



October 2010

## Michigan 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 Michigan.

**Investments in Clean Energy Programs in Michigan.** ACES will invest over \$2.2 billion in clean energy programs in Michigan 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 \$250 million to \$355 million in Michigan each year. Specifically, ACES would provide:

- **Over \$100 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. Michigan's share is \$100 to \$140 million annually.
- **Over \$40 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. Michigan's share is \$40 to \$60 million annually.
- **Over \$50 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. Michigan's share is \$50 to \$70 million annually.

- **Over \$30 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. Michigan's share is \$30 to \$50 million annually.
- **Over \$25 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 Michigan is \$25 to \$35 million annually.

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

- **\$25 billion to rebuild or retool factories to build fuel efficient vehicles.** These funds will support the construction of plug-in electric vehicles and other advanced technology vehicles, putting autoworkers back to work on new types of vehicles.
- **\$25 billion in additional loan guarantees for the auto industry.** These funds will expand the existing advanced technology vehicle manufacturing program, which provides federal loan guarantees to auto manufacturers and their component suppliers.
- **\$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 Michigan'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 Michigan.** ACES will have demonstrable benefits for Michigan's economy. A recent university study concluded that Michigan could gain 37,000 to 42,000 more jobs by 2020 as a result of comprehensive clean energy policy.<sup>5</sup> It also concluded that Michigan's gross domestic product would be \$2.0 billion to \$2.4 billion higher with clean energy policy than without.

**Other Benefits for Michigan.** ACES has other important benefits for the nation and Michigan. 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 currently import from the Persian Gulf.<sup>6</sup>

A second essential benefit is reducing the environmental damage caused by unchecked global warming. Model projections of summer conditions in a scenario of unchecked global warming predict that Michigan's summers will feel like Missouri's summers by mid-century and Oklahoma's summers by 2100.<sup>7</sup> Unchecked global warming is projected to cause water levels in the Great Lakes to drop one to two feet by 2100, disrupting commercial shipping.<sup>8</sup> An increase in heavy precipitation events is projected to increase soil erosion by 270% in the eastern parts of the state, negatively impacting Michigan's agriculture industry.<sup>9</sup> Higher temperatures will shorten winter snow seasons, hurting the state's tourism industry.<sup>10</sup>

None of the estimates of the costs and benefits of the legislation take into account the benefits to the nation and Michigan 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/servicert/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)) and EIA, *U.S. Total Crude Oil and*

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*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> U.S. Global Change Research Program, *Global Climate Change Impacts in the United States* (2009).

<sup>8</sup> *Ibid.*

<sup>9</sup> O'Neal, M. R., *Climate Change Impacts on Soil Erosion in Midwest United States with Changes in Crop Management* (2005) (online at <http://etmd.nal.usda.gov/bitstream/10113/6789/1/IND43978173.pdf>).

<sup>10</sup> Center of Integrative Environmental Research, University of Maryland, *Economic Impacts of Climate Change on Michigan* (July 2008) (online at <http://www.cier.umd.edu/climateadaptation/Michigan%20Economic%20Impacts%20of%20Climate%20Change.pdf>).