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A Response to the Keystone Center's Fact Finding on Nuclear Power

Global warming is the greatest moral challenge of our time, and is the single most urgent threat to the future of wildlife.

The Keystone Center's report (see www.keystone.org) on nuclear power reinforces the National Wildlife Federation's view that there is a wide range of safer, cheaper, and faster ways to reduce global warming pollution other than expanding nuclear power. These alternatives, such as renewable energy sources and the vast untapped potential to improve energy efficiency in vehicles, buildings and industry, have far greater potential for large-scale reductions in global warming pollution. Federal subsidies for nuclear power potentially siphon fiscal and technology resources away from these more promising technologies. A summary of authoritative studies on the potential for energy efficiency and renewable energy is included at the conclusion of this response.

As the Keystone report illustrates, there are serious questions about the feasibility of significant nuclear expansion. Hypothetically, an aggressive scenario to achieve even modest global reductions in greenhouse gas emissions would require building 21 large (1,000 megawatt) nuclear reactors worldwide every year for fifty years, and more than five per year (and 275 total) in the United States. Keystone participants could not agree on the feasibility of such an expansion, but the amount of resulting waste would fill "10 nuclear waste repositories the size of the statutory capacity of Yucca Mountain." The report also notes many unresolved concerns about Yucca Mountain, and expresses "little confidence" that the facility will open on schedule.

Furthermore, even if aggressively pursued, nuclear power would represent only a modest step toward the bold carbon emission cuts required to prevent global warming's worst effects. Under the most aggressive nuclear scenario examined in the report—a one gigaton reduction of carbon emissions per year compared to business-as-usual emission trends—global greenhouse gas emissions would still increase by more than 85 percent over current levels over the next fifty years. Yet scientists have made clear that avoiding global warming's worst effects will require an 80 per reduction in greenhouse gases by mid-century.

The National Wildlife Federation applauds the valuable contribution that the Keystone Center has made to our ongoing national dialogue on nuclear power's potential role in reducing global warming pollution.

We continue to call on Congress to quickly to enact a "cap-and-trade" system to promptly reduce U.S. global warming pollution by at least two percent every year, and a total of 80% within the

next 40 years. A "cap and trade" would set firm limits and timetables for reducing pollution from power plants and other large sources while allowing the free market to reward technologies that deliver the biggest "bang for the buck" in terms of cutting pollution.

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What Other Recent Studies Have Concluded:

- The Intergovernmental Panel on Climate Change, the leading scientific authority on global warming, in May 2007 released a landmark assessment on solutions to global warming ("IPCC Fourth Assessment Report, Working Group III"). Unanimously approved by the U.S. government and governments throughout the world, the report found that world greenhouse gas emissions can be reduced 50 to 85 percent below year 2000 emission levels by the year 2050, and that these reductions can be achieved while tripling the global economy. According to the Report:

  - "It is often more cost-effective to invest in end-use energy efficiency improvement than in increasing energy supply to satisfy demand for energy services."
  - "By 2030, about 30% of the projected GHG [global greenhouse gas] emissions in the building sector can be avoided with net economic benefit."
  - "Renewable energy generally has a positive effect on energy security, employment and on air quality. Given costs relative to other supply options, renewable electricity, which accounted for 18% of the electricity supply in 2005, can have a 30-35% share of the total electricity supply in 2030."

- In 2005, President Bush and the other G-8 leaders asked the International Energy Agency (IEA) to assess options to control greenhouse gas emissions. IEA's report ("Energy Technology Perspectives") concluded that:

  - "By 2050, energy efficiency measures can reduce electricity demand by a third below [business-as-usual] levels. Savings from liquid fuels would equal more than half of today's global oil consumption."
  - "In many countries, new buildings could be made 70% more efficient than existing buildings…. Windows are now available with three times the insulation value of their predecessors…. Efficient air conditioners use 30 to 40% less energy than the models of ten years ago…. Improved lighting could yield cost-effective savings of 30 to 60%. Major improvements have been made in refrigerators, water heaters, washing machines and dishwashers."
  - "In industry there is huge potential to reduce energy demand and CO2 emissions through improved efficiency of motors, pumps, boilers and heating systems;

increased energy recovery in materials-production processes; increased recycling of used materials; adoption of new and more advanced processes and materials; and a higher efficiency of materials use."

- The world can double the supply of energy from renewable sources such as wind, solar, biomass and hydropower by 2050.

- Growth in global energy consumption could be reduced by more than two-thirds over the next 15 years through energy efficiency gains, according to a report by McKinsey & Company ("Productivity of Growing Energy Demand: A Microeconomic Perspective"), a leading global consulting firm.

- A recent report ("Stern Review") by former World Bank chief economist Sir Nicholas Stern concluded that "by 2050, energy efficiency has the potential to be the biggest single source of emissions savings in the energy sector. This would have both environmental and economic benefits: energy-efficiency measures cut waste and often save money." Further, "A portfolio of technologies will be required to stabilise emissions. It is highly unlikely that any single technology will deliver all the necessary emission savings."

- A report by the State of California details how energy efficiency and clean fuel policies have helped the state reduce the average amount of greenhouse gas emissions per person by 50 percent, compared to average emissions in the rest of the nation ("No Reason to Wait").

- By 2025, 25 percent of U.S. energy could be provided by America's farms and lands, tapping technologies such as advanced biofuels and wind power, according to a study by the University of Tennessee ("25% Renewable Energy for the United States by 2025"). Seventeen governors have endorsed this goal.

- By 2025, half of all new U.S. electricity generation could be powered by the sun, according to a report by the Solar Energy Industries Association ("Our Solar Power Future")

- The Apollo Alliance, a coalition of national labor unions and other partners, has estimated that a bold program of investments in clean-energy technology will create more than 3 million high-wage jobs in construction, manufacturing and industrial machinery by 2015 and expand the economy by $330 billion.

- As documented in a report by The Climate Group ("Carbon Down, Profits Up"), a coalition of leading businesses and government agencies, corporations that set goals to reduce global warming pollution are routinely able to identify innovative ways to significantly cut greenhouse gas emissions through improved energy efficiency, cleaner fuels, and other options. For example, five global companies, including IBM and DuPont, have achieved greenhouse gas reductions of 60 percent or more with combined savings of more than $5.5 billion from improved energy efficiency, fuel switching and reduced waste.