013 manufacturing costs. A global agreement that addresses the  
6014 industrial sector uniformly and in the context of fair trade  
6015 and increasing productivity is the only way to avoid job  
6016 losses.

6017         Number three, U.S. demand for our products will  
6018 continue. It is just a question of whether they will be  
6019 supplied domestically or imported. We compete in a global  
6020 marketplace where pennies on the dollar can determine whether  
6021 we win or lose within a national competition. Unfortunately,  
6022 as Mayor Fetterman said, from 2000 to 2008, imports are up 29  
6023 percent and manufacturing employment fell 22 percent, a loss  
6024 of 3.8 million jobs. These numbers would indicate that we  
6025 are losing that competitiveness battle.

6026         Number four, the provisions entitled ``Preserving  
6027 Domestic Competitiveness'' provides for 85 percent of average

6028 needed allowances. Without 100 percent allowances and  
6029 without reimbursement for higher natural gas and electricity  
6030 costs, we will lose competitiveness, relative  
6031 competitiveness.

6032         Number five, increasing our greenhouse gas costs before  
6033 comparable costs are placed on our competitors, our global  
6034 competitors, will put competitiveness at risk. Countries  
6035 like China and India have said they will not jeopardize their  
6036 competitiveness and neither should we. Congress must  
6037 understand that when manufacturers from developing countries  
6038 engage in international trade, they no longer have  
6039 developing-country excuses for not meeting comparable  
6040 greenhouse gas reduction requirements and costs. Many of  
6041 them are world-class competitors using the latest technology  
6042 and they are owned by their governments and often they are  
6043 subsidized.

6044         Number six, reducing our Nation's greenhouse gas  
6045 emissions from about 7 billion tons to 5 billion tons in a  
6046 relatively short time period without a readily available  
6047 abundant supply of low-cost carbon that is affordable will  
6048 drive up energy prices. Energy efficiency and renewable  
6049 energy will help but it will not close the gap. Carbon  
6050 capture sequestration and nuclear will not be contributors  
6051 over the next 10 years, which means the power sector will be

6052 dependent upon natural gas for power generation. Expansion  
6053 of renewable energy means electric utility companies will be  
6054 required to build natural gas-fired backup plants. It is  
6055 extremely important to note that natural gas-fired power  
6056 generation sets the marginal price for electricity. The  
6057 implications are significant. As demand for natural gas goes  
6058 up, prices go up and electricity across the country, a double  
6059 hit.

6060 Thank you.

6061 [The prepared statement of Mr. Cicio follows:]

6062 \*\*\*\*\* INSERT 10 \*\*\*\*\*

|  
6063           Mr. {Markey.} Thank you, Mr. Cicio, very much. You  
6064 will have opportunities in the question-and-answer period to  
6065 expand upon your thoughts.

6066           Our next witness is Mr. Kevin Knobloch. He is the  
6067 president of the Union of Concerned Scientists. He has more  
6068 than 30 years of legislative and advocacy experience and has  
6069 served as the president of the Union of Concerned Scientists  
6070 since 2003. We welcome you, Mr. Knobloch. Whenever you are  
6071 ready, please begin.

|  
6072 ^STATEMENT KEVIN KNOBLOCH

6073 } Mr. {Knobloch.} Thank you, Chairman Markey, Ranking  
6074 Member Upton, distinguished members of the committee. Thank  
6075 you for this opportunity to speak to you today on behalf of  
6076 the Union of Concerned Scientists. UCS is a national  
6077 science-based nonprofit organization that has been working  
6078 for a healthy environment and a safer world for 40 years. I  
6079 applaud the leadership of this committee for moving this  
6080 issue forward at this critical time.

6081 Today I am pleased to share the results of a major study  
6082 we have conducted over the last 2 years to examine the energy  
6083 and economic implications of a comprehensive suite of energy,  
6084 transportation and climate policies that we call the Climate  
6085 2030 Blueprint. This comprehensive approach is similar to  
6086 the one proposed by Chairman Waxman and subcommittee Chairman  
6087 Markey in their draft legislation. We used a modified  
6088 version of the U.S. Department of Energy's national energy  
6089 modeling system for our analysis.

6090 Our results show that we can build a comprehensive and  
6091 competitive 21st century clean energy economy that saves  
6092 consumers and businesses money and gives our children a  
6093 future without huge, damaging costs of unchecked climate

6094 change and this future is well within our technological and  
6095 financial abilities.

6096         To highlight just a few of our major findings, our  
6097 analysis found that by 2030, one, under the Blueprint, our  
6098 Nation meets a carbon cap of 26 percent below 2005 levels by  
6099 2020 and 56 percent below 2005 levels by 2030. The  
6100 electricity sector contributes more than half of the emission  
6101 cuts in 2030. The transportation sector contributes the  
6102 second largest area of emissions reductions. The Blueprint  
6103 policies will also cut mercury, acid rain, smog and soot  
6104 pollution, improving air and water quality and saving lives.  
6105 Two, we can achieve these deep reductions in carbon emissions  
6106 while saving American consumers and businesses \$465 billion  
6107 annually in 2030 while maintaining about the same rate of  
6108 economic growth as the reference case. The Blueprint builds  
6109 \$1.6 trillion in cumulative net savings between 2010 and  
6110 2030. Families will see an average household savings of \$900  
6111 a year in 2030 while businesses will altogether save nearly  
6112 \$130 billion a year in the year 2030. Households and  
6113 businesses in every region of the Nation, even coal-dependent  
6114 States and regions, will see lower energy bills. And third,  
6115 we can cut the use of oil and petroleum products by 6 million  
6116 barrels a day in 2030, as much oil as we currently import  
6117 from the OPEC nations.

6118           We did not find that all of these benefits will come for  
6119 free but we found cost savings for reductions in energy use  
6120 due to efficiency will more than offset the modest increase  
6121 in energy prices and upfront investment costs. The key to  
6122 the success is a comprehensive policy approach remodel. The  
6123 transportation policies get us cleaner cars, cleaner fuels  
6124 and better transportation options. The energy policies get  
6125 us more efficient appliances, buildings and industry,  
6126 renewable energy and more-efficient natural gas generation.  
6127 A transparent and smartly designed cap-and-trade policy  
6128 assures the emissions reductions the United States needs to  
6129 help avoid the worst effects of global warming. This  
6130 comprehensive approach is so critical that when we stripped  
6131 out the sector-specific energy and transportation policies in  
6132 our analysis, the cumulative savings for households and  
6133 businesses in 2030 were reduced dramatically from 1.6  
6134 trillion to 600 billion.

6135           We have a historic opportunity to reinvent our economy,  
6136 to make it more resilient and efficient and to produce a bow  
6137 wave of new high-quality jobs, especially in regions that  
6138 have strong manufacturing capacity, a seasoned, able labor  
6139 force and needed resources and infrastructure. In this new  
6140 home-grown economy, we need people to build wind turbines,  
6141 build carbon capture and storage infrastructure, weatherize

6142 and retrofit homes, install solar panels and manufacture  
6143 advanced cars and fuels as well as to design, transport,  
6144 maintain, repair, market and sell all of the above. In my  
6145 travels around the country, I hear a growing call for a new  
6146 clean energy economy that is designed to also solve large,  
6147 stubborn problems, by reducing our dependence on oil, making  
6148 us less vulnerable to blackouts, creating jobs, tackling  
6149 climate change and improving our families' health. We know  
6150 that if we continue down a path of no action, our risks and  
6151 vulnerabilities will increase, leading to significantly  
6152 higher costs than if we act boldly today. The Waxman-Markey  
6153 legislation is a strong start on to this path and on to this  
6154 clean energy future.

6155 Thank you.

6156 [The prepared statement of Mr. Knobloch follows:]

6157 \*\*\*\*\* INSERT 11 \*\*\*\*\*

|  
6158           Mr. {Markey.} Thank you, Mr. Knobloch, very much.

6159           Our next witness is Dr. Steven Hayward, who is the F.K.

6160 Weyerhaeuser fellow in economics at the American Enterprise

6161 Institute and a senior fellow at the Pacific Research

6162 Institute. We welcome you, Dr. Hayward.

|  
6163 ^STATEMENT OF STEVEN HAYWARD

6164 } Mr. {Hayward.} Thank you, Chairman Markey and Ranking  
6165 Member Upton. You know, I don't relish being in the role of  
6166 a naysayer, partly because it goes against my own optimistic  
6167 nature, and I tend to be something of a techo-optimist. I  
6168 have a lot of excitement about things I see going on in the  
6169 areas of energy research and development, and I am an  
6170 optimist about a great many things.

6171 However, I do find myself troubled by an awful lot of  
6172 what I think is sort of wishful thinking, and too much, I  
6173 will just put it casually, happy talk about the matter.

6174 I mean, the last panel, I kept hearing that there is  
6175 nothing but win-win situations out there in the world, and it  
6176 seems to me that we seem to feel that we can repeal the laws  
6177 of economics and the laws of physics at the same time. It  
6178 may be quite true that for certain industries and certain  
6179 companies, you do quite well if you give them allowances to  
6180 emit carbon for free, but it does seem to remind me of that  
6181 remark of Charlie Wilson, from the Eisenhower Era that, to  
6182 paraphrase his remark, it is not clear that what is good for  
6183 GE is good for America.

6184 Well, I prepared my analysis today in this sort of

6185 confusing schedule, more tailored for the next panel about  
6186 green jobs, but a couple of general comments. It seems to me  
6187 the difficulty here is that on the one hand, we want to make  
6188 carbon more expensive, but on the other hand, we don't want  
6189 anyone to pay higher costs for it. To the extent that we  
6190 have lots of rebates and give away free allowances, it will  
6191 mitigate the reductions you are likely to get from it. It  
6192 would be, to use a simple analogy, as if we decided to try  
6193 and reduce cigarette smoking by raising the tax on  
6194 cigarettes, but then rebated the tax back to smokers at the  
6195 end of the month. I don't think that would be very  
6196 effective, or it would certainly reduce its effectiveness.

6197         A couple of observations here. It seems to me there are  
6198 three questions to answer, or to ponder more deeply. One is,  
6199 would a green jobs policy, or narrow RPS mandates, I say  
6200 narrow, because, for example, the U.S. Conference of Mayors  
6201 report on green jobs includes jobs in the nuclear industry as  
6202 green jobs, yet the nuclear industry is conspicuously  
6203 excluded from non-carbon sources contemplated in the draft  
6204 discussion. But would a green jobs policy and renewable  
6205 mandates result in net employment gains and net economic  
6206 growth in the absence of such policy?

6207         Of course, it is true, in the ordinary sense that when  
6208 the Federal Government spends more resources, either

6209 directly, through appropriations, or indirectly, through tax  
6210 breaks and subsidies and mandates, you will generate  
6211 employment where little or none existed before, just as our  
6212 very large spending over the decades for defense spending  
6213 generated a lot of employment where it didn't exist before.  
6214 But I would think the example of defense spending is one we  
6215 would want to ponder a little bit. It is precisely the  
6216 reason we don't see defense spending as a route to permanent  
6217 prosperity, because it does not necessarily add productive  
6218 and self-sustaining capacity to the private economy.

6219         There is a lot of academic literature--I have made some  
6220 reference to it in the statement I have submitted to the  
6221 committee, and I won't repeat it all here--a lot of academic  
6222 literature calling into questions a lot of the analysis and  
6223 assumptions of the green jobs ideas. I think I will just  
6224 skip over that in the interests of time and getting to your  
6225 questions, and say that I think, as a summary statement, in  
6226 the fullness of time, we are going to look back on this  
6227 period, say 20 or 30 years from now, as the climate policy  
6228 equivalent of wage and price controls to fight inflation back  
6229 in the 1970s. Or maybe to pick an example that is a little  
6230 closer to home, the Gramm-Rudman approach to cutting the  
6231 deficit in the late 1980s. And we are going to decide on  
6232 some fundamentally different approaches to tackling this

6233 problem.

6234 Thank you.

6235 [The prepared statement of x follows:]

6236 \*\*\*\*\* INSERT 12 \*\*\*\*\*

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6237           Mr. {Markey.} Thank you, Dr. Haywood, very much. Our  
6238 next witness is Dr. David Kreutzer, who is the Senior Policy  
6239 Analyst in Energy Economics and Climate Change at the  
6240 Heritage Foundation Center for Data Analysis. He previously  
6241 taught economics at James Madison University, where he served  
6242 as the Director of the International Business Program.  
6243           We welcome you, sir.

|  
6244 ^STATEMENT OF DR. DAVID KREUTZER

6245 } Mr. {Kreutzer.} Thank you. I will read the disclaimer  
6246 first, at the risk of being redundant. My name is David  
6247 Kreutzer. I am the Senior Policy Analyst in Energy Economics  
6248 and Climate Change at the Heritage Foundation. The views I  
6249 express in this testimony are my own, and should not be  
6250 construed as representing any official position of the  
6251 Heritage Foundation.

6252 Mr. Chairman, I want to thank you and the members of the  
6253 Energy and Commerce Committee for this opportunity to address  
6254 you concerning the economic impacts of cap and trade  
6255 policies. Cap and trade is a tax. It artificially restricts  
6256 access to fossil fuels that provide 85 percent of our  
6257 Nation's energy. This restriction drives up energy costs,  
6258 drives down income, and drives jobs away.

6259 Today, I will discuss several of the most critical  
6260 economic impacts. Last year, the Center for Data Analysis at  
6261 the Heritage Foundation projected the costs of the Lieberman-  
6262 Warner Climate Change Bill. The emissions target for the  
6263 Lieberman-Warner Bill was a 70 percent cut by the year 2050.  
6264 It should be clearly noted that our analysis could only  
6265 project for the first 20 years, at which point, the carbon

6266 reduction scheme is only halfway to this 70 percent reduction  
6267 goal.

6268         The first impact is on national income. Between 2012  
6269 and 2030, gross domestic product, the broadest measure of  
6270 national income, drops by nearly \$5 trillion, after adjusting  
6271 for inflation. The second impact is the tax transfer.  
6272 Coincidentally, it is also \$5 trillion. So, you have a \$5  
6273 trillion reduction in the size of the pie, and from that pie,  
6274 you cut another \$5 trillion piece to spread around. This  
6275 money is transferred from energy consumers to the government,  
6276 or those lucky enough to be given the pollution permits,  
6277 which are also known as allowances.

6278         The third, and arguably, most painful impact is on  
6279 employment. Employment drops overall, but the energy  
6280 intensive manufacturing sector is especially hard-hit. By  
6281 2030, manufacturing employment loses nearly three million  
6282 jobs because of cap and trade's energy restrictions.. A map  
6283 included in the written testimony shows that this impact will  
6284 be uneven, as manufacturing is relatively more important to  
6285 the economies of some states than it is to others. Though  
6286 some of those who lose or never get manufacturing jobs will  
6287 find employment in the service sector, overall unemployment  
6288 rises by over 800,000 in some years, due to the effects of  
6289 cap and trade.

6290           Another point to note is that these job losses are net  
6291 of any green jobs created by CO<sub>2</sub> restrictions. In the written  
6292 testimony is a copy of a page from the May 1945 issue of  
6293 Mechanics Illustrated. It shows what we would call a green  
6294 job in postwar Paris, a cyclist powering an electric  
6295 generator. This was an imaginative solution to a lack of  
6296 coal-generated current, done by an ingenious beauty shop  
6297 operator, perhaps. Today, a human-powered generator could  
6298 produce about \$0.10 of electricity in an eight hour shift.

6299           Now, I don't think anybody is proposing that, but with  
6300 sufficient subsidies, we could induce people to ride and  
6301 pedal generators. The problem, of course, is that it moves  
6302 human labor from producing output worth over \$50 per day, and  
6303 that would be at minimum wage, to producing something worth  
6304 only \$0.10 per day. Yes, we could point to the people riding  
6305 these bicycle generators and count them as green jobs  
6306 created, but the overall impact is to reduce economic output  
6307 by at least \$50 per day per person.

6308           Energy sources that require subsidies are energy sources  
6309 that use inputs whose value is greater than the value of the  
6310 output. Just as subsidizing a cyclist to generate \$0.10 of  
6311 electricity per day will not expand the economy, forcing  
6312 energy to flow through uneconomic bottlenecks is not a  
6313 stimulus. Rather, it will reduce income.

6314           In summary, we find the first two decades of a 40 year  
6315 program to cut CO<sub>2</sub> by 70 percent will lead to \$5 trillion of  
6316 lost gross domestic product, will increase energy taxes by  
6317 another \$5 trillion, will lead to three million lost  
6318 manufacturing jobs, and 400,000 to 800,000 fewer jobs  
6319 overall, even after accounting for green job creation.

6320           Thank you very much.

6321           [The prepared statement of Dr. Kreutzer follows:]

6322           \*\*\*\*\* INSERT 13 \*\*\*\*\*

6323 | Mr. {

|  
6324           Mr. {Markey.} Thank you, Dr. Kreutzer, very much. Our  
6325 next witness is Dr. Nathaniel Keohane, who is--Dr. Keohane.  
6326 Keohane. Keohane, Director of Environmental Economic Policy  
6327 and Analysis for the Environmental Defense Fund.

6328           Dr. Keohane oversees EDF's analytical work on the  
6329 economics of climate change, and helps develop its policy  
6330 positions on global warming. Formerly, he was an associate  
6331 professor of economics at the Yale School of Management.

6332           We welcome you, Doctor, and whenever you are ready,  
6333 please begin.

|  
6334 ^STATEMENT OF DR. NATHANIEL KEOHANE

6335 } Mr. {Keohane.} Well, thank you, Mr. Chairman, and the  
6336 distinguished members of the committee, for holding this  
6337 hearing. I am very honored to be here today.

6338 The climate crisis is our responsibility, and it is  
6339 within our power to address. We can easily afford strong  
6340 action. What we cannot afford is more delay. The  
6341 catastrophic consequences of unchecked climate change may  
6342 seem remote, but they will happen within the lifetimes of my  
6343 children and grandchildren. If we fail to address this  
6344 problem, we must be willing to tell our children we could  
6345 have addressed this crisis for a little over a dime a day per  
6346 person, but we chose not to.

6347 My message today is simple. The most expensive climate  
6348 change policy is not having one at all. The economic costs  
6349 of unchecked climate change are real, and they will be  
6350 severe. Fortunately, the best available economic analysis  
6351 shows that the U.S. can easily afford the pollution cuts  
6352 necessary to solve this problem. In my written testimony, I  
6353 present results from a range of economic forecasts published  
6354 last year by government and academia, analyzing earlier  
6355 proposed legislation. Just yesterday, though, the

6356 Environmental Protection Agency released new results that  
6357 specifically analyze the draft legislation released by this  
6358 committee, and I would like to highlight some of those  
6359 results for you now.

6360         First, EPA's new analysis shows that our economy will  
6361 grow strongly under the proposed bill before you today.  
6362 Their study estimates that if Congress passes climate  
6363 legislation this year, U.S. economic output will be 71  
6364 percent larger in the year 2030 than it is today. The  
6365 difference between that amount and what the analysis  
6366 estimates will happen if we do nothing about climate change  
6367 amounts to half a percent to a little over 1 percent of GDP  
6368 in that year 2030.

6369         To put that in perspective, if the economy, if the  
6370 American economy will reach \$23 trillion in January of 2030  
6371 if we do nothing to address climate change, it will get there  
6372 by April or June at the latest with a carbon cap. Now, so  
6373 far, I have been telling you about the costs of climate  
6374 policy, the estimated costs compared to business as usual.  
6375 But in reality, the business as usual scenario in these  
6376 models doesn't exist. It is a fantasyland in which there are  
6377 no economic costs of unchecked climate change, and we all  
6378 know that there is no such future. So, these models that I  
6379 am talking about just look at one side of the ledger, the

6380 costs of action, but not the benefits of avoiding climate  
6381 change and its consequences.

6382         So, still looking at that one side of the ledger, what  
6383 are the costs for the average American family? EPA gives us  
6384 a clear sense of what those are likely to be and they are  
6385 small. The average estimated cost to households in the year  
6386 2015 is just \$14 to \$75 per year, sorry, in that year in  
6387 present value, that is \$0.04 to \$0.21 a day. Over the entire  
6388 life of the bill, the annual cost is just \$98 to \$140 per  
6389 household. That is \$0.27 to \$0.38 a day for the average  
6390 American family, or \$0.11 to \$0.15 a day per person. That  
6391 includes all of the estimated costs of this bill, now, of the  
6392 cap and trade program on carbon.

6393         Now, you might say it is just one study, but in truth,  
6394 this study is completely consistent with everything else we  
6395 know. As my written testimony describes in detail, the  
6396 consensus among credible economic analysis is that the  
6397 American economy will grow robustly while cutting carbon  
6398 pollution and investing in a clean energy economy.

6399         Now, I am sure we are going to hear lots of numbers in  
6400 the next few weeks that have been cherry-picked from reports  
6401 issued by whatever modelers for hire can be found to support  
6402 the latest or the desired point.

6403         Forecasts aren't crystal balls. They are only as good

6404 as the assumptions that go into them, and some of the  
6405 assumptions used to get some of the numbers you may have  
6406 heard are just simply not credible. The EPA, in its  
6407 analysis, has set the gold standard in this report by using  
6408 two of the most credible, transparent, and peer-reviewed  
6409 models available, and the bottom line from that analysis is  
6410 that for around \$0.13 a day, and I brought \$0.13 with me,  
6411 around \$0.13 a day, we can solve climate change, help get our  
6412 economy off foreign oil, and invest in the clean energy  
6413 economy.

6414 As I said in the beginning, the climate crisis is our  
6415 responsibility, and it is within our power to address it. We  
6416 can easily afford strong action. What we cannot afford is  
6417 more delay.

6418 Thank you for inviting me to testify. I look forward to  
6419 your questions.

6420 [The prepared statement of Dr. Keohane follows:]

|

6421 \*\*\*\*\* INSERT 14 \*\*\*\*\*

|  
6422           Mr. {Markey.} Thank you, Dr. Keohane. And our final  
6423 witness, Myron Ebell, is the Director of Energy and Global  
6424 Warming Policy at the Competitive Enterprise Institute. He  
6425 also chairs the Cooler Heads Coalition.

6426           We welcome you to a place that needs that, Dr. Ebell.  
6427 Thank you for your leadership in that area.

6428           Mr. {Ebell.} Mr.

6429           Mr. {Markey.} Whenever you are ready, please begin.

6430           Mr. {Ebell.} Yes. Thank you, Chairman Markey, for  
6431 inviting me to testify here today.

6432           Before I begin, let me say that I refer to several  
6433 studies and articles in my very short testimony, and I would  
6434 like to ask that they be submitted for the record.

6435           Mr. {Markey.} Without objection.

6436           Mr. {Ebell.} Great. Thank you.

6437           Mr. {Markey.} So ordered.

|  
6438 ^STATEMENT OF MYRON EBELL

|  
6439 } Mr. {Ebell.} My name is Myron Ebell, and I am Director  
6440 of Energy and Global Warming Policy at the Competitive  
6441 Enterprise Institute. I am speaking here today on behalf of  
6442 CEI. We oppose this bill. We hope that it will be defeated,  
6443 and we will do whatever we can within our limited resources  
6444 to defeat it.

6445 Rather than summarize my very brief testimony, I would  
6446 like to just respond to several things I have heard today.  
6447 This morning, with the Administration witnesses, we heard  
6448 some astonishing claims in very matter of fact,  
6449 conversational answers, that this bill will create jobs, that  
6450 it will reduce our dependence on foreign oil, and that it  
6451 will help the economy. I believe Dr. Chu and Administrator  
6452 Jackson said that several times, and I think Secretary LaHood  
6453 said it at least once.

6454 I think that each one of these is wrong, and certainly,  
6455 each one of these claims is arguable. I am not much for  
6456 modeling. I think it depends, as Dr. Keohane said, it  
6457 depends on what the assumptions are, and you can get almost  
6458 any answer you want out of a climate model or an economic  
6459 model.

6460 I would rather look at historical experience. We have  
6461 many of the policies in your draft bill, Chairman Markey,  
6462 being tried today, and have been tried for several years in  
6463 the European Union and in California. California is falling  
6464 off an economic cliff. Now, it is not the only reason that  
6465 they have run up the price of energy so that they have the  
6466 highest gasoline taxes in the Nation. They have a shortage,  
6467 a continuing shortage of refined gasoline. That they have  
6468 among the highest electric rates in the Nation, comparable  
6469 with yours in Massachusetts. But it is one of the reasons  
6470 that their economy is falling off a cliff.

6471 They used to have a very substantial, energy intensive  
6472 manufacturing sector. They used to produce aircraft. They  
6473 used to produce armaments. They used to produce a lot of  
6474 automobiles. They used to have a steel mill and an iron  
6475 mine. All of that is gone. Now, that has made them less  
6476 carbon intensive. They don't produce as many emissions, but  
6477 they still consume all those things. They just buy them from  
6478 out of state. Somebody has to still produce stuff.

6479 So, I am very skeptical of these claims. Now, the  
6480 second panel from the U.S. Climate Action Partnership, and I  
6481 have some very harsh things to say about the members of the  
6482 Climate Action Partnership in my testimony. It seems to me  
6483 that these are guys on the make. They want to get rich off

6484 the backs of American consumers, and they want you to enable  
6485 them to do it. And I would urge you to take a step back from  
6486 the astonishing statement in your executive summary, which  
6487 the Committee put out on this bill, that says that this,  
6488 Title III, the Cap and Trade Program, was designed with, to  
6489 conform to the recommendations of the Climate Action  
6490 Partnership. And I would also ask to submit for the record,  
6491 and I am sorry he is not here, a letter from Chairman Waxman  
6492 in 2004, to the Administrator of the EPA, complaining about  
6493 this very thing, when it was revealed that an EPA rule had  
6494 been written with the cooperation of outside businesses and  
6495 their lobbyists from a well-known D.C. law firm. And I think  
6496 Chairman Waxman was exactly right then, and I would hope that  
6497 you would think this over again.

6498 Now, Mr. Rogers said that this will all work if we have  
6499 a well-designed program. I would like to ask you in your  
6500 experience how many government programs that have been  
6501 enacted in your time in Congress have been well designed. I  
6502 would just like you to keep that in mind as you consider this  
6503 enormous, huge hit on the American economy, and how easy it  
6504 will be to design it so that it is well designed. I just  
6505 can't see it.

6506 Now, Mr. Barton asked, and since he isn't here, I will  
6507 answer his question, do you favor 100 percent auctioning?

6508 Would you still favor this bill? Well, I will still oppose  
6509 this bill, but I do favor 100 percent auctioning. I think  
6510 100 percent auctioning of the rationing coupons removes a  
6511 tremendous amount of the opportunity for gaming the system,  
6512 con games, and corruption. And so, I would encourage you all  
6513 to vote for an amendment that would have 100 percent  
6514 auctioning.

6515 Thank you very much.

6516 [The prepared statement of Mr. Ebell follows:]

6517 \*\*\*\*\* INSERT 15 \*\*\*\*\*

|  
6518           Mr. {Markey.} Thank you, Mr. Ebell, very much. You hit  
6519 the number right on the minute. Let me turn now and  
6520 recognize the gentleman from Texas, Mr. Gonzalez, for a round  
6521 of questions.

6522           Mr. {Gonzalez.} Thank you very much, Mr. Chairman.

6523           And I wasn't going to ask Mr. Ebell any question, but I,  
6524 where did all those jobs go, that left California?

6525           Mr. {Ebell.} You know, I think most of them went either  
6526 abroad or to the heartland states that have lower energy  
6527 prices, lower taxes, a less stringent regulatory atmosphere,  
6528 and have. You know, I remember when Dr. John Christy from  
6529 the University of Alabama at Huntsville testified, I think  
6530 before this committee, and he said you know, California used  
6531 to have a vibrant auto industry, but in 2008, more  
6532 automobiles will be assembled in Alabama than any other  
6533 state. We have workers who do harder work, and we have  
6534 lower--

6535           Mr. {Gonzalez.} Mr. Ebell, the reason I ask is, look,  
6536 this is the obvious, and we go around and around on these  
6537 things, and I really don't get something as fundamental as  
6538 why some jobs leave certain jobs. Sometimes, it is just that  
6539 there are certain concerns that are addressed in certain  
6540 areas, that may not be in others, and it increases the cost

6541 of labor, such as fair wages, a living wage, safe working  
6542 conditions, small things like that.

6543 I am sure this country could still be incredibly  
6544 productive at incredibly low cost had we maintained something  
6545 like slavery, or maybe just forgotten about child labor, or  
6546 safe working conditions, or minimum wage. There is all sorts  
6547 of ways to reduce cost. I would like to think that we have  
6548 matured and developed as a country, where sometimes, we just  
6549 do that which is fair, equitable, and right, even though it  
6550 may increase the cost. And I think there is a fundamental  
6551 philosophical difference, I think, that is going on here.

6552 But let us just get to the matter at hand. Dr. Keohane  
6553 and Dr. Kreutzer, the only thing that you all share is the  
6554 first letter of your last names, because it seems, Dr.  
6555 Kreutzer, you simply don't believe that there is a need to  
6556 act on greenhouse gas emissions. Would that be a fair  
6557 statement? I want to start off with that. I mean, I really  
6558 want your honest answer, because I thought we debated that.  
6559 I thought we were past it. But if that is your premise, then  
6560 it goes to the very heart of maybe some of your opinions.

6561 Do you believe we should be taking any action on  
6562 reducing greenhouse gas emissions?

6563 Mr. {.} I can only talk about the ones that are being  
6564 proposed in this bill and elsewhere.

6565 Mr. {Gonzalez.} No, no.

6566 Mr. {Kreutzer.} The cost--

6567 Mr. {Gonzalez.} Well, let us forget about this bill.

6568 Should we be addressing it in any form or fashion?

6569 Mr. {Kreutzer.} If it is free, yeah. Okay. Why not?

6570 But it is not free. That is the problem, and--

6571 Mr. {Gonzalez.} So, what would be the alternative?

6572 Mr. {Kreutzer.} And Dr. Keohane said that this bill

6573 would solve the climate change problem. It doesn't even come

6574 close to having--

6575 Mr. {Gonzalez.} All right. So, you are just--

6576 Mr. {Kreutzer.} --impact.

6577 Mr. {Gonzalez.} It is the approach that you object to,

6578 but you believe, as your colleague--

6579 Mr. {Kreutzer.} I don't--I don't--

6580 Mr. {Gonzalez.} --believes, that truly, gas emissions,

6581 or greenhouse gas emissions truly pose a problem, and one

6582 that needs to be addressed?

6583 Mr. {Kreutzer.} They don't pose--I don't think there is

6584 enough evidence to say there is catastrophic problems coming

6585 down the road from greenhouse gas emissions.

6586 Mr. {Gonzalez.} All right.

6587 Mr. {Kreutzer.} All right. You know, there will be

6588 some increase in sea level. There will be some without

6589 greenhouse, without manmade greenhouse gas emissions rising.  
6590 There will be some when we cut it back by, you know, 70  
6591 percent or 80 percent. All right. And I would like to have  
6592 an economy that is strong enough that when we have the  
6593 climate variability that we are going to have with or without  
6594 climate action, that we have an economy that is strong enough  
6595 to get through it, as we have done for the past couple of  
6596 hundred years. We are getting stronger and stronger. We are  
6597 going to be able to handle a foot and a half of sea level  
6598 rise. And we are not going to stop it with this bill, and  
6599 that is the problem.

6600         It is huge cost, very little benefits, and I wish this  
6601 committee would look at what is the benefit? If you, this  
6602 isn't denier math, that isn't flat Earth math. This isn't  
6603 man never went to the Moon math. The IPCC says that a  
6604 doubling of CO<sub>2</sub> emissions will lead to a 2 to 4.5 degree  
6605 increase in world temperature. The EPA, looking at the  
6606 Lieberman-Warner Bill, said that bill would lower greenhouse  
6607 gas emissions from about 719 parts per million to about 695.

6608         Mr. {Gonzalez.} Let me ask, Dr. Kreutzer--

6609         Mr. {Kreutzer.} That is a 0.1 to 0.2--

6610         Mr. {Gonzalez.} Well, what you are saying is we have  
6611 plenty of time, and whatever is inevitable is something we  
6612 could handle along the way, as long as we have a strong,

6613 robust economy.

6614 Now, if you were wrong, what might be the consequence of  
6615 too little, too late, or would you be able to even address  
6616 the adverse effects at a later date?

6617 Mr. {Kreutzer.} We would be able to address that at a  
6618 later date, if it--

6619 Mr. {Gonzalez.} All right. That is--

6620 Mr. {Kreutzer.} --becomes clear that--

6621 Mr. {Gonzalez.} --when I want to go to Dr. Keohane. Do  
6622 you agree with any of those basic premises? One, that it  
6623 really doesn't pose a danger, we don't need immediate action?  
6624 If, as in when, we will be able to deal with it.

6625 Mr. {Keohane.} It won't surprise you to know,  
6626 Congressman, that I don't agree with those premises. I think  
6627 the--I am not a scientist, but I read the science and I talk  
6628 to scientists, and I think the science is clear that if we  
6629 don't do anything about climate change, the consequences will  
6630 be catastrophic, that unchecked climate change is going to  
6631 lead to severe and real economic damages.

6632 I mean, Dr. Kreutzer says that addressing it won't be  
6633 free. The thing that won't be free, the thing that is really  
6634 going to cost us is the damages from climate change if we  
6635 don't do anything about it. This is a problem where we are  
6636 not taking account of those costs at all in what we are doing

6637 right now, and that is the most important problem that we  
6638 have to solve.

6639 Now, this is a global problem, and this is a problem  
6640 that will require concerted international action to address,  
6641 but the U.S. is part of that community, and we need to take  
6642 the lead, and that is what this bill would do.

6643 Mr. {Gonzalez.} Thank you, Mr. Chairman.

6644 Mr. {Markey.} Thank you. The gentleman's time has  
6645 expired. The chair recognizes the gentlelady from Tennessee,  
6646 Ms. Blackburn.

6647 Ms. {Blackburn.} Thank you, Mr. Chairman, and thank you  
6648 all for your patience today. This has been absolutely  
6649 fascinating to listen to, and to hear the different opinions.

6650 Mr. Cicio, I think I want to start with you, because I  
6651 appreciated what you said. We should not jeopardize our  
6652 competitiveness.

6653 Mr. {Cicio.} Well, absolutely. We shouldn't. Our  
6654 organization and our companies have done an incredibly great  
6655 job of continuing to reduce their energy consumption, because  
6656 it makes us more competitive, and higher costs are okay, but  
6657 you have got to have higher costs on our competitors  
6658 overseas, or we lose the jobs.

6659 Ms. {Blackburn.} Well, and I would like to come, I  
6660 would like for you just to touch on what you think the

6661 electric industry will do to achieve efficiencies and meet  
6662 the renewable electricity standards that are in the proposed  
6663 legislation, and how you balance that, and how we still  
6664 remain globally competitive with goods.

6665       Mr. {Cicio.} Well, the Renewable Portfolio Standard is  
6666 only one part of the challenge of higher electricity costs.  
6667 For one, paper companies, which are some of my companies, use  
6668 that, use renewable energy to biomass as a raw material  
6669 feedstock. And if electric utilities are utilizing that to  
6670 meet the standard, it could put the paper business industry  
6671 out of business.

6672       Ms. {Blackburn.} Okay.

6673       Mr. {Cicio.} But states are endowed with different  
6674 renewable resources, and that is why our view is that that is  
6675 the decision that should be made at the state level, where  
6676 they know how much renewable resources are available and at  
6677 what cost.

6678       Ms. {Blackburn.} And can make those appropriate  
6679 adjustments.

6680       Mr. {Cicio.} Yes, ma'am.

6681       Ms. {Blackburn.} Mr. Kreutzer, when I was talking with  
6682 Mr. Chu, and questioning him earlier today, I asked him about  
6683 the 25 percent standard, and working toward that by 2025, and  
6684 he said it was going to be easily achieved. So, do you agree

6685 or disagree with that?

6686           Mr. {Kreutzer.} Well, it is going to be costly. We  
6687 actually, in our analysis, we gave that away. We said let us  
6688 assume that all of the renewable standards set up by the  
6689 states can be met at reasonable cost. So, when we did our  
6690 analysis of Lieberman-Warner, this very difficult to achieve  
6691 standard, we said we are going to meet that. Still, \$5  
6692 trillion worth of lost GDP in 20 years, \$5 trillion worth of  
6693 energy taxes, three million lost manufacturing jobs. All of  
6694 that was even though we assumed we could meet the Renewable  
6695 Portfolio Standard that was a little bit less, but close to  
6696 25 percent.

6697           Ms. {Blackburn.} Okay. Mr. Hayward, when I had talked  
6698 with Secretary LaHood, I asked him about, and then,  
6699 subsequently Mr. Chu, about the Low Carbon Fuel Standard and  
6700 the effect on prices at the pump. And, as we look at  
6701 transportation fuels. And will it lead to greater or  
6702 lessened dependence on foreign oil?

6703           Those are two issues that we hear a lot about from our  
6704 constituents. They are concerned about the dependence  
6705 issues. They are concerned about the price at the pump, so  
6706 as you look at the low carbon standards, what do you think?

6707           Mr. {Hayward.} Oh, boy, I have a hard time making up my  
6708 mind about that. Because there are so many moving parts. I

6709 mean, the big, one of the big problems to try and solve in  
6710 transportation is how do we have a portable fuel? I mean,  
6711 that is why we want gasoline or diesel or biofuels or  
6712 something. You want something to put in a tank, or in an  
6713 energy supply for a car, so we talk a lot over the years  
6714 about hydrogen. We are talking about plug-in hybrids with  
6715 much bigger battery capacity. We are talking now about,  
6716 biofuels from algae is being talked about.

6717         The difficulty here is once again, if the government  
6718 tries to pick winners, you may actually clog up the market  
6719 for innovation. I don't know that anybody is really happy  
6720 about the way the whole ethanol business has gone, including  
6721 most environmentalists, but yet, we are kind of path-  
6722 dependent on that now, because you have a lot of powerful  
6723 interests who don't want to change the program there. I  
6724 think that is a good example and case study of how you can  
6725 actually retard progress.

6726         So, you know, I try to keep an open mind about that, but  
6727 that is, I think, very hard to predict, how that is going to  
6728 turn out.

6729         Ms. {Blackburn.} Well, but my constituents say, is this  
6730 going to cost us more, or is it going to save us money? So,  
6731 where do you think that is going to come down?

6732         Mr. {Hayward.} In the short run, it is going to cost

6733 you more, I would think.

6734 Ms. {Blackburn.} Cost more.

6735 Mr. {Hayward.} Long run, I don't think anyone can say.

6736 Ms. {Blackburn.} Thank you. I am out of time, Mr.

6737 Chairman. I have got a couple of other questions. I will

6738 submit those.

6739 Mr. {Markey.} And we will ask the witnesses to respond

6740 in writing to those questions. The gentlelady's time has

6741 expired. The chair recognizes the gentlelady from

6742 California, Ms. Matsui.

6743 Ms. {Matsui.} Thank you, Mr. Chairman. Mr. Chairman, I

6744 saw a recent analysis from Mr. Knobloch's group that stated

6745 some interesting facts.

6746 In 2007 and 2008, more wind power was installed than in

6747 the previous 20 years combined, and more than 70 wind turbine

6748 component facilities opened, expanded, or were announced.

6749 The Renewable Electricity Standard that this legislation

6750 contains is an economic engine for the future. According to

6751 the Union of Concerned Scientists, an RES would create

6752 297,000 new jobs in renewable energy development. A robust

6753 RES would drive investment to the tune of \$263.4 billion in

6754 cities and towns across this country. We can achieve these

6755 economic benefits even while taking the equivalent of 45.3

6756 million cars off our roads.

6757           Mr. Knobloch, in my hometown of Sacramento, we are  
6758 attempting to create a center of clean energy technology that  
6759 would drive our local economy, and I visited a number of  
6760 these new regional companies when I was back home last week.  
6761 With this background, I am interested in hearing your  
6762 thoughts on the job creation components of this legislation.

6763           Can you expand a bit on what types of jobs would be  
6764 created with this legislation?

6765           Mr. {Knobloch.} Thank you, Congresswoman.

6766           You know, the great thing about the Renewable  
6767 Electricity Standard debate is that we are not dependent on  
6768 modeling. We can look at the 28 states that have adopted a  
6769 renewable electricity standard, and the success of that  
6770 policy has been tremendous. At least half of those states  
6771 have gone back before the time limit for the increase  
6772 percentage of renewables and increased the percentage,  
6773 because they were doing so well. A state like Texas, years  
6774 ahead of the timeframe went in and doubled the amount of  
6775 renewables that they would expect from that policy, and now,  
6776 Texas is, of course, the national leader in wind power, and  
6777 has three times the installed wind electricity of the State  
6778 of California.

6779           And you can also look to before there was any renewable  
6780 electricity standard policies. The renewable sector was

6781 floundering. And so here, what happened was that government  
6782 came in, set a standard, did not pick winners and losers,  
6783 technological winners and losers. It did define what is  
6784 renewables, and there are some very legitimate debates going  
6785 on as to what belongs in there.

6786 Ms. {Matsui.} Now, some opponents of this legislation  
6787 argue that new jobs would only be created because other jobs  
6788 will be lost. In the case of RES, is this a zero-sum game  
6789 when it comes to jobs, or are the hundreds of thousands of  
6790 jobs it creates going to be on top of the existing job  
6791 figures?

6792 Mr. {Knobloch.} Well, this analysis that you are  
6793 referring to, which is not part of our blueprint, it was a  
6794 separate analysis, showed that the renewables sector, that a  
6795 national renewable electricity standard would create three  
6796 times the number of jobs that would be created in the same  
6797 time span in the fossil fuels sector. So, it nets out  
6798 positive when it is well designed.

6799 When you listen to any kind of jobs analysis, you want  
6800 to be sure that there is a control for what is happening in  
6801 the economy already, and get your arms around that, but we  
6802 are quite confident that whether it is, you know, the  
6803 steelworkers in Pennsylvania who got laid off, and are now  
6804 building towers for wind turbines, truckers, people who pour

6805 concrete, people who design wind turbines and the associated  
6806 machinery, there is dozens of different job disciplines that  
6807 go into making this technology.

6808         Ms. {Matsui.} I would like to turn to something that is  
6809 really something in my district, I represent the most at risk  
6810 river city in the Nation in Sacramento, and studies are  
6811 seeing that the Sierra Nevada snowpack would disappear under  
6812 a business as usual scenario. So, that represents great  
6813 challenges to my district.

6814         This is to Dr. Keohane. With this in mind, will you  
6815 please expand on the point you made in your testimony, that  
6816 the threat from water-related impacts of climate change could  
6817 be in the billions of dollars?

6818         Mr. {Keohane.} Absolutely. That was a quote from a  
6819 study that Frank Ackerman at Tufts University did, as part of  
6820 just looking at four types of impacts on the United States,  
6821 one of them being increased water scarcity, and when they  
6822 added up all those four analyses, all those four costs, the  
6823 other were increased energy costs and coastal flooding, which  
6824 is important in other areas of the country, and also,  
6825 increased hurricane intensity, they got hundreds of billions  
6826 of dollars in costs from unchecked climate change. That is  
6827 what we would pay in business as usual. That is why I said  
6828 it wasn't free not to do anything about this. And that is

6829 just from those four costs. That excludes a huge other  
6830 number of damages. So, that kind of concern, that is going  
6831 to be, the water scarcity is going to be relevant to the  
6832 American West, and there are going to be other concerns that  
6833 are relevant to other parts of the country.

6834 Ms. {Matsui.} I thank you. I see my time is up.

6835 Mr. {Markey.} The gentlelady's time has expired. The  
6836 chair recognizes the gentleman from Michigan, Mr. Upton.

6837 Mr. {Upton.} Well, thank you, Mr. Chairman, and I am  
6838 delighted that this is the last panel. We have had eight  
6839 hours panel, almost, today.

6840 Mr. {Markey.} This is not the last panel.

6841 Mr. {Upton.} Today, it is, the last panel today, right?

6842 Mr. {Markey.} No. One more to go.

6843 Mr. {Upton.} There isn't another panel. There is not  
6844 another panel. There is?

6845 Mr. {Markey.} This is an all you can eat. It is all  
6846 you can eat. There is no--

6847 Mr. {Upton.} Who is on the fourth panel? Raise your  
6848 hand? Oh, I am sorry. I will stay. I am sorry I asked that  
6849 question. My time really shouldn't be--I was going to say  
6850 that--

6851 Mr. {Markey.} Let us start. We are going to start.

6852 The gentleman was a little bit disoriented, and we are going

6853 to start again.

6854 Mr. {Upton.} I didn't realize. I have this big list, I  
6855 just didn't turn the page, but there it is. I was going to  
6856 say that I am looking forward to co-hosting with you tonight,  
6857 with Disney, the show Earth.

6858 Mr. {Markey.} Perhaps you will be hosting.

6859 Mr. {Upton.} Is this another panel after this one?

6860 Mr. {Markey.} No, no.

6861 Mr. {Upton.} I actually have a detail for us, in terms  
6862 of our remarks tonight, so maybe I will get your time.  
6863 Anyway, I just want to say a couple things.

6864 For me, I do want to see emissions reduced. I want to  
6865 see plenty of incentives to provide cleaner energy for all of  
6866 our citizens, but I also want it to be fair, and I don't want  
6867 to put the U.S. at a big disadvantage, and the headlines that  
6868 I cited in my opening statement some eight hours ago, with  
6869 India and China not willing to participate, and every  
6870 opportunity that they have been given, and whether it is  
6871 before this committee in the last year, or now, in public  
6872 statements, I think puts our Nation at a severe disadvantage.

6873 And it is not that we are going to do nothing. We are  
6874 going to do a lot, whether it is with energy appliance  
6875 standards, it is with building standards. It is with  
6876 lighting standards. It is with auto standards. It is, there

6877 is a lengthy list that, in fact, we are going to do a lot to  
6878 reduce our emissions. And when I look at, what I cited this  
6879 morning, and that we have had, in essence, comparable growth,  
6880 the United States and EU. They had a cap and trade scheme.  
6881 They desperately want us to participate with them, because  
6882 their emissions went up while ours went down.

6883         There was significant leakage, I think, of jobs. Their  
6884 energy prices did go up, and when we hear from the Chairman  
6885 of AEP, who testified at some point in the last couple weeks  
6886 that they thought that their energy prices in Ohio would go  
6887 up 40 to 50 percent, because Ohio uses more than 90 percent  
6888 coal, we know that that is the same for Indiana. Michigan is  
6889 about 60, 65 percent. Those costs get passed along, and yes,  
6890 you can help with the subsidies, I guess run a little bit  
6891 along the lines of LIHEAP for low income individuals, so that  
6892 they don't bear the brunt of that higher cost, and Dr.  
6893 Hayward, I loved your example on cigarettes.

6894         But the jobs don't stay. Not when they can go someplace  
6895 else at a lower cost, knowing that they are competing in a  
6896 global economy. And so, what we want to do is, and there is  
6897 no off-ramps, from my read of this legislation. Yeah, there  
6898 is some discussion with the idea of allowing us to have an  
6899 important that somehow would be WTO amenable, but again, the  
6900 jury is out. I don't know whether that is going to work or

6901 not.

6902 I have a feeling, Mr. Chairman, that we are going to  
6903 have a vote on whether or not the Administration ought to  
6904 have 100 percent auction here. I know the Administration  
6905 supported that in the testimony that they gave in the first  
6906 panel today. We will find out where the votes are, whether  
6907 that ought to be part of the package, and what happens if, in  
6908 fact, it is an amendment that is adopted.

6909 Mr. Ebell, your comments, I think, were right online, as  
6910 we look at the costs associated, and what is going to happen  
6911 to businesses. But how do you counter that with Dr.  
6912 Keohane's--am I saying that right? Keohane? It is not  
6913 right.

6914 Mr. {Keohane.} Keohane, but it is close.

6915 Mr. {Upton.} Keohane, all right. Is it spelled right?  
6916 All right. I mean, how do you comport that, your two  
6917 testimonies together. Dr. Keohane says that it is going to  
6918 be \$0.07 to \$0.10 a day, and yet, we hear some pretty  
6919 different numbers when we actually go into the field, at  
6920 least as we look at the Midwest.

6921 Mr. {Ebell.} Thank you, Representative Upton. I  
6922 appreciate your leadership on this issue. We know it can't  
6923 be that inexpensive. If it were that inexpensive, we  
6924 wouldn't be having these rancorous debates.

6925           The fact is that energy prices have to go up  
6926 significantly if emission cuts are going to be made.  
6927 President Obama recognized this when he was running for  
6928 President, and he said: ``Under my plan of a cap and trade  
6929 system, electricity rates would necessarily skyrocket.``  
6930 Peter Orszag, now the head of OMB, then head of CBO, when he  
6931 testified here, said this won't work unless prices go up.

6932           In the European Union, there has been tremendous  
6933 consternation about the price of the rationing coupons,  
6934 because they yo-yo up and down, and the people who want to,  
6935 who are actually serious about making emissions cuts, keep  
6936 pointing out that the price has to stay up in order to force  
6937 emissions down. When it keeps yo-yoing up and down, nobody  
6938 has an incentive to reduce their emissions, because they are  
6939 going to hope that they are going to get some cheap rationing  
6940 coupons, you know, if not this month, next month.

6941           So, I just think it is beyond believability that this is  
6942 going to be inexpensive. It is going to be incredibly  
6943 expensive.

6944           Mr. {Upton.} So, the answer is yes. Go ahead.

6945           Mr. {Keohane.} Thank you. Well, with all due respect,  
6946 I don't--I am not quite sure how Mr. Ebell knows that it  
6947 can't possibly be as inexpensive as the best analysis we have  
6948 from the best economic models we have, which is what the EPA

6949 analysis represents. That is what those models estimate.  
6950 Now, sure, there are, you know, the models aren't perfect,  
6951 but if you look at the record, we have always overestimated  
6952 the costs of environmental regulation. That was a finding by  
6953 some researches at Resources for the Future, who looked at  
6954 and found a consistent pattern of overestimation, and that's  
6955 because frankly, we don't know how to model technological  
6956 change, and these models, these analyses, can't capture the  
6957 scope of technological change that we will see when we use a  
6958 market-based system that unlocks American innovation.

6959 Mr. {Upton.} Well, just to close, because my time is  
6960 expired, it seems like based on what you just said, maybe we  
6961 ought to have an amendment that would offer a safety valve,  
6962 that if it goes up more than \$0.20, the whole thing will be  
6963 struck after the enacting clause. Maybe we will see an  
6964 amendment like that. Thank you.

6965 Mr. {Markey.} Okay. The gentleman's time has expired.  
6966 The chair recognizes the, the chair is uncertain here. I am  
6967 going to continue to recognize members of the minority.  
6968 Okay, the chair recognizes the gentleman from Texas, Mr.  
6969 Hall. We can go to Mr. Shimkus if you like, Mr. Hall.

6970 Mr. {Hall.} I am sorry that I haven't been here,  
6971 because it seems like you all are having so much fun in here  
6972 when I got here. I will stay a while. I want to ask some

6973 questions, and thank you, Mr. Chairman, for recognizing me,  
6974 and thank you for accepting that Washington Post. I  
6975 appreciate that.

6976         You know, it is my opinion, and the opinion of most of  
6977 us over here, and the opinion of maybe half of you out there,  
6978 that we are going to be in a weakened competitive position in  
6979 the United States under cap and trade. I believe it deeply,  
6980 and have a lot of reasons to believe it, and you all are in  
6981 responsible positions, and know more about your business than  
6982 I know about your business, but I know you are a businessman,  
6983 successful, or you wouldn't be here.

6984         So, I just can't see why you can't understand, if you  
6985 don't understand, why we wouldn't be in a weakened  
6986 competitive position under cap and trade as it is written  
6987 here. We--I have--the chairman is a good friend of mine, and  
6988 I like the chairman. We elect one another, I think. I  
6989 criticize him in his district, and he criticizes me in mine,  
6990 but we have a mutual understanding, and I respect him. I  
6991 really do. And he is funny.

6992         But in the Washington Post, China hopes climate deal  
6993 omits exports. Now, this ought to tell you how China thinks,  
6994 and they are one of the big players, they are the big player  
6995 in this, other than us, and if they don't play, and I  
6996 mentioned this this morning, it is a little bit, maybe,

6997 simple, but when you go to Wal-Mart or sears, or your wives  
6998 go to Neiman's, or anywhere, you are going to see a machine  
6999 on your way out, that you got to go by that machine. It is  
7000 called a cash register, and you have to pay, and somebody has  
7001 got to pay. And China has never indicated, in one instance,  
7002 that they want to pay their share, and they are polluting the  
7003 air as we sit here today, and I think I read the other day  
7004 where about every sixth day, they open a plant that is not  
7005 conducive to clean air.

7006         And I am very pro-coal. I am pro-nuclear. I live in  
7007 Texas, and we have fossil fuels there, and I don't know how  
7008 we are going to do away with fossil fuels. Of course, we  
7009 have to have technology and keep continuing to pursue  
7010 cleansing. Anybody in their right sense knows that, but  
7011 anybody that thinks we can just overnight do away with fossil  
7012 fuels is just dreaming. They are just thinking. And it  
7013 would be wonderful, but that hasn't happened, and elements  
7014 here in Washington and around the country have fought us  
7015 drilling offshore, fought us drilling off the coast of  
7016 Florida, fought us from drilling up in ANWR, and we could, we  
7017 don't even have to have any help from anybody else. We have  
7018 plenty right here at home if we could just mine it, and we  
7019 should have. But we haven't.

7020         So, we find ourselves in the position where it is China,

7021 one of the big players, not only won't agree to curtail their  
7022 polluting the skies, but I think they are insolent enough to  
7023 indicate, and I am going to read you a little bit from this  
7024 Washington Post deal. It says: ``Countries importing  
7025 Chinese goods should be responsible for the heat trapping  
7026 gases released during manufacturing, a top Chinese official  
7027 said yesterday.'' That was Li Gao, I don't know if that is  
7028 the right pronunciation, but that is the way it looks to me.  
7029 Anyway, he is the climate change, he directs the Climate  
7030 Change Department at the National Development and Reform  
7031 Commission. So, he is the top guy, so far as I know, over  
7032 there. He is their top climate negotiator, and he said that,  
7033 and he said: ``As one of the developing countries, we are at  
7034 the low end of the production line for the global economy.  
7035 We produce products, and these products are consumed by other  
7036 countries. This share of emissions should be taken by the  
7037 consumers, not the producers.'' They are not even willing to  
7038 pay for their own emissions.

7039 Now, please take that into consideration when you make  
7040 your decisions. So, I would ask this question. What  
7041 evidence, and I will begin over here, Mr. Ebell, I can't see  
7042 that far, but Mr. what is his name? Mr. Ebell. That is what  
7043 I thought it said, but I couldn't pronounce it.

7044 What evidence does U.S. cap have that China and other

7045 developing nations will not take strategic advantage of what  
7046 will be a weakened competitive position of the United States  
7047 under cap and trade?

7048         Mr. {Ebell.} Representative Hall, I don't believe that  
7049 they have any evidence, and in fact, I think they do plan to  
7050 take competitive advantage, and they also want to be paid for  
7051 their emissions reductions. And I think you can see how  
7052 expensive it is going to be to reduce emissions, because  
7053 everyone believes it will be cheaper to reduce emissions in  
7054 developing countries than it will be in the United States,  
7055 and yet, they are talking, in the European Union and in China  
7056 and in India, about sending hundreds of billions of dollars a  
7057 year to developing countries to reduce emissions. So, the  
7058 idea that the EPA model is believable, no, it doesn't pass  
7059 the laugh test.

7060         Mr. {Hall.} Absolutely an indication, not an  
7061 indication, it is just proof that they are not going to play  
7062 fair with us. They are not going to take care of their  
7063 emissions. Go ahead, sir.

7064         Mr. {Keohane.} I just wanted to say, again, with  
7065 respect to my fellow panelists, I think the best judges of  
7066 the businesses and the competitive positions of the U.S. cap  
7067 companies are those U.S. cap CEOs and not Mr. Ebell, and I  
7068 will say there is, in this bill, I think these concerns you

7069 have laid out are real, but the bill has provisions to deal  
7070 with them. And I think the way forward is for the United  
7071 States to do what it has always done best, which is to lead.  
7072 And if we lead on this crucial issue, then we will be  
7073 producing the next generation of low carbon technologies here  
7074 at home. We will be exporting them instead of importing them  
7075 from others.

7076 Mr. {Markey.} The gentleman's time has expired.

7077 Mr. {Hall.} May I make one last statement to the  
7078 gentleman?

7079 Mr. {Markey.} Yes, you may.

7080 Mr. {Hall.} The cash register that I spoke about is in  
7081 all of these countries, China, Russia, they are going to  
7082 walk, you are going to allow them to walk right by the cash  
7083 register and leave it to the children that are unborn today,  
7084 taxes to fall on their backs. I don't believe you really  
7085 want to do that. I yield back my time.

7086 Mr. {Markey.} The gentleman's time has expired. The  
7087 chair recognizes the gentleman from Illinois, Mr. Shimkus.

7088 Mr. {Shimkus.} Thank you, Mr. Chairman. Appreciate the  
7089 hearing and being patient. I appreciate the panel for  
7090 staying as long as you have.

7091 A couple things. I asked this question to an earlier  
7092 panel. Does everyone agree that India does not have a low

7093 carbon fuel standard? Everybody is nodding in agreement with  
7094 that. Does everyone agree, I am just doing this quickly, so  
7095 I can get to other questions. Does everyone agree that China  
7096 does not have a low carbon fuel standard? Okay. Everybody  
7097 is shaking their head. Mayor, do you agree? Thank you.

7098         What about, does everyone agree that India currently is  
7099 not under a cap and trade regime? Does everyone agree with  
7100 that? And Mayor, you too? Okay. And does everyone agree  
7101 that India is not under a cap and trade regime? Okay. Well,  
7102 with heads nodding in assent.

7103         One of our problems is that, and I have used this  
7104 terminology numerous times, all the pain and no gain, because  
7105 there is really a debate about whether countries will comply,  
7106 if our leadership will spur an international accord. So,  
7107 briefly, do you agree that if we lead, China and India will  
7108 comply to a low carbon fuel standard and a cap and trade  
7109 regime. Real quickly, if you can get yes and no, Mr. Ebell,  
7110 you had first. Microphone. Be quickly, though, yes or no  
7111 would be helpful.

7112         Mr. {Ebell.} Yes. I think we can guarantee it, if we  
7113 put a provision in the bill saying it will not go into effect  
7114 until there is an international agreement that has been  
7115 ratified that is binding.

7116         Mr. {Shimkus.} And we used to talk about that. We used

7117 to use the terminology of an off-ramp, but that has been  
7118 jettisoned. Dr. Keohane.

7119 Mr. {Keohane.} I will say if we do not do anything,  
7120 then they won't take a cap on their own, but if we do lead,  
7121 that is the only way we will get there.

7122 Mr. {Shimkus.} No, will they? Yes or no. Will they,  
7123 if we do lead, I guess is the question. You believe they  
7124 will.

7125 Mr. {Keohane.} I think if we do lead, China and India  
7126 will follow.

7127 Mr. {Shimkus.} China will do it, and India will both do  
7128 low carbon fuels and a cap and trade.

7129 Mr. {Keohane.} I think, I don't know what mechanism  
7130 they will use, but I think if we lead, we will see China and  
7131 India--

7132 Mr. {Shimkus.} Okay. Okay. Great.

7133 Mr. {Keohane.} --follow on our--

7134 Mr. {Shimkus.} Thank you. Mr. Kreutzer.

7135 Mr. {Kreutzer.} I don't think they will. They  
7136 certainly won't accept a cap that the EPA assumes, which will  
7137 be about half of the one we are getting.

7138 Mr. {Shimkus.} Okay. Dr. Hayward.

7139 Mr. {Hayward.} I think it is very unlikely. Here is  
7140 the problem. Even in an optimistic scenario, a lot of low

7141 carbon technologies that we can afford as a rich country are  
7142 still going to be more expensive than fossil fuels for  
7143 developing countries who, by the way, control about 80  
7144 percent of the world's fossil fuels. It takes quite a flight  
7145 of fancy, it seems to me, to think that they are not going to  
7146 use those fossil fuels, especially if they get cheaper on the  
7147 world market as we use less of them.

7148 Mr. {Shimkus.} Okay. Mr. Knobloch.

7149 Mr. {Knobloch.} I think we are leaving a vacuum. I  
7150 think if we lead, they will. China today has a national  
7151 renewable electricity standard. They have fuel economy  
7152 standards that are competitive with--

7153 Mr. {Shimkus.} They are also building a new power  
7154 plant, coal-fired power plant every week.

7155 Mr. {Knobloch.} Yes, sir, that is so.

7156 Mr. {Shimkus.} Okay.

7157 Mr. {Knobloch.} But if we don't lead, it is assured  
7158 that they won't adopt that policy.

7159 Mr. {Shimkus.} Oh, you think they will comply, if we  
7160 move, on both low carbon fuel--

7161 Mr. {Knobloch.} I think if--

7162 Mr. {Shimkus.} --and cap and trade regime.

7163 Mr. {Knobloch.} I think if we lead, and they, and we  
7164 lead broadly in negotiations, and they accept a cap, then

7165 some of these policies will flow from there.

7166 Mr. {Shimkus.} Okay. Mr. Cicio.

7167 Mr. {Cicio.} I don't. I don't. I don't think so, and  
7168 particularly for the industrial sector, which is their engine  
7169 of jobs growth, so I don't think so.

7170 Mr. {Shimkus.} Mayor.

7171 Mr. {Fetterman.} I do believe they will eventually  
7172 follow, because the practices that they are currently  
7173 engaging will, are not sustainable environmentally, and it  
7174 will lead to an environmental catastrophe.

7175 Mr. {Shimkus.} Well, yeah, and I would, and I don't  
7176 want to debate you, but carbon dioxide is not a toxic  
7177 pollutant.

7178 Mr. {Fetterman.} I am sorry, what was that?

7179 Mr. {Shimkus.} Carbon dioxide is not a toxic pollutant.  
7180 Would you agree with that?

7181 Mr. {Fetterman.} It is toxic in excessive amounts.

7182 Mr. {Shimkus.} It is not. Does everyone--does anyone  
7183 believe that carbon dioxide is a toxic pollutant? At 15--and  
7184 we are at, in the atmosphere right now? 380. Okay. Let me  
7185 go, and so much to discuss.

7186 Let me talk about real jobs for a second. I just toured  
7187 a supercritical new coal-fired power plant in Lively Grove,  
7188 Washington County. Washington County has 15,000 employees.

7189 This power plant is, right now has 1,200 construction jobs,  
7190 an additional 400 building a coal mine across the street that  
7191 will have 500 full-time power plant jobs, and 400 coalmine  
7192 jobs once in operation. Those are real jobs that are at  
7193 risk. Because what happens in carbon dioxide capture and  
7194 sequestration, 40 percent, and I will end on this, Mr.  
7195 Chairman, 40 percent, 100 percent of the electricity output  
7196 will then be cut to only 60 percent that can go on the  
7197 market, because it is going to take 40 percent of the energy  
7198 created by this power plant to initiate the carbon capture  
7199 and sequestration provision that is limiting its ability to  
7200 really get a return on the investment.

7201 Mr. {Markey.} Okay. The gentleman's time has expired.  
7202 The chair recognizes the gentleman from Texas, the Ranking  
7203 Member of the full committee.

7204 Mr. {Barton.} Thank you, Mr. Chairman. I am not going  
7205 to ask, I don't think I will take the full five minutes. Mr.  
7206 Cicio, is it your view that there should be no cap and trade  
7207 program at all? Is that a fair assessment?

7208 Mr. {Cicio.} We, as an organization, have not taken a  
7209 position either for or opposed. What we look at is cost  
7210 effectiveness, cost number one, cost number two, cost number  
7211 three. In my testimony, I said that our industry has done an  
7212 incredibly good job of continuing to drive down energy

7213 consumption and the resulting greenhouse gas emissions. We  
7214 do not support policies, any policy, a cap and trade policy  
7215 or any other policy that is not cost effective.

7216 Mr. {Barton.} Well, then let me ask it a different way.  
7217 Can you develop a cap and trade program that doesn't add cost  
7218 to the economy?

7219 Mr. {Cicio.} No, sir. I would say in my opinion, that  
7220 is not possible.

7221 Mr. {Barton.} Okay. Mr. Hayward, it says that you are  
7222 a Weyerhaeuser Fellow. That is a forestry company. Do you  
7223 think that we can reforest America with enough offsets to  
7224 cover the allowances in, if we had a cap and trade bill that  
7225 didn't give away allowances? That is a terribly complicated  
7226 question.

7227 Mr. {Hayward.} The Weyerhaeuser Chair at AEI is  
7228 something the family set up over 30 years ago, at the same  
7229 time they set up a chair at Yale University's School of  
7230 Forestry and Environmental Studies. I don't do that much  
7231 work on forestry, actually. I do the sludge part of the  
7232 environment.

7233 But I have looked at some numbers of this. We have  
7234 actually been reforesting pretty rapidly in this country, a  
7235 million acres a year net forest growth in the 1990s,  
7236 according to a study the Clinton Administration set in

7237 motion. But it is hard to get some numbers on this, but I  
7238 think the general answer is no, you actually can't take up  
7239 all of our carbon emissions through carbon sinks. But some  
7240 portion of them, and that I am hesitant to give you a figure  
7241 on that, but it is not anywhere near enough to the targets  
7242 that we are setting out for.

7243 Mr. {Barton.} I think, Mr. Keohane, do you want to  
7244 answer that? Or are you just looking at him?

7245 Mr. {Keohane.} Well, I was actually going to highlight  
7246 the enormous potential for helping to protect the tropical  
7247 rainforests, and in doing so, reduce greenhouse gas emissions  
7248 there, and help reduce costs here at home.

7249 Mr. {Barton.} I am not opposed to tropical rainforest  
7250 protection. My problem within the United States, if we set  
7251 up an offset program, I am reasonably confident that we can  
7252 enforce it and implement it. I am not as confident overseas.  
7253 So, my problem with the tropical rainforest is not that I  
7254 don't want to protect them, and I wouldn't, and I would even  
7255 be willing to figure out a way to give some credits, if we  
7256 could ensure that they would actually be enforced and  
7257 implementable in those countries. And I don't have that  
7258 confidence level overseas. That is my problem, what you just  
7259 said.

7260 Mr. {Keohane.} Well, I agree that enforcement and

7261 verification is crucial, but I think we have the satellite  
7262 monitoring and the on the ground monitoring to do that  
7263 reliably.

7264         Mr. {Barton.} My last question, I am going to ask this  
7265 to my friend at the Heritage Foundation, if we have a  
7266 renewable energy standard or a clean energy standard, should  
7267 we include nuclear power?

7268         Mr. {Kreutzer.} Yeah, I don't understand why that gets  
7269 left out. If the goal is CO<sub>2</sub>, and CO<sub>2</sub> is the worry, nuclear  
7270 produces essentially zero CO<sub>2</sub> per kilowatt-hour.

7271         Mr. {Barton.} What about clean coal technology?

7272         Mr. {Kreutzer.} Clean coal technology, as Mr. Shimkus  
7273 pointed out, is pretty expensive. Right now, we don't have,  
7274 those of us at Heritage, and I don't speak for Heritage, but  
7275 I know that some of the people I talk with are doubtful that  
7276 it will be commercially available any time in the next couple  
7277 of decades. That is our concern.

7278         Mr. {Barton.} But theoretically, it--

7279         Mr. {Kreutzer.} The science is there, but you have to  
7280 do something in addition to pulling it out of the effluent,  
7281 you have to put essentially supertankers per day worth of  
7282 compressed liquefied CO<sub>2</sub> someplace. And I think that is a  
7283 problem.

7284         Mr. {Barton.} Thank you. Thank you, Mr. Chairman.

7285           Mr. {Markey.} I thank the gentleman very much, and we  
7286 thank the panel for your expert testimony, and if you would,  
7287 please remain available, because over the next several weeks,  
7288 we would like to rely upon your expertise. Thank you all so,  
7289 so much for your expertise today.

7290           And we are going to now ask the next panel to come up to  
7291 testify, as well, before the panel.

7292           Welcome, and we appreciate very much our final panel for  
7293 being seated here. And we are going to begin by recognizing,  
7294 excuse me, we are going to recognize first Mr. Frank  
7295 Ackerman. He is a Senior Economist from the Stockholm  
7296 Environmental Institute at Tufts University. We welcome you,  
7297 sir.

|  
7298 ^STATEMENTS OF FRANK ACKERMAN, SENIOR ECONOMIST, STOCKHOLM  
7299 ENVIRONMENTAL INSTITUTE-US CENTER, TUFTS UNIVERSITY; KATE  
7300 GORDON, CO-DIRECTOR, APOLLO ALLIANCE; DENISE BODE, CEO,  
7301 AMERICAN WIND ENERGY ASSOCIATION; DAVID MANNING, VICE  
7302 PRESIDENT, EXTERNAL AFFAIRS, NATIONAL GRID; AND YVETTE PENA,  
7303 LEGISLATIVE DIRECTOR OF THE BLUE GREEN ALLIANCE

|  
7304 ^STATEMENT OF FRANK ACKERMAN  
|

7305 } Mr. {Ackerman.} Thank you, and based on prior travel  
7306 arrangements, I will have to leave the room no later than  
7307 6:45. I can answer questions.

7308 Mr. {Markey.} I think we are going to be able to  
7309 accommodate you.

7310 Mr. {Ackerman.} Okay. So, Mr. Chairman, members of the  
7311 committee, thank you for the invitation to testify on my  
7312 research on the costs of climate change.

7313 This hearing comes at a crucial juncture, not only  
7314 because a new Congress and a new Administration are beginning  
7315 to make changes in climate policy. New initiatives are on  
7316 the table, in part, because there has been a fundamental  
7317 shift in the terms of the debate, with the controversy moving  
7318 from science to economics.

7319 In the realm of science, the influence of an isolated  
7320 handful of climate skeptics is rapidly waning. The world's  
7321 scientists have never been so unanimous and so ominous in  
7322 their warnings of future hazards. But while the climate  
7323 science debate is approaching closure, the climate economics  
7324 debate is still wide opening.

7325 Climate change is happening. It is threatening our

7326 future wellbeing, but how much can we afford to do about it?  
7327 The most powerful argument for inaction today is the claim  
7328 that the costs of reducing emissions would be intolerable.  
7329 The damage to the economy, it is alleged, would be worse than  
7330 the climate problem we are attempting to solve.

7331         Other witnesses have addressed the costs of climate  
7332 policy. My testimony addresses the other side of the coin,  
7333 the costs of inaction. Dr. Keohane mentioned this briefly in  
7334 his remarks in the last panel. When it comes to climate  
7335 change today, there is no longer any choice of avoiding all  
7336 costs. The status quo is no longer an option. That is, the  
7337 costs of climate change are not a discretionary purchase,  
7338 like choosing whether to buy a new car this year or wait  
7339 another year. It is more like a homeowner deciding whether  
7340 it is time to repair the ever-widening cracks in the  
7341 foundation of a house. The longer you wait, the more  
7342 expensive it will be. Wait long enough, and it may become  
7343 impossible to save the house.

7344         My research shows that for the United States as a whole,  
7345 even a partial accounting of the costs of inaction is well  
7346 above 1 percent of GDP, rising steadily in dollars and as a  
7347 percentage over time. For some parts of the country, such as  
7348 Florida, a similar partial accounting of the costs of  
7349 inaction in another study we did reaches 5 percent of state

7350 income within this century.

7351           For particularly vulnerable parts of the world, such as  
7352 the islands of the Caribbean, the costs will be disastrously  
7353 greater, with one likely consequence being a much increased  
7354 flow of refugees out of that region.

7355           Damages that will result from inaction include, but are  
7356 not limited to the impacts of increasingly severe hurricanes,  
7357 more coastal property at risk from rising sea level and storm  
7358 surges, increased energy costs for air conditioning, as  
7359 temperatures rise, growing scarcity and rising costs for  
7360 water, losses in agriculture to hotter and drier conditions,  
7361 and losses of tourism revenue as weather conditions worsen.

7362           My written testimony details these, and has references  
7363 to the detailed studies from which they are taken. Rather  
7364 than try to walk you through any of those calculations, I  
7365 would like to take a minute to talk about what some of my  
7366 newer research implies about an issue that came up in the  
7367 last panel, about competitiveness.

7368           I have been looking at the question of China's trade and  
7369 its carbon intensity, and the remarkable fact is that China  
7370 does not have a comparative advantage in carbon-intensive  
7371 goods. China's imports are as carbon-intensive as carbon-  
7372 intensive as its exports, in a sense, more. China has a  
7373 comparative advantage in low cost labor, and they export

7374 things that are based on low cost labor, which are not the  
7375 carbon-intensive products in the world economy. It is  
7376 completely a mistake to think that concerns about  
7377 competitiveness lead to thinking that China is going to rush  
7378 ahead based on lower cost carbon.

7379         If we want to think about competitiveness on the  
7380 environment, I think we would be more useful to think about  
7381 the country that is really winning in world trade, in most  
7382 recent years, which is Germany. Germany has high wages, it  
7383 has high energy costs, and it has a renewable energy  
7384 standard. It is part of a cap and trade system. It is the  
7385 world-beater, in terms of exports, and they don't seem to be  
7386 crippled by those European environmental regulations. They  
7387 have a big trade surplus in manufacturing. So, not only is  
7388 China not the winner in carbon-intensive things. Germany has  
7389 a lot of very carbon-intensive exports, but it is not  
7390 necessary to cut wages to the Chinese level, to cut  
7391 environmental regulations back to the Chinese level.

7392         Why is it that you can lead the world in exports with  
7393 European wages, regulations, and energy costs? I think that  
7394 is the question that we ought to be looking at before we jump  
7395 to any conclusions about what small changes in climate policy  
7396 are going to mean for competitiveness.

7397         So, thank you. I will be happy to answer questions if I

7398 am still here, or in writing, if I have to leave.

7399 [The prepared statement of Mr. Ackerman follows:]

7400 \*\*\*\*\* INSERT 16 \*\*\*\*\*

|  
7401           Mr. {Markey.} Thank you, Mr. Ackerman, very much. Our  
7402 next witness is Ms. Kate Gordon. She is the Co-Director of  
7403 the National Apollo Alliance. We thank you so much for being  
7404 here. Turn on that microphone, please.

|  
7405 ^STATEMENT OF KATE GORDON

7406 } Ms. {Gordon.} Thanks for your patience, also, in  
7407 staying so late. I also am going to have to run out of here  
7408 at some point, so, for a flight.

7409 This is a critical moment. You keep hearing this. We  
7410 are at a moment of climate crisis, but also, economic crisis,  
7411 and also, an equity crisis. We have an inequality at a high  
7412 in this country, and everything has sort of converged. We  
7413 really need to consider whether we are continuing with  
7414 business as usual, or whether we are looking at a new path,  
7415 where we can simultaneously achieve climate stability and  
7416 energy security, and economic prosperity.

7417 And this is, I think the bill in front of you is a good  
7418 and exciting step toward that, but I also want to say it is  
7419 critical, at this moment, that we take a comprehensive  
7420 approach. It is not going to be enough just to regulate. We  
7421 need to take the kind of comprehensive approach that the  
7422 countries that are beating us in this space, which I agree  
7423 are the European countries, that those countries have taken.

7424 What those countries have done is to say not only do we  
7425 create the regulations that create demand in these sectors  
7426 for clean energy and efficiency, they have also invested in

7427 their workforce. They have also invested in their  
7428 manufacturing sectors. These countries have not succeeded  
7429 and they are not ahead of us because of lower wages and  
7430 cheaper processes. They are ahead of us because they have  
7431 looked both to demand and supply, when looking at clean  
7432 energy and energy efficiency.

7433         There is no guarantee. There is no magic pill that is  
7434 going to create jobs from this bill if we don't take a  
7435 comprehensive approach. There is no guarantee that, for  
7436 instance, construction jobs in efficiency will be good jobs,  
7437 unless we put in prevailing wage standards and other  
7438 guarantees. There is no guarantee manufacturing jobs will  
7439 stay in the United States, unless we invest in retooling and  
7440 scaling up our manufacturing sector, so that the 70,000  
7441 manufacturing firms today, that are making the component  
7442 parts that could be part of the supply chain, unless those  
7443 firms can retool and retrain to be part of that supply chain.

7444         There is no guarantee that workers will be ready for the  
7445 clean energy economy unless we invest in training programs  
7446 that really help all Americans, including those without four  
7447 year college degrees. And I would just urge the committee to  
7448 think about the workforce provisions of the bill, and really  
7449 expand those, to include folks who are not in four year  
7450 colleges. The vast majority of the jobs that we have seen

7451 coming out of the green economy in manufacturing and  
7452 construction operations and installation, the majority of  
7453 those will be the kind of middle skill jobs that are really  
7454 most available to those with two year associate degrees, with  
7455 technical degrees. So, really looking at those folks as  
7456 well.

7457         We have seen, I think, in some ways, the Recovery Act as  
7458 a precursor to the kind of bill we are looking at today, the  
7459 way of doing comprehensive investment, combined with  
7460 workforce investment. That bill is already leading, through  
7461 its sections on creating demand for efficiency and renewable  
7462 energy. It is already leading to jobs throughout the  
7463 country. In my testimony, written testimony, I talked about  
7464 the company, Serious Materials, which just bought a Chicago  
7465 window factor, and is turning it into an efficient window  
7466 factory, in part, because of demand created by the Recovery  
7467 Act for efficient products.

7468         We also have seen companies in other parts of the  
7469 Midwest retool, going from producing regular glass to  
7470 efficient glass, going from producing gearboxes for tractors  
7471 to gearboxes for wind turbines. This is already happening,  
7472 and it will continue to happen. There is a hundred stories  
7473 from the Recovery Act. We could turn that into a thousand or  
7474 ten thousand stories from this type of bill.

7475           So, we encourage you, as you are looking at the bill, to  
7476 think big. Don't just think about, you know, the cap and  
7477 trade section. Don't just think about imported oil and  
7478 energy savings. Think about workers, and the countless  
7479 Americans who might finally be able to earn a living wage,  
7480 and be able to enter the middle class, or be able to invent  
7481 cutting edge technologies that will put us on the forefront  
7482 of the clean energy future.

7483           We have, as a country, always come to crisis, come out  
7484 of crisis stronger, and come out of crisis with new  
7485 innovations and new leadership, and we can do that again.

7486           And I just encourage you to look beyond the individual  
7487 pieces of this bill, to where we want to go as a country, and  
7488 how we want to be competitive.

7489           Thank you.

7490           [The prepared statement Ms. Gordon follows:]

7491 \*\*\*\*\* INSERT 17 \*\*\*\*\*

|  
7492           Mr. {Markey.} Thank you, Ms. Gordon, very much. Our  
7493 next witness, Denise Bode, is the CEO of the American Wind  
7494 Energy Association. Welcome back.

7495           Ms. {Bode.} Thank you, Mr. Markey. It is always nice  
7496 to be here.

7497           Mr. {Markey.} We look forward to your testimony.

|  
7498 ^STATEMENT OF DENISE BODE

7499 } Ms. {Bode.} Thank you very much. I would like to start  
7500 off by thanking you all for drafting the American Clean  
7501 Energy Security Act. It is an important step forward. In my  
7502 testimony, I will focus on all aspects of it, but my oral  
7503 testimony, I want to focus on the wind industry's top  
7504 priority, and that is early passage of the Renewable  
7505 Electricity Standard, and what it means to jobs, good  
7506 manufacturing jobs, as well as electric generation jobs in  
7507 the United States.

7508 Short-term extensions of the Renewable Energy Production  
7509 Credit, the PTC, have helped keep wind energy companies  
7510 competitive with traditional forms of energy, but the short-  
7511 term extensions have created planning and investment  
7512 uncertainty. The booms and busts, the extension and the lack  
7513 of extension have created uncertainty for new development of  
7514 wind generation businesses, and most especially, for the  
7515 build-out of brand new manufacturing base in the U.S.

7516 By eliminating this uncertainty, a National Renewable  
7517 Electric Standard would provide the long-term commitment to  
7518 manufacturers and developers alike to invest billions of  
7519 dollars in the American worker, that will be around forever

7520 in an industry where the source of fuel is infinite.

7521           This business certainty will help quickly deploy  
7522 renewable energy sources in the short term, to help achieve  
7523 stronger emission reductions in the future at a lower cost.  
7524 If you thought last year's historic high for wind,  
7525 contributing 42 percent of new generation capacity in the  
7526 U.S., just wait to what you will see with a lasting  
7527 commitment to renewables.

7528           Last year, while the U.S. economy was shedding hundreds  
7529 of thousands of jobs, the wind industry added 35,000 new  
7530 jobs, in addition to 55 new expanded or announced  
7531 manufacturing facilities across the country. The renewable  
7532 energy industry, with wind power playing a major role, is  
7533 really poised to help lead the country out of the current  
7534 recession and create a more sound economy.

7535           During the Bush Administration, the Department of Energy  
7536 concluded that wind energy could feasibly supply 20 percent  
7537 of the Nation's electricity by 2030. The 20 percent wind  
7538 energy report, that is just one scenario, certainly, we can  
7539 do more, and we are already doing more. But I wanted to  
7540 announce this. Even this one scenario, that they said that  
7541 the numerous benefits from achieving that level of deployment  
7542 would include supporting 500,000 new jobs, generating over \$1  
7543 trillion in economic impact by the year 2030, decreasing

7544 natural gas prices by 12 percent, saving consumers between  
7545 \$43 billion and \$171 billion, and avoided 825 million tons of  
7546 carbon dioxide emissions in the electric sector in 2030, the  
7547 equivalent of taking out 140 million cars off the road.

7548           Unfortunately, though, the United States is at a  
7549 competitive disadvantage compared to the 37 countries around  
7550 the world that have national renewable electric energy  
7551 requirements, including China and India, which have mandatory  
7552 requirements.

7553           The importance and benefits of a national RES are  
7554 unbelievable, because we stand at a critical crossroads, as  
7555 we determine how to promote job growth, building back a new  
7556 economy of jobs that will be there forever.

7557           In addition to keeping our Nation competitive with other  
7558 countries, there are many other benefits. Numerous studies  
7559 conclude that a national RES would save consumers money, as  
7560 renewable energy sources displace fossil fuel, and avoid the  
7561 volatility of fossil fuel prices.

7562           An excellent real world example that I was involved in  
7563 as the Chairman of the State Commission in Oklahoma was the  
7564 renewable electricity development that brought down costs to  
7565 consumers, is the experience of Oklahoma Gas & Electric. The  
7566 entire cost of Oklahoma Gas & Electric's Centennial Wind  
7567 Project in Oklahoma was entirely offset by the natural gas

7568 fuel savings in 2007 alone, saving consumers in Arkansas and  
7569 Oklahoma money. And that is a state that clearly can  
7570 benefit.

7571 A national RES would create jobs. Of course, you know,  
7572 the 46 states with power plants and manufacturing facilities,  
7573 job growth is already expanding in every region of the  
7574 country. A national RES will also bring benefits to all  
7575 areas. The Energy Information Administration has found that  
7576 the Southeastern United States would be a net renewable  
7577 energy exporter by 2019 under a national RES. Because a  
7578 variety of resources are eligible for RES compliance, all  
7579 regions of the country will be able to utilize other abundant  
7580 renewable resources besides wind to meet the requirements.  
7581 Further wind energy projects exist in 35 states already.

7582 Whereas other fuels are shipped by rails, pipelines, a  
7583 national RES would promote the shipment of wind via  
7584 transmission lines, and allow utilities to purchase renewable  
7585 energy credits from windy regions. It is a down payment to,  
7586 on the greenhouse gas emissions. And I know I am up against  
7587 my deadline, and I know you will pound that, but I want to  
7588 tell you more thing.

7589 What is really critical here is the study, just came out  
7590 within the last month, that said in Europe alone, the wind  
7591 generation that was added has avoided 7 percent of the

7592 greenhouse emissions from electric generation that would have  
7593 been there before. So, it is an immediate impact on removing  
7594 carbon right now.

7595 Thank you very much for my opportunity.

7596 [The prepared statement of Ms. Bode follows:]

7597 \*\*\*\*\* INSERT 20 \*\*\*\*\*

|  
7598           Mr. {Markey.} Thank you, Ms. Bode. Our next witness is  
7599 Mr. David Manning. He is the Vice President for External  
7600 Affairs at National Grid, where he is responsible for federal  
7601 issues and relations. He has also served as the President of  
7602 the Canadian Association of Petroleum Producers, so we  
7603 welcome you, sir. Whenever you are ready, please begin.

|  
7604 ^STATEMENT OF DAVID MANNING

7605 } Mr. {Manning.} Thank you very much, Mr. Chairman. As  
7606 you know, I may be the only one here that was on the rigs in  
7607 the high Arctic and also a delegate to Kyoto. So, just  
7608 quickly, thank you, Mr. Chairman, Ranking Member Upton, and  
7609 members of the committee.

7610 National Grid is a very large natural gas and  
7611 electricity provider in the Northeast. We work from New York  
7612 to New Hampshire. We serve about 15 million people. I am  
7613 here to speak very specifically, however, sir, on the  
7614 analysis which is available to us to explain the economic  
7615 benefits of energy efficiency investment.

7616 A couple of years ago, at the World Economic Forum,  
7617 there was great debate over whether or not we can do climate  
7618 change, whether or not we can drive energy efficiency without  
7619 bankrupting the economy, and we heard a lot about that this  
7620 evening, in terms of the cost of action.

7621 There was a lack of substantive evidence, and a group  
7622 pulled together, including ourselves, Shell, DTE, Honeywell,  
7623 Environmental Defense, the NRDC, the Natural Resources  
7624 Defense Council, and we all partnered with McKinsey, and  
7625 produced a study. It took over a year in production, and it

7626 analyzed all of the various means open to us, in terms of  
7627 investing in energy efficiency technologies. It was vetted  
7628 by MIT, Princeton, Texas A&M, UC-Davis, and if you look at  
7629 nothing else, I have attached to my written testimony what I  
7630 call the McKinsey Curve. And the McKinsey Curve, which came  
7631 out in 2007, demonstrates that about 40 percent of the  
7632 technologies that they reviewed are, fully pay for themselves  
7633 within their lifetime. So, there is no net cost to those  
7634 technologies. Quite obviously, you start with residential  
7635 electronics. We know that computers can be much more  
7636 effective, much more efficient. Residential lighting.

7637         And as you work through, you then go into vehicles, you  
7638 go into fuel, intensity of carbon fuels. So, we have a  
7639 pretty thorough analysis, setting out all of the various  
7640 opportunities, and it is to drive a significant shift in  
7641 capital investment away from less efficient, more emitting  
7642 technologies, and driving us to more cost-effective solutions  
7643 that assume no technological breakthroughs, 80 percent of the  
7644 options reviewed relied on proven technology. The balance  
7645 were considered high potential, and high potential in 2007  
7646 included cellulosic biofuels and plug-in hybrids, and of  
7647 course, now, a number of companies are testing plug-in  
7648 hybrids.

7649         So, it looked at a series of options, going from least

7650 cost to greatest cost, and this is consistent with what New  
7651 York City found in its New York City 2030 Program, that a  
7652 great deal of the emissions within urban centers are in  
7653 buildings. So, your easy and earliest hits were in buildings  
7654 and appliances. Moving on, vehicles and fuel carbon  
7655 intensity. The third move was industrials, sinks and  
7656 forests, and then, finally electric power options.

7657         What it also found was the maximum of all of those  
7658 categories, no one category contributed more than 11 percent  
7659 to the solution. So, it is widely dispersed through the  
7660 economy, and of course, that is part of our point, is that in  
7661 order to invest in these technologies, you are driving an  
7662 entire new industry.

7663         Just a few examples. Obviously, we have been doing a  
7664 lot of work in energy efficiency in New Hampshire. We have  
7665 been working throughout New England. In Massachusetts, we go  
7666 back some 30 years in this experience.

7667         Just in the last year alone, we are partnering with  
7668 Positive Energy. This is a firm doing a pilot in  
7669 Massachusetts. They are based on the West Coast, and they  
7670 are coming up with a tracking system for customers to  
7671 demonstrate how their fuel consumption relates to those with  
7672 similar properties.

7673         Reflex Lighting Group, now doing state of the art design

7674 work in Boston for commercial space. DMI, R.G. Vanderweil,  
7675 two new design firms that are doing energy efficiency  
7676 programs and products for commercial and customer  
7677 installations. We are working with them.

7678         Evergreen Solar, Sharp Solar, these are made, locally  
7679 manufactured solar providers and Solar Design Associates are  
7680 designing our new building, which we are about to open just  
7681 outside of Boston, which will be the second largest solar  
7682 array in New England, and that will be open in May, 330,000  
7683 square foot lead-certified building, dedicated for National  
7684 Grid, powered, of course, by a solar array.

7685         So, those are all, those companies didn't exist a year  
7686 or two ago, so my point, sir, is that, and panel, is that we  
7687 have a very real opportunity to not only pay for these  
7688 opportunities and energy savings, but to drive new jobs.

7689         Very quickly, we spend \$215 billion annually on the  
7690 production of electricity. We only invest \$2.6 billion in  
7691 energy efficiency.

7692         In natural gas, we spend \$1 to \$2 per mcf on energy  
7693 efficiency, compared to, I mean, the cost, I am sorry, would  
7694 be \$1 to \$2, compared to the cost of the fuel of \$6 to \$8.  
7695 And multiple studies have demonstrated that you can do energy  
7696 efficiency for approximately \$0.03 per kilowatt-hour saved,  
7697 and electricity costs, of course, range anywhere from \$0.06

7698 to \$0.12 and beyond.

7699           A lot of this has taken place in New England, because of  
7700 our highest cost of energy, but we can do it.

7701           [The prepared statement of Mr. Manning follows:]

|

7702 \*\*\*\*\* INSERT 18 \*\*\*\*\*

|

7703           Mr. {Markey.} Thank you, Mr. Manning, very much. Our  
7704 final witness is Yvette Pena, who is Legislative Director of  
7705 the Blue Green Alliance, a partnership between labor unions  
7706 and environmental organizations, comprising more than six  
7707 million people in support of good jobs and a green economy.  
7708 We welcome you.

|  
7709 ^STATEMENT OF YVETTE PENA

7710 } Ms. {Pena.} Thank you. Thank you, Mr. Chairman and  
7711 members of the committee. I am testifying today, I am afraid  
7712 David Foster was supposed to testify, so obviously, I am not  
7713 him. He is our Executive Director. He is very sorry he had  
7714 to leave. He had a commitment outside of the country.

7715 The Blue Green Alliance is made up of the United  
7716 Steelworkers, the Sierra Club, the Laborers International  
7717 Union, the National Resource Defense Council, the  
7718 Communication Workers of America, and SEIU. This  
7719 collaboration of labor unions and environmental organizations  
7720 is based on our common goal to build a clean energy economy,  
7721 and economy that both creates good green union jobs and  
7722 combats global warming.

7723 Several weeks ago, in response to the deepening economic  
7724 and climate crisis, the Blue Green Alliance put forward a  
7725 policy statement on climate change, the first such statement  
7726 issued jointly by both labor unions and environmental  
7727 organizations. The policy statement stressed the importance  
7728 of including targets that rely on the best scientific  
7729 evidence in an economy-wide cap and trade system that  
7730 contains mechanisms to prevent job loss and globally

7731 competitive energy-intensive industries. And above all, the  
7732 statement made clear that comprehensive climate change  
7733 legislation should focus on the creation and retention of  
7734 millions of family-sustaining green jobs. I have submitted a  
7735 copy of our policy statement for the record following my  
7736 written testimony.

7737 Solving global warming will not be the economic calamity  
7738 that some are predicting. Done right, the transition to a  
7739 green economy will be the most important economic development  
7740 tool of the Twenty First Century. The American Recovery and  
7741 Reinvestment Act of 2009 took the first step in that  
7742 direction, with a meaningful down payment on investment in  
7743 the green economy. But this down payment could be wasted, if  
7744 we don't continue to make the large scale investments that  
7745 are necessary to transition the Nation into a clean energy  
7746 economy.

7747 Policies, such as the strong Renewable Electricity  
7748 Standard, which is included in the draft bill, are essential  
7749 in creating a regulatory framework that supports renewable  
7750 energy, energy efficiency, and new transmission, as they  
7751 provide important market signals that will attract private  
7752 investment at the scale necessary to put Americans back to  
7753 work.

7754 A study released by the Blue Green Alliance on the

7755 Renewable Energy Policy Project of component manufacturing in  
7756 the renewable energy industry found that 850,000  
7757 manufacturing jobs could be created with \$160 billion of  
7758 investments in manufacturing.

7759         New wind turbine equipment plants have also been built in  
7760 communities across the country, including North and South  
7761 Dakota, Minnesota, Iowa, Pennsylvania, Oklahoma, Colorado,  
7762 Arkansas, New York, North Carolina, and other places directly  
7763 employing thousands of workers.

7764         Comprehensive climate change legislation will also  
7765 reinvigorate the construction industry, in which 1.9 million  
7766 people are now out of work. We must make greater investments  
7767 in both commercial retrofitting and residential  
7768 weatherization, with the right standards that others have  
7769 spoken about.

7770         Such energy savings can be put to use to finance a high  
7771 wage, high road weatherization industry, where livable wages  
7772 are paid, health care is provided, and essential career and  
7773 apprenticeship job training opportunities are made available  
7774 to communities across America.

7775         As members of the committee are fully aware, global  
7776 warming is a global problem. U.S. climate change legislation  
7777 must not create perverse incentives for energy-intensive  
7778 industries to close their U.S. facilities because of rising

7779 energy costs and relocate them to countries that do not take  
7780 effective action to curb emissions. Nor should energy-  
7781 intensive industries be left vulnerable to imports from  
7782 countries that do not price carbon in energy-intensive  
7783 products. In either case, Americans lose jobs and global  
7784 warming emissions increase.

7785         Among the mechanisms available to resolve the  
7786 international competitive issue are allowance allocations to  
7787 energy-intensive industries, border adjustment mechanisms,  
7788 and globally measurable and enforceable sectoral agreements  
7789 within the framework of an international treaty.

7790         We are confident that this committee can craft the  
7791 appropriate combination of these mechanisms to ensure that  
7792 our domestic manufacturing industries remain both competitive  
7793 and play their critical role in reducing their own emissions.

7794         Global warming is already destroying the livelihood of  
7795 workers available. Doing nothing is not an option. Before  
7796 us are critical choices and decisions. Will we build the  
7797 clean energy economy and put America's factory and  
7798 construction workers back on the job? Will we advocate a new  
7799 development model for developing countries, that emphasizes  
7800 consumption in their economies, instead of unsustainable  
7801 trade deficits and hours?

7802         Will we look back a year from now and say that we stood

7803 up for our country, our climate, and all humanity when it  
7804 mattered? Your choices will decide which path we go down as  
7805 a Nation. I believe that with the vision that has been laid  
7806 out in the draft legislation, you have already taken steps  
7807 down the right path for our workers and for our environment.

7808           The Blue Green Alliance and its partner organizations  
7809 look forward to working with members of the committee as you  
7810 continue to work on this critical piece of legislation.

7811           Thank you.

7812           [The prepared statement of Ms. Pena follows:]

7813 \*\*\*\*\* INSERT 19 \*\*\*\*\*

|  
7814           Mr. {Markey.} We thank you, Ms. Pena, very much. And  
7815 now, we will turn and recognize Ms. Castor, from the State of  
7816 Florida.

7817           Ms. {Castor.} Thank you, Mr. Chairman. Thank you all  
7818 very much for your testimony today. I hear a lot from  
7819 students and young entrepreneurs, and they are very motivated  
7820 these days to enter a green jobs field.

7821           What is your best advice for a young person, what should  
7822 they be studying in school? How should they be preparing?  
7823 Where are the opportunities today for those jobs?

7824           Mr. {Manning.} I would love to start. We have a real  
7825 issue in this country, in terms of math and science  
7826 education. And this doesn't just apply to the new economy,  
7827 the new energy economy. It applies to all of the work that  
7828 we must do as utilities to keep our own systems reliable.

7829           So, I would have to say off the top that if you are  
7830 having that conversation, if anyone has the aptitude or the  
7831 interest to pursue science and--speaking as a retired lawyer,  
7832 I can offer great respect for mathematicians, for scientists,  
7833 for engineers, but beyond that, of course, I think what is  
7834 really significant is that the educational institutions that  
7835 we now meet with and talk to, they are designing these  
7836 programs, in terms of design, architecture, engineering,

7837 science, that it is very difficult for us to know what we are  
7838 going to need. The Bipartisan Action Group is meeting again  
7839 tomorrow on this very issue, trying to figure out what sorts  
7840 of means they will have, in terms of personnel.

7841 Don't forget also, the average age of an employee within  
7842 our company is very close to 50. So, when you talk to these  
7843 people, remind them that there is an entire generation of  
7844 energy providers who are very close to retirement. So, I  
7845 think there is a pretty broad scope open to them.

7846 Ms. {Gordon.} Thank you for the question. I think it  
7847 is a great one. It is incredibly important to not limit the  
7848 scope of the notion of what a green job is. Ideally, we  
7849 would love to see jobs in inventing, making, installing,  
7850 using, maintaining, operating all of these systems here in  
7851 this country, and that is a huge range of occupations, and a  
7852 huge range of areas and sectors. It is one of the reasons it  
7853 has been hard to count the jobs, because they are so diverse  
7854 across so many sectors.

7855 I think, I would agree that math and science, math and  
7856 science are critical not just for engineering, but what we  
7857 are hearing from the folks, our union partners who are  
7858 running apprenticeship programs in electrical and in the  
7859 building trades, is they also need folks to come in with  
7860 basic math and science. It is an incredibly important skill.

7861 I would also just reiterate what I said earlier, that  
7862 many of these jobs are jobs that don't need a four year  
7863 degree, and while we want our young people, who are  
7864 interested, all the young people who are interested and  
7865 excited about going to a four year college should be able to  
7866 do that. But not all young people are in that category.

7867 There is 150,000 dropouts last year in California. The  
7868 Gates Foundation surveyed them, and found 80 percent of them  
7869 said if they had had job experience while in school, they  
7870 would have stayed in school.

7871 And that is an incredibly important statistic, and I  
7872 think we need to give opportunities to folks who want to go  
7873 into the trades, opportunities to folks who want to be  
7874 building hands-on, building these systems that we are talking  
7875 about.

7876 Ms. {Bode.} As one of the mainstream, sort of new  
7877 renewable industry.

7878 Mr. {Markey.} Turn on the microphone, please.

7879 Ms. {Bode.} We want, am I on? Okay, now I am. We  
7880 represent both the people involved in manufacturing of wind  
7881 turbines, and there is over 8,000 parts in a wind turbine, as  
7882 well as those people that develop the wind farms. So, we  
7883 deal with both, so what we have been trying to do, and are  
7884 doing through our Education Committee, is developing

7885 curricula that will provide the job training, and working  
7886 with a number of educational institutions, junior colleges,  
7887 vo-tech schools, as well as four year colleges, to develop  
7888 the breadth of training that will be necessary for these  
7889 jobs.

7890 We have, at our Wind Power Conference that will be in  
7891 Chicago, Illinois the first week in May, we will have  
7892 approximately 20,000 people attending that conference. We  
7893 have one of the days of the conference set aside for young  
7894 people and for people in academics, who want to come in and  
7895 meet the 1,200 exhibitors who are manufacturer, supply chain  
7896 folks, as well as developers, to talk with job possibilities.  
7897 And we are there to talk with them as well.

7898 So, contact us. We are putting together an internship  
7899 program. We are all about the jobs and the people.

7900 Ms. {Bode.} And I have another question. It is a bit  
7901 broader. You know, last week, the Environmental Protection  
7902 Agency issued its proposed endangerment finding, that follows  
7903 on the U.S. Supreme Court decision that says EPA has the  
7904 legal authority and obligation to regulate greenhouse gases.

7905 And you know, if the Congress, if we can't get it  
7906 together and pass a cap and trade, or an Energy Bill here, it  
7907 will probably be left to EPA to regulate it. What would that  
7908 do to green jobs initiatives and to your growing industries?

7909 Mr. {Manning.} Again, if I could open. I think we had  
7910 a strong preference, which is one of the reasons we are very  
7911 pleased to be included in this panel, we have a strong  
7912 preference for a legislative response which can provide the  
7913 kind of flexibility and the investment opportunities that  
7914 make sense.

7915 We are a very large company. We are a very large  
7916 industry, all of us collectively. Our preference would be  
7917 that we come up with a regime, or that you come up with a  
7918 regime which we can, instead of rules that we can live by,  
7919 and drive the right kind of investments.

7920 So, *Mass. v. EPA*, we are very familiar with that case.  
7921 We are very familiar with the work of the EPA, in terms of  
7922 regulating what we do as power generators. Our preference  
7923 would be that we come up with, or that you come up with a set  
7924 of rules that will address this problem. We are very anxious  
7925 to get on with it.

7926 Ms. {Bode.} Thank you.

7927 Mr. {Markey.} Thank you. The gentlelady's time has  
7928 expired.

7929 Ms. {Bode.} Okay.

7930 Mr. {Markey.} The chair recognizes the gentleman from  
7931 Michigan, Mr. Upton.

7932 Mr. {Upton.} Mr. Manning, we sort of chuckled back here

7933 when you said you were very glad to be on this panel. If I  
7934 were you, I would have asked to have been on panel 2 or 3. I  
7935 have just a couple questions, and hopefully, will not take my  
7936 full five minutes.

7937 Ms. Pena, you talked about the Blue Green Coalition and  
7938 how broad it is, which was exciting to hear. I am a  
7939 supporter of a renewable portfolio standard. Obviously, the  
7940 question is what is in the details, what is in the base. I  
7941 am one that happens to believe that hydro ought to be in  
7942 there, both old and new. Waste energy, I think, is very  
7943 important. We see that in my district. A gas line runs  
7944 right through a landfill, and they provide gas heat or gas  
7945 for, I believe, 1,200 homes a day from the methane produced  
7946 from that.

7947 I am a supporter of nuclear, and that is my question for  
7948 you. We have two nuclear plants in my district. We had the  
7949 unfortunate incident last fall of having a turbine lose a  
7950 blade, and it was destroyed. And there are now 500 folks  
7951 working to repair that turbine. As you can imagine, it is  
7952 pretty big. That turbine was made in Germany, because we  
7953 turned the switch from green to red on nuclear, we lost, we  
7954 have lost a lot of jobs. Among them, I think in your  
7955 coalition, you talked about the steelworkers.

7956 When my two plants were built, 85 percent of the

7957 components of those two plants were built in this country.  
7958 Because we have not turned on a new plant in a couple of  
7959 decades, 85 percent of the components are now made someplace  
7960 else, as we have seen with this turbine. Would your  
7961 organization support nuclear, with no greenhouse gas  
7962 emissions, as part of the renewable portfolio standard?

7963 Ms. {Pena.} We do not have a position on nuclear  
7964 energy. Some various organizations--

7965 Mr. {Upton.} Well, we might be able to convince you.

7966 Ms. {Pena.} --have varying positions on the issue.

7967 Mr. {Upton.} I just know that the steelworkers, I  
7968 believe they are supportive of that. Well, I don't know. It  
7969 would be great if you could go back to them, because this  
7970 would really create tens of thousands of jobs, if we are able  
7971 to do that.

7972 Knowing my time is running out, I am going to not use  
7973 all my time. Ms. Bode, a question that I have been asking my  
7974 crew for a long time, and maybe you know the answer.

7975 This proposal, the draft deal, has a 25 percent standard  
7976 by '25. Obviously, a lot of that is wind. Unlike some  
7977 people from Massachusetts, I actually support in water, Lake  
7978 Michigan, though I don't, maybe Mr. Manning, I don't know  
7979 whether you support it off Nantucket or not. Do you? You  
7980 do. Do you hear that, Mr. Markey? He supports wind off

7981 Nantucket.

7982           Maybe, you will be delegated to panel 5 next time.

7983           Mr. {Markey.} How about wind in Lake Michigan?

7984           Mr. {Upton.} I just said that I support that.

7985           Mr. {Markey.} Oh, you do. Okay, oh, good.

7986           Mr. {Upton.} I do. I do support that.

7987           Mr. {Markey.} Excellent, excellent.

7988           Mr. {Upton.} The question, though, that I have for you,

7989 Ms. Bode, is we actually, we have some of those green jobs

7990 that we've talked about. In my district, we actually make

7991 the cap, which weighs 32,000 pounds, on the 80 meter wind

7992 turbines. Great, good jobs, in a little town in my district.

7993 Now, they provide, if we end up going to 25 percent, I don't

7994 know what the wind component of that will be. I would guess

7995 what, 10 to 15 maybe, if we don't include--how much, knowing

7996 that today, it is less than 1 percent wind, how much space in

7997 America do we need for, how many wind turbines do we need, at

7998 80 meters tall, because they are the most efficient, right?

7999           Ms. {Bode.} Actually, they are actually going up to 100

8000 feet.

8001           Mr. {Upton.} Okay. Well, 80 meters. But in essence.

8002           Ms. {Bode.} 100.

8003           Mr. {Upton.} How much space do we need, land space do

8004 we need?

8005 Ms. {Bode.} Right now, there are 35 states that are  
8006 producing, that have wind turbines and wind generation.

8007 Mr. {Upton.} Right.

8008 Ms. {Bode.} In terms of producing wind. In terms of  
8009 the space to do that, I think, I haven't measured it in terms  
8010 of half of the state, or part of the state, but I think the  
8011 footprint is probably less important, in the fact that the  
8012 wind turbine--

8013 Mr. {Upton.} Well, do we need--

8014 Ms. {Bode.} A wind turbine, put up on land, continues  
8015 to allow the land to have multiple uses, and in fact, you  
8016 know, that is, you know, in some respects, that is very  
8017 different than all--

8018 Mr. {Upton.} Do we need--

8019 Ms. {Bode.} --other forms of generation.

8020 Mr. {Upton.} But how close do you put these 80 meter  
8021 jobs together?

8022 Ms. {Bode.} Well, let us put it this way. In Germany,  
8023 they have 20 percent penetration, and I think they are very  
8024 comfortable with the amount of wind turbines they have put up  
8025 in their country. The same thing with Italy, France, and it  
8026 is a much smaller space for them to put it--

8027 Mr. {Upton.} Again, remember, I am a supporter.

8028 Ms. {Bode.} Yes.

8029 Mr. {Upton.} Do we need the size of Iowa? Do we need  
8030 the size of--I mean, how much space do we need to generate 10  
8031 to 15 percent of our energy from wind?

8032 Ms. {Bode.} I have no idea.

8033 Mr. {Upton.} All right.

8034 Ms. {Bode.} Well, I mean, but the point is that you do  
8035 not--you are not taking land out of--

8036 Mr. {Upton.} Can you find out and get back to me?

8037 Mr. {Shimkus.} If the gentleman would yield, I have got  
8038 some stats.

8039 Mr. {Markey.} Tell you what, the gentleman's time has  
8040 expired, and I can recognize from, if the gentleman wouldn't  
8041 mind, I can recognize the gentleman from Illinois on his own  
8042 time.

8043 Mr. {Shimkus.} Then I am not going to use my stats  
8044 instead of my question.

8045 Ms. {Bode.} Well, and I would be up to answer to his  
8046 question, my brilliant staffer, who has a lot more statistics  
8047 than I do at his fingertips, if I could answer.

8048 Mr. {Markey.} Sure.

8049 Ms. {Bode.} Apparently, it is, actual land use is 2 to  
8050 5 percent of the land covered, which is less than half of the  
8051 area of Anchorage, Alaska. So, onshore land use would be  
8052 approximately 12.3 million acres, but of course, in almost

8053 every case, that land has continued to be multiple use.

8054 Mr. {Upton.} Okay. Understand that. Thank you.

8055 Mr. {Markey.} The gentleman's time has expired. The  
8056 chair recognizes the gentleman from Illinois.

8057 Mr. {Shimkus.} Let me just add to that, then. Thank  
8058 you, Mr. Chairman. Take a steel mill that uses 545 million  
8059 kilowatts per year. It would require roughly 138 wind  
8060 turbines on roughly 12,443 acres of land, for a total output.  
8061 However, during peak load at that steel mill, it requires  
8062 100,000 kilowatts. For that, you would need roughly 825  
8063 turbines on 33,000 acres of land to account for peak load.  
8064 This wind panacea is just scary.

8065 The President, in his inaugural address, said we will  
8066 run our factories, manufacturing factories, on wind and  
8067 solar. Dr. Seuss couldn't write a better line. That is  
8068 irresponsible. Base load generation will always be major  
8069 traditional electricity generation, whether that is coal or  
8070 that is nuclear power, or it is going to be major hydro.  
8071 Now, renewables can help, and I am probably one of the few  
8072 Members who climbed a wind turbine, Mr. Chairman. I know you  
8073 would be shocked that I actually climbed one during my break.

8074 I encourage everybody to visit coal-fired power plants  
8075 or coalmines. I also did climb all the way up to the top of  
8076 a turbine, and got a good tour of that. So, we are not anti-

8077 this, but for people to propose that we are going to solve  
8078 our electricity problems and stay competitive worldwide on  
8079 wind and solar, are being very disingenuous. And so, that is  
8080 why part of our debate is, in this bill, which has a gaping  
8081 hole, which is the credit allocation. Are you all  
8082 comfortable with the fact that there are some folks cutting  
8083 backroom deals on the credit allocations, and that we are not  
8084 here discussing the allocation of those credits right now.

8085 Ms. Pena?

8086 Mr. {Manning.} If I could--

8087 Mr. {Shimkus.} No, I asked Ms. Pena first.

8088 Mr. {Manning.} Oh, I am sorry.

8089 Ms. {Pena.} Thank you for--

8090 Mr. {Shimkus.} Real quickly. I have only got 2:40, and  
8091 the chairman's hot on time.

8092 Ms. {Pena.} And that question will be answered, and  
8093 obviously, we are having a lot of discussions on it. We need  
8094 to--

8095 Mr. {Shimkus.} So, you are part of the backroom deals,  
8096 too.

8097 Ms. {Pena.} Well, I--

8098 Mr. {Shimkus.} Yes?

8099 Ms. {Pena.} No, no. I mean, obviously, the chairman  
8100 has--

8101 Mr. {Shimkus.} No. There is deals being cut right now,  
8102 so if you are not back there, you had better get back there,  
8103 because folks are negotiating these credits. Now, we should  
8104 be discussing these credits out here in the open, so that we  
8105 can then also score them. So, do you think we should have  
8106 those out for everyone to see, so we can address the  
8107 benefits?

8108 Ms. {Pena.} I believe we need allocations, and we need  
8109 investments--

8110 Mr. {Shimkus.} How about transparency?

8111 Ms. {Pena.} --manufacturing--

8112 Mr. {Shimkus.} How about transparency? You all are for  
8113 transparency, aren't you?

8114 Ms. {Pena.} There is transparency in this process, sir.

8115 Mr. {Shimkus.} There is. So, can you tell me the  
8116 credit allocation right now?

8117 Ms. {Pena.} It is being discussed.

8118 Mr. {Shimkus.} And who is discussing it?

8119 Ms. {Pena.} The chairman, the various constituencies.  
8120 The--

8121 Mr. {Shimkus.} In the backrooms. In the backroom,  
8122 which I have not been invited to yet. That is not dealing  
8123 and helping me on coal production and electricity generation.

8124 Ms. {Pena.} I can only answer what we believe, and--

8125 Mr. {Shimkus.} Mr. Manning?

8126 Mr. {Manning.} Our position has been very public, in  
8127 terms of allocation. We believe that--

8128 Mr. {Shimkus.} Should there be, let me ask this  
8129 question. My time is--should there be 100 percent auction?

8130 Ms. Pena, yes or no, 100 percent auction? Yes or no.

8131 Ms. {Pena.} We need to continue to discuss that.

8132 Mr. {Manning.} We need to move promptly to--

8133 Mr. {Shimkus.} 100 percent auction, yes or no.

8134 Mr. {Manning.} Ultimately, yes.

8135 Ms. {Shimkus.} Yes. Ms. Bode, 100 percent auction.

8136 Should we have 100 percent auction? Ms. Bode?

8137 Ms. {Bode.} I don't know what is being discussed in the  
8138 back rooms. I am sorry.

8139 Mr. {Shimkus.} No, the question is should we have 100  
8140 percent auction of credits?

8141 Ms. {Bode.} Oh, okay.

8142 Mr. {Shimkus.} The question is, should we have 100  
8143 percent auction of credits? Aren't these important  
8144 questions? Mr. Chairman?

8145 Ms. {Bode.} Yes.

8146 Mr. {Shimkus.} Well, did you invite the panel here?

8147 Mr. {Markey.} I don't think there should be 100  
8148 percent.

8149 Mr. {Shimkus.} I am asking the panel that you have  
8150 invited.

8151 Mr. {Markey.} Okay. Please.

8152 Mr. {Shimkus.} Should they be answering? Should there  
8153 be 100 percent auction of credits?

8154 Ms. {Bode.} I don't know the answer to your question.

8155 Mr. {Shimkus.} Okay. Next.

8156 Ms. {Gordon.} I think we, our alliance hasn't come to a  
8157 specific position on this, but we definitely believe there  
8158 needs to be a transition period, where--

8159 Mr. {Shimkus.} Mr. Ackerman, please.

8160 Ms. {Gordon.} Ultimately, yes.

8161 Mr. {Shimkus.} Should there be 100 percent--someone.

8162 Ms. {Gordon.} But there needs to be a transition  
8163 period, that includes some allocations, and we need to make  
8164 sure we invest auction proceeds back into the clean energy  
8165 economy.

8166 Mr. {Shimkus.} Mr. Ackerman.

8167 Mr. {Ackerman.} Well, I am in favor of 100 percent  
8168 auction.

8169 Mr. {Shimkus.} Thank you. Thank you.

8170 Mr. {Ackerman.} And I am in favor of transparency in  
8171 making these deals.

8172 Mr. {Shimkus.} Thank you.

8173 Mr. {Ackerman.} I think the question of is there  
8174 transitional assistance needed is a separable question.

8175 Mr. {Shimkus.} Right. But we should be discussing  
8176 these credits. If we move to markup of a bill on Tuesday,  
8177 and we don't have the credit allocation, that will pose a  
8178 question, Mr. Chairman, one that you asked in past Energy  
8179 Bills, of who is writing the bill in the back room. And with  
8180 that, I yield back my time.

8181 Mr. {Markey.} I thank the gentleman very much. And I  
8182 thank all of the members of the committee for this  
8183 historically long hearing, and you don't hear many witnesses  
8184 ever say thank you for inviting me this evening to testify.  
8185 As one of our witnesses--

8186 Ms. {Bode.} Mr. Markey.

8187 Mr. {Markey.} Yes.

8188 Ms. {Bode.} I just wanted a point of personal  
8189 privilege. I wanted to share the fact that my brother and  
8190 sister-in-law are here from Carlisle, Massachusetts. They  
8191 are in the tiers with their two daughters.

8192 Mr. {Markey.} Where are they, please? I would love to  
8193 see them, and welcome from Carlisle.

8194 Ms. {Bode.} And this is the first Congressional hearing  
8195 they have ever been to, and so, I just wanted to make sure  
8196 that everyone knew that they were here.

8197           Mr. {Markey.} Hopefully they weren't here at--Carlisle  
8198 is like the aristocracy of Massachusetts. So, thank you so  
8199 much for being here today, and your sister-in-law did a  
8200 fantastic job here today.

8201           Tomorrow morning, by the way, our first hearing is on  
8202 the allocation policies of carbon credits, in order to assist  
8203 and benefit consumers, and we will have seven witnesses,  
8204 beginning at 9:30 tomorrow morning, to begin the discussion  
8205 of carbon credits and its implementation, in a way that will  
8206 protect consumers in America.

8207           Again, we thank all of you for your patience today, and  
8208 for your tremendous contributions to this process. Thank  
8209 you.

8210           This hearing is adjourned.

8211 [Whereupon, at 6:40 p.m., the subcommittee was adjourned.]