



October 2010

## Colorado and the American Clean Energy and Security Act

### Committee on Energy and Commerce

On June 26, 2009, the U.S. House of Representatives approved H.R. 2454, the American Clean Energy and Security Act (ACES). The legislation would create millions of new clean energy jobs, enhance America's energy independence, and protect the environment. And it would reduce the deficit by billions of dollars over the next decade.

At the national level, government and other experts have documented the job creation, oil savings, consumer cost savings, and pollution reduction that would result from enactment of ACES. A recent economic analysis at New York University concluded: "from almost any perspective and under almost any assumption, H.R. 2454 is a good investment for the United States to make in our own economic future and in the future of the planet."<sup>1</sup>

Estimates from the Congressional Budget Office, the Environmental Protection Agency, and the Energy Information Agency predict that the per-household costs of the bill will be less than 50 cents per day in 2020 (\$74 to \$160 annually).<sup>2</sup> These estimates do not take into account the benefits of curbing global warming. They also do not take into account the full energy savings resulting from the investments ACES makes in energy efficiency, which the American Council for an Energy Efficient Economy estimates will be \$215 annually per household by 2020.<sup>3</sup>

This fact sheet provides a brief overview of how the legislation would affect the state of Colorado.

**Investments in Clean Energy Programs in Colorado.** ACES will invest over \$1 billion in clean energy programs in Colorado by 2020.<sup>4</sup> These funds could be used to pay for renewable energy projects, energy efficient building retrofits, home appliance upgrades, and clean and efficient transportation improvements. Over the period 2012 to 2020, ACES will invest \$115 million to \$165 million in Colorado each year. Specifically, ACES would provide:

- **Over \$45 million per year for investments in energy efficiency, renewable energy, and low carbon transportation.** The largest portion of funds provided by ACES can be used by states to transition to a clean energy economy. States will receive carbon allowances worth \$2.8 billion to \$3.9 billion each year to be used for projects that improve energy efficiency, deploy renewable energy and smart grid technologies, or reduce transportation-related emissions. Colorado's share is \$45 to \$60 million annually.
- **Over \$20 million per year for renewable energy manufacturing and deployment.** States will receive carbon allowances worth \$1.2 billion to \$1.6 billion each year to deploy renewable energy generation or to establish facilities that manufacture renewable energy technologies. Colorado's share is \$20 to \$25 million annually.
- **Over \$25 million per year to improve energy efficiency in buildings.** States will receive carbon allowances worth \$1.5 billion to \$2.2 billion each year to improve the energy efficiency of buildings through implementation of building energy codes, building retrofit assistance, and

upgrades of manufactured homes. Funds may also be used for additional clean energy activities in low-income communities. Colorado's share is \$25 to \$35 million annually.

- **Over \$15 million per year for adaptation projects.** States will receive carbon allowances worth \$900 million to \$1.5 billion to adapt to climate impacts that are already occurring or are expected to occur. These funds can be used for activities such as agriculture and water management, as well as for protection of wildlife and natural ecosystems. Colorado's share is \$15 to \$25 million annually.
- **Over \$10 million for local governments.** Local governments will receive carbon allowances worth \$700 million to \$1 billion each year to invest in local energy efficiency programs and deployment of local renewable energy technology. The share for local governments in Colorado is \$10 to \$15 million annually.

**National Programs that Benefit Colorado.** In addition, ACES makes several national investments that will benefit Colorado. Over the period 2012 through 2025, ACES would provide:

- **\$64 billion to develop and deploy carbon capture and storage.** These funds will build the first generation of coal power plants equipped with carbon capture and sequestration.
- **\$22 billion in advanced energy research.** These funds will support eight regional Energy Innovation Hubs where university researchers, private researchers, and industry can cooperate to develop clean energy technologies. The funds can also be used to support innovative energy technologies through the Advanced Research Projects Agency-Energy (ARPA-E).
- **\$1 billion for agricultural and renewable energy incentives.** These funds will be used by the Environmental Protection Agency and the U.S. Department of Agriculture to support supplemental activities in agriculture and to invest in infrastructure to help deploy biofuels and other renewable energy.
- **Up to \$8 billion per year in a domestic offset market.** ACES creates a national domestic offset market, in which Colorado's farmers and forest owners could participate to generate a new source of income when they cut emissions.
- **Up to \$15 billion per year to promote domestic clean energy manufacturing.** ACES authorizes the creation of a Clean Energy Manufacturing Revolving Loan Fund to award grants to states to establish revolving loan funds for small and medium-sized manufacturers to improve energy efficiency and produce clean energy technology. It also creates partnerships to help manufacturers find new markets, improve competitiveness, reduce global warming pollution, and adopt innovative manufacturing technologies.

**Promoting Economic Growth in Colorado.** ACES will have demonstrable benefits for Colorado's economy. A recent university study concluded that Colorado could gain 11,000 to 30,000 more jobs by 2020 as a result of comprehensive clean energy policy.<sup>5</sup> It also concluded that Colorado's gross domestic product would be \$30 million to \$1 billion higher with clean energy policy than without.

**Other Benefits for Colorado.** ACES has other important benefits for the nation and Colorado. One is greater energy independence. ACES contains provisions to make vehicles more efficient, retool factories

to build the next generation of vehicles, electrify the transportation sector, design more efficient communities, develop next-generation biofuels, save oil in homes and factories, and help to increase recovery from existing oil reserves. Clean energy policies like those in the legislation have the potential to save four to seven million barrels of oil per day by 2030, two to three times the oil we import from the Persian Gulf.<sup>6</sup>

A second essential benefit is reducing the environmental damage caused by unchecked global warming. In Colorado, global warming will likely spread the range of damaging insects and increase the area burned by wildfires. A recent study by the National Academies found that even one degree of additional warming could lead to a four- to six-fold increase in the area in Colorado burned by wildfires.<sup>7</sup> Higher temperatures will also shorten the skiing season and damage the tourism industry. One analysis suggests that global warming would more than triple the number of days in August over 90°F in Denver.<sup>8</sup> More serious droughts and floods will stress farming, ranching, and fishing.<sup>9</sup>

None of the estimates of the costs and benefits of the legislation take into account the benefits to the nation and Colorado of increased energy independence and a more stable climate.

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<sup>1</sup> Institute for Policy Integrity, New York University School of Law, *The Other Side of the Coin: The Economic Benefits of Climate Legislation* (September 2009) (online at <http://www.policyintegrity.org/documents/OtherSideoftheCoin.pdf>)

<sup>2</sup> Environmental Protection Agency, *EPA Analysis of the American Clean Energy and Security Act of 2009, H.R. 2454 in the 111<sup>th</sup> Congress* (January 29, 2010) (online at [http://www.epa.gov/climatechange/economics/pdfs/HR2454\\_SupplementalAnalysis.pdf](http://www.epa.gov/climatechange/economics/pdfs/HR2454_SupplementalAnalysis.pdf)), Energy Information Administration, *Energy Market and Economic Impacts of H.R. 2454, the American Clean Energy and Security Act of 2009* (August 4, 2009) (online at <http://www.eia.doe.gov/oiaf/servicerpt/hr2454/index.html>), and Testimony of Douglas Elmendorf, Congressional Budget Office before the Senate Committee on Energy and Natural Resources (Oct. 14, 2009) (online at <http://www.cbo.gov/doc.cfm?index=10561&type=1>).

<sup>3</sup> American Council for an Energy Efficient Economy, *Energy Efficiency in the American Clean Energy and Security Act of 2009: Impacts of Current Provisions and Opportunities to Enhance the Legislation* (online at <http://www.aceee.org/pubs/e096.htm>)

<sup>4</sup> Estimates are based upon allowance prices from the Congressional Budget Office, adjusted to 2009 dollars. Changes in population, energy consumption, or allowance value will impact actual allowance value.

<sup>5</sup> College of Natural Resources, University of California - Berkeley, *Clean Energy and Climate Policy for U.S. Growth and Job Creation* (October 2009) (online at: [http://are.berkeley.edu/~dwrh/CERES\\_Web/Docs/ES\\_DRHFK091025.pdf](http://are.berkeley.edu/~dwrh/CERES_Web/Docs/ES_DRHFK091025.pdf))

<sup>6</sup> EPA, *Analysis of the Transportation Sector: Greenhouse Gas and Oil Reduction Scenarios*, (Feb. 2, 2010) (online at [www.epa.gov/otaq/climate/publications.htm#basic](http://www.epa.gov/otaq/climate/publications.htm#basic)) EIA, *U.S. Total Crude Oil and Products Imports*, (June 29, 2009) (online at: [http://tonto.eia.doe.gov/dnav/pet/pet\\_move\\_impcus\\_a2\\_nus\\_ep00\\_im0\\_mbbldpd\\_a.htm](http://tonto.eia.doe.gov/dnav/pet/pet_move_impcus_a2_nus_ep00_im0_mbbldpd_a.htm))

<sup>7</sup> National Research Council, *Climate Stabilization Targets: Emissions, Concentrations, and Impacts over Decades to Millennia* (July 2010) (online at: [dels.nas.edu/Materials/Presentations/Stabilization-Targets](http://dels.nas.edu/Materials/Presentations/Stabilization-Targets))

<sup>8</sup> Climate Central. “August Heat” (online at: [www.climatecentral.org/other/august-heat/](http://www.climatecentral.org/other/august-heat/))

<sup>9</sup> For example: U.S. Global Change Research Program, *Regional Climate Impacts: Southwest* (June 2009) (online at: [www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/regional-climate-change-impacts/southwest](http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/regional-climate-change-impacts/southwest))