

Jumpstarting Energy Infrastructure and Manufacturing Investments

Innovative financial models and instruments are needed to move the energy industry forward, ensuring the global competitiveness of the U.S. manufacturing base and supply chains and domestic job retention and creation.

Capitalize Growth and Make It Here

The Council Recommends that:

- Congress establish and capitalize a \$200 billion National Clean Energy Bank, modeled on the U.S. Export-Import Bank and Overseas Private Investment Corporation, to provide long-term financing for clean energy.
- Congress establish fifteen federally-sponsored, regional clean energy manufacturing centers.
- The U.S. Government provide federal financial investment to facilitate construction of the first two to three manufacturing plants for any new or significantly improved sustainable energy technology.

The U.S. energy system embodies an enormous capital investment. Simply maintaining and expanding it will require financial and institutional resources of comparable scale. Estimates are that worldwide, over \$45 trillion of new investment, on top of business as usual spending, will be needed from 2010-2050 to decarbonize the energy sector by 50 percent.¹

The need to upgrade facilities and turn over aging, obsolete and heavily polluting equipment is a continuous process. Companies across the energy industry will need to invest heavily in new and more efficient equipment to improve operating efficiencies and meet environmental requirements.

The United States must establish the optimal tax, fiscal and regulatory environment that does not disadvantage U.S. industry or inadvertently create comparative advantage for other nations vying to attract and subsidize advanced technology development, manufacturing infrastructure and jobs. To successfully develop and deploy sustainable energy technologies, the costs

Did You Know...?

China now constructs more of the most efficient coal-fired power plants than any other country, driving down its costs of using these technologies. The energy-hungry nation is also building more nuclear power plants than the rest of the world combined.

The U.S. Energy System is Vast

America's energy infrastructure is vast, complex and vital to virtually every facet of modern life and to the functioning of the U.S. economy. The scale is staggering: 20 million barrels per day of oil, 17 million barrels per day of refining capacity, 200,000 miles of oil pipeline—all aimed at fueling the more than 220 million cars and trucks now on U.S. roadways. The nation's infrastructure for extracting and transporting natural gas encompasses some 1,300 drilling rigs and over 300,000 miles of pipeline. Thousands of power plants, 200,000 miles of interconnected transmission lines and countless transformer substations operate in sync to power millions of homes and businesses.²

and regulatory uncertainty risks for investment should be reduced along the whole energy value chain. The United States needs to support investors by successfully deploying financing assistance, including debt guarantees, product liability protection and transparent, predictable regulatory coherence. Until regulatory issues concerning the siting of infrastructure investments are simplified, deployment is inhibited and the risks—and consequently costs—of constructing and maintaining the infrastructure will be higher than necessary.

Failure to grow, retain and attract investment capital in the United States will result in large scale, long horizon debt financing, venture capital and private equity capital being deployed in competitive markets outside our economy, thereby financing clean energy infrastructure, building new

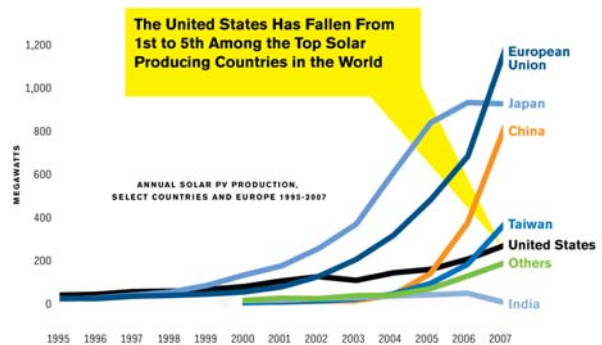
industries and supporting next generation innovation offshore. Financing for sustainable energy investments can be jumpstarted through a variety of means, such as loan guarantees and insurance. A portfolio of techniques should be developed so that each infrastructure investment that is necessary can utilize the type of jumpstart that is most appropriate to its requirements.

The United States must shift to a low carbon energy-manufacturing base to support the building a 21st century energy system, such as steel for wind turbines, silicon and glass for solar panels, electric transformers for high-voltage transmission and advanced building materials. Many of these technologies are simply too large and expensive to cost-effectively import, giving domestic production a strong competitive advantage.

The ability of the United States to model and simulate the complexity of the energy transformation can accelerate time to market and turbo-charge design of new energy efficient and sustainable products for competitive advantage. By increasing the capability of U.S. manufacturers to utilize high performance computing (HPC), we will leapfrog competitors and achieve advantage in time to market, complex design, safety and validation testing of complex materials and huge cost reductions.

A Decade Ago, U.S. Solar Power Manufacturers Captured the Entire Domestic Market and 40 Percent of the World Market

Source: *Drive*, Council on Competitiveness (2009)



Note: Graph represents analysis of data from Renewable Energy World and the Worldwatch Institute.

***In Drive: A Comprehensive Roadmap to Achieve Energy Security, Sustainability and Competitiveness* (September 2009) and *Prioritize: A 100-Day Energy Action Plan for the 44th President of the United States* (September 2008), the Council detailed actions to be taken by the federal government in six critical “pillars” as necessary for true breakthroughs in U.S. energy production and use to be achieved. Below are additional recommendations from Pillar 3: Jumpstarting Energy Infrastructure and Manufacturing Investments.**

Additional Recommendations:

- Congress cap the federal corporate tax rate at 25 percent for all businesses, make the R&D tax credit permanent and establish accelerated depreciation treatment for all capital investments.
- Congress establish a CompeteAmerica saving bond, the proceeds of which would be invested in next generation clean energy infrastructure and manufacturing.
- Congress authorize adequate funding to ensure a National Clean Energy Bank can provide insurance and other needed risk management or credit enhancements.
- Congress and the Administration devote more resources to nuclear industry expansion.
- Congress allocate 40 percent of the annual revenue generated from carbon pricing to federal, state and regional clean energy manufacturing initiatives.
- Congress designate regional Clean Energy Technology Manufacturing Development Zones.
- Congress allow manufacturers to fully expense the retooling of production lines to produce qualified energy-efficient products or sustainable energy options.
- The U.S. Government enhance industrial access to high performance computing resources.

For More Information: Visit our website at Compete.org to find the full reports or contact Susan Rochford, Senior Vice President, at 202 969 3384 or SRochford@compete.org.

¹ International Energy Agency, *Energy Technology Perspectives 2008*. Paris, France: International Energy Agency. 2008.

² National Commission on Energy Policy, *Siting Critical Energy Infrastructure: An Overview of Needs and Challenges*. Washington, D.C.: Bipartisan Policy Institute. June 2006.