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## **Presidential Report Provides Roadmap for Federal Role in Transforming America's Energy System**

*President's Council of Advisors Calls for Government-wide Energy Technology Strategic Planning and New Investments in Energy Research, Development, and Deployment*

The United States should craft a government-wide Federal energy policy and update it regularly with strategic Quadrennial Reviews similar to those produced regularly by the Department of Defense, according to a report on the Nation's looming energy challenges released today by the President's Council of Advisors on Science and Technology (PCAST), a group of presidentially appointed experts from academia, non-governmental organizations, and industry.

The report, *Accelerating the Pace of Change in Energy Technologies Through an Integrated Federal Energy Policy*, provides a roadmap for the Federal role in transforming the U.S. energy system within one to two decades—a transformation that is necessary, it concludes, for reasons of economic competitiveness, environmental stewardship, and national security. It calls for significant changes in the way the Federal government coordinates the complex job of fulfilling the Nation's energy needs across individual agencies and programs. It also calls for significantly increasing Federal investments in energy-related research and development, and suggests new revenue options that could support the development of more efficient energy technologies.

"The development of clean, secure, safe, and affordable sources of energy is clearly one of the preeminent challenges facing the United States and will be central to solving a host of other challenges in the years ahead," said Ernest Moniz, co-chair of the PCAST Energy Technology Innovation System Working Group. "This report details what the Federal government can do to accelerate innovation in the energy sector, encourage scale-up of the best ideas, and lower current barriers to the widespread adoption of winning technologies."

The report, which builds on the deliberations of a working group consisting of PCAST members and prominent energy experts from the public and private sectors, responds in part to a fall 2009 request by Secretary of Energy Steven Chu to review the Nation's current approach to energy-related innovation and recommend ways to accelerate the transformation of the U.S. energy system to a more sustainable model. PCAST concluded that a major factor slowing that transformation is the large number of Federal policies that affect the development, implementation, and use of energy technologies and the lack of coordination among the many departments and agencies with responsibilities under those policies.

A key step to achieving that coordination, the report concludes, is to initiate a government-wide process analogous to the Quadrennial Defense Review undertaken every four years by the Department of Defense. A Quadrennial Energy Review (QER) could establish national goals and coordinate actions across agencies. It could also identify the resources needed for the invention, development, and adoption of new energy technologies options, and policy options such as incentives and regulations to facilitate these activities. The Executive Office of the President would lead the QER with the Department of Energy providing a Secretariat.

It is particularly important to focus on promoting widespread use of new technologies that have proven worthy of scale-up, PCAST concluded, since early-stage innovation is reasonably well supported in the United States but a number of barriers tend to slow adoption and diffusion of new energy technologies in the private sector.

“The vast majority of the U.S. energy enterprise is in the private sector, and most of big decisions about where to invest in the energy innovation ecosystem are made outside of government,” said Maxine Savitz, co-chair of the PCAST Energy Technology Innovation System Working Group. “Nevertheless, the Federal government has many instruments it can use to accelerate the creation and implementation of new energy technologies. We need to strengthen those levers and coordinate them better.”

The report recommends implementing a staged process to provide some elements of a QER during each of the next four years, with the first complete and integrated QER targeted for delivery in early 2015. And it recommends that the Department of Energy (DOE) prepare and implement a DOE-level version of a QER focused on that agency’s activities, and should do so on a more rapid timeframe to be completed by June 1, 2011. It also recommends organizational and process changes within the agency that would accelerate progress toward energy innovations, including establishment of a new traineeship program to address critical skill areas for its energy science and technology mission.

The report also finds that the Federal investment in energy-related research, development, demonstration, and deployment (RDD&D) is considerably less than in a number of other industrialized countries as a fraction of gross domestic product. It urges a substantial increase—to about \$16 billion per year, from the current annual level of approximately \$5 billion—and suggests that the President engage the private sector, consumer representatives, and Congress to explore options to provide about \$10 billion of the additional funding through new revenue streams. For the near term, these funds could come from small charges on energy production, delivery, and/or use, the report concludes, while in the intermediate and long term they may come from carbon dioxide emissions pricing.

At the same time the report recommends that the Administration, led by the Council of Economic Advisors, inventory existing legislative energy subsidies and incentives—including preferred tax treatment and trade restrictions—with the goal of better aligning them with evolving priorities as specified in the Quadrennial Energy Review. The report does not call for eliminating subsidies and incentives, noting that they can be legitimate policy tools, but rather using them to more effectively advance Administration objectives within budgetary constraints.

Additional recommendations focus on workforce development, social science research on innovation, innovative use of the government’s procurement capacity, and international cooperation to help solve the Nation’s energy challenges.

**For more about PCAST, and to view the full report, please visit: [www.whitehouse.gov/ostp/pcast](http://www.whitehouse.gov/ostp/pcast)**