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January 31, 2008

MEMORANDUM

TO: Council Members

FROM: Mark Walker, Director of Public Affairs
Tom Eckman, Conservation Resources Manager

SUBJECT: Briefing on H.R. 6, The Energy Independence and Security Act of 2007

After months of negotiation and debate, the Congress passed H.R. 6, *The Energy Independence and Security Act of 2007*, in the closing days of the first session of the 110th Congress. An amended version of the original House-passed bill was approved by the Senate on December 13 by a vote of 86 to 8, and was then sent back to the House where it passed on December 18 by a margin of 314 to 100. It was signed into law by President Bush on December 19 and became Public Law 110-140.

The two issues that received most of the attention during negotiations over the legislation were fuel economy standards for automobiles and renewable portfolio standards for electric utilities. In the end, an automobile fuel economy standard was included in the bill, but a renewable portfolio standard was dropped. Although these were the two issues that attracted most of the media's attention, H.R. 6 also dealt with a wide variety of other energy resources and related topics. For example, the bill includes major sections on energy efficiency, research and development, and carbon capture and sequestration.

At the February Council meeting, Mark Walker will provide the Council with a short overview of H.R. 6, and Tom Eckman will cover some of the energy efficiency provisions and explain how they relate to the Council's power plan.

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United States Senate Committee on
Energy & Natural Resources

Chairman Jeff Bingaman

Democrat - New Mexico

H.R. 6

The Energy Independence and Security Act of 2007

Raises fuel economy standards for cars, trucks, and SUVs for the first time since 1975, increases the renewable fuel standard to 36 billion gallons by 2022. H.R. 6 also contains the most important energy efficiency increase in American history by enacting national efficiency standards for light bulbs.

CAFE

Congress has not mandated an increase in fuel economy standards for passenger cars since 1975. **H.R. 6** will require the National Highway Traffic Safety Administration to increase the average fleet fuel economy standards for cars and light trucks to 35 miles per gallon by 2020. The provision that increases CAFE standards is supported by a wide range of groups including auto manufacturers, labor, and environmental groups.

Increases fuel economy standards for all vehicles

- Beginning in 2011, the National Highway Traffic Safety Administration (NHTSA) annually increase the nationwide average fleet fuel economy standard for cars and light trucks to achieve a standard of 35 miles per gallon by 2020. This will be the first statutory fuel economy increase for passenger cars since 1975.
- For the years 2021-2030, car and light truck fuel economy standards would increase at the maximum feasible rate.
- For the first time, NHTSA would establish a program for medium and heavy duty trucks under which fuel economy standards would improve at the maximum feasible rate.
- NHTSA would establish a separate fuel economy standard for work trucks that would increase their fuel efficiency at the maximum feasible rate.

Ensures fuel economy standards will be reached

- **H.R. 6** would eliminate the off-ramp, which ensures that NHTSA will mandate a fuel economy standard of 35 mpg by 2020.

- **H.R. 6** would eliminate the low volume manufacturer exception, which would have allowed any company that sells less than approximately 64,000 cars and trucks a year in the United States to be exempt from the 35 mpg requirement by 2020 fuel economy standard.

Includes labor protections

- **H.R. 6** inserts domestic car production rules that the United Auto Workers believes will keep workers employed in U.S. manufacturing facilities.

Provides manufacturer flexibility

- **H.R. 6** would extend the flexible fuel vehicle (FFV) credit, but taper it so that it is phased out according to the following schedule:

2011: 1.2 mpg

2012: 1.2 mpg

2013: 1.2 mpg

2014: 1.2 mpg

2015: 1.0 mpg

2016: 0.8 mpg

2017: 0.6 mpg

2018: 0.4 mpg

2019: 0.2 mpg

2020: 0 mpg

- B20 biodiesel capable cars would be considered dual-fueled vehicles and eligible for the FFV credit.
- NHTSA would use an attribute system with two separate curves (cars and light trucks) in determining an overall fuel economy average of 35 mpg by 2020. Using this authority, NHTSA would be able to tailor attainable fuel economy standards based on the physical attributes of particular models of cars and light trucks.
- **H.R. 6** would give manufacturers the ability to trade extra fuel economy credits earned between the passenger car and light truck fleets when the performance of either fleet exceeds the standards. The amount of credit traded would be limited.

- Automakers would have the flexibility to borrow against future fuel economy gains for up to three years in the future and to carry forward earned fuel economy credits earned for up to five years.

Increases consumer information.

- Automakers would be required to provide clearer fuel economy and emissions information to consumers. A label would be prominently placed on each vehicle that includes information on the fuel economy of the automobile and the greenhouse gas and other emissions consequences of operating the automobile over its likely useful life.
- **H.R. 6** would improve consumer information on tire fuel efficiency, safety, and durability, and increase consumer awareness of flexible fuel automobiles.

Saves American consumers money and creates jobs.

- By 2020, the new fuel economy standards are expected to save 1.1 million barrels of oil per day, a savings that will continue to increase in subsequent years.
- By 2020, the standards are expected to remove 192 million metric tons of global warming pollution in that year alone, a savings that will continue to increase in subsequent years. That is the equivalent of taking approximately 28 million cars off the road.
- By 2020, the standards are estimated to save consumers \$22 billion in net consumer savings in that year alone, a savings that will continue to increase in subsequent years.
- By 2020, assuming that gas prices remain at \$3.00 and a vehicle travels 15,000 miles a year, a family with two cars would save up to \$1,000 in gasoline costs. (See appendix A for a state-by-state projected consumer savings and job creation numbers).

Renewable Fuel Standard

H.R. 6 would expand the renewable fuels standard to 9 billions gallons in 2008 and progressively increase it to a 36 billion gallon requirement by 2022. Additionally, **H.R. 6** makes a historic commitment to develop cellulosic ethanol by requiring that by 2022 the United States produce 21 billion gallons of advanced biofuels, like cellulosic ethanol.

The growth and development of renewable fuels can help solve America's long-term energy and national security problems. Today, the most recently available statistics indicate that the United States produced approximately 5 billion gallons of ethanol from over 130 ethanol plants.

Economic growth. Increasing the renewable fuels standard is a critical component in helping to expand and diversify rural economies. The construction and operation of a 100 million gallon ethanol plant would:

- Provide \$150 million in capital construction investment;
- Create \$70 million to the local economy during construction;
- Expand the local economic base by \$233 million each year;
- Create 45 “direct jobs” plus 101 “indirect jobs” throughout the area;
- Raise household incomes by \$7.9 million annually;
- Generate millions more in increased local, state, and federal tax revenues;
- Raise grain prices raised by 5 to 10 cents per bushel; and
- Increase tax revenues of \$3.2 million annually.

Renewable fuels infrastructure and flex fuel vehicles. The new renewable fuel standard would also help to spur the development of a renewable fuel infrastructure, like additional E-85 stations. Due to inadequate renewable fuels infrastructure, many states lack the ability to bring the benefits of enhanced ethanol, like E-85, to consumers who have purchased vehicles that run on E-85.

For instance, while Louisiana has more than 92,000 flex fuel vehicles on its roads, the state has only a single E-85 fueling site. Nationwide, there are only 1,261 public service stations that sell E85 out of 170,000 service stations. (See appendix C for a state-by-state analysis of flex fuel cars and public E-85 stations).

National Efficiency Standards for Light Bulbs

H.R. 6 contains a set of national efficiency standards for light bulbs which represent the most important energy efficiency improvement in American history. The first part of the new energy efficiency standard would effectively phase out most common types of incandescent light bulbs by 2012-2014 by increasing the energy efficiency standards of light bulbs by 30 percent. The new standard would be technology-neutral, allowing consumers a choice among several efficient lighting technologies, including improved halogen-incandescent bulbs, compact fluorescent lamps and eventually light-emitting diodes and other advanced lighting technologies. In 2020, a second set of standards would be established that could at least double the 65 billion kilowatt hours of electricity saved under the first set of standards (depending on how much of the market has shifted to compact fluorescent light bulbs).

Consumer, energy, and environmental savings. Within the 18 months after full implementation of the first energy efficiency standard analysts estimate savings of more than 65 billion kilowatt hours of electricity. An annual savings of 65 billion kilowatt hours of electricity would be nearly as large as combined savings from all federal appliance standards adopted from 1987 to 2000 (88 billion kilowatt hours per year). Savings from this one standard are also two to three times larger than savings from any other single appliance standard, including the 1997 refrigerator standard, the 2001 clothes washer standard, and the 2001 central air conditioner standard.

The near-term savings from the standard are estimated to be \$6 billion a year. The first part of the new standard will also avoid emitting about 13 million metric tons of carbon dioxide, which is equivalent to approximately 24 new coal plants that each produce 500 megawatts of electricity. The second set of standards, effective in 2020, could at least double the initial savings of 65 billion kilowatt hours of electricity.

Carbon Capture Technology

Carbon capture technology is one of the technological improvements that will help address the challenge of global warming by “capturing” or confining carbon dioxide emissions from power plants and sequestering them within the earth. Carbon capture technology has the potential to play an important part in mitigating against the threats of climate change. Under today’s regulatory framework, the Energy Information Administration projects that U.S. carbon emissions will increase by more than one percent annually to at least 2030. Additionally, the Intergovernmental Panel on Climate Change, the current atmospheric carbon dioxide concentration is approximately 380 parts per million volume and increasing at a rate of approximately two parts per million volume annually.

One of the challenges for carbon capture technology, however, is that the technology has performance and cost disadvantages that limit its wide scale use by power plants. **H.R. 6** aims to further develop carbon capture technology that would be used to sequester the carbon emissions from fossil fuel power plants by:

- Expanding and improving the Department of Energy’s existing carbon sequestration research;
- Requiring a national assessment of capacity to sequester carbon;
- Requiring the Secretary of Energy to conduct no less than seven large-scale geologic sequestration tests, with at least one as an international partnership;
- Increasing the funding authorization for all projects included in the new carbon capture and storage research, development, and demonstration program, with an emphasis placed on large-scale geologic CO₂ injection demonstration projects;

Green Buildings

H.R. 6 accelerates the implementation of new energy efficiency requirements for federal buildings, primarily through new requirements on the General Services Administration (GSA). Today, the GSA owns and leases over 340 million square feet of space in more than 8,900 buildings, located in every state.

Improving the energy efficiency of buildings is important because each year buildings are responsible for 39 percent of U.S. carbon dioxide emissions. Annually, buildings in the United States also account for 70 percent of resource consumption, use 15 trillion gallons of water per year, and consume 3 billion tons of raw materials. The federal government is

the single largest consumer of energy in the United States. In 2005, the federal government spent \$14.5 billion on energy, \$5.6 billion of that amount went toward heating, cooling, and powering more than 500,000 federal buildings.

H.R. 6 calls for a 30 percent reduction in energy consumption by 2015 in federal buildings which would save approximately 60 trillion BTUs of energy, 15 million metric tons of carbon dioxide, and almost \$4 billion in taxpayers' money.

Geothermal Energy

Today, the United States generates more than 2,800 megawatts of geothermal energy and another 2,500 megawatts are in development. The development of geothermal energy across the country can help stabilize electricity and natural gas prices for consumers while producing new and high-paying jobs across rural America. Unfortunately, the Bush Administration has in recent years been targeting the Department of Energy's geothermal research and development programs for elimination.

H.R. 6 would invest in the promise of geothermal energy. With advances in technologies and sensible tax policies approximately 5,500 megawatts of geothermal energy could come online and be brought to market. **H.R. 6** aims to realize that potential by:

- Expanding funding for cost-shared drilling;
- Developing the commercial application for Engineered Geothermal Systems (EGS) techniques;
- Mandating a national geothermal energy resource assessment; and
- Creating a national exploration and development technology and information center;

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