



## **Invest in New American Energy: Pathway to a Clean and Prosperous American Energy Economy**

### ***THE CASE FOR PUBLIC INVESTMENT***

*“We know the country that harnesses the power of clean, renewable energy will lead the 21st century. And yet, it is China that has launched the largest effort in history to make their economy energy efficient. We invented solar technology, but we’ve fallen behind countries like Germany and Japan in producing it. New plug-in hybrids roll off our assembly lines, but they will run on batteries made in Korea.*

*Well I do not accept a future where the jobs and industries of tomorrow take root beyond our borders – and I know you don’t either. It is time for America to lead again.*

– President Obama, addressing a joint session of the U.S. Congress, February 24<sup>th</sup>, 2009

Renewing America’s economy, reducing the threat of global climate change, and finally securing the nation’s energy independence all compel the transformation of the U.S. energy system. The nation that moves first to develop and harness new energy technologies will take the lead in the next powerful growth sector of the 21<sup>st</sup> century. Meeting this imperative and capturing the energy opportunity requires new federal policies to rapidly develop and deploy clean, affordable, and scalable U.S. energy technologies. It is time to invest in new American energy.

#### **Public investment is the cornerstone of an effective strategy for American energy transformation.**

Comprehensive climate and energy legislation should include major public investments to promote clean energy innovation, accelerate the development and deployment of clean energy technologies, and catalyze American energy industries. Major, strategic public investment can change America’s energy future and must be part of any effective climate and energy policy.

**Public investment can make clean energy cheap and abundant.** Investing in research and development in federal labs, high-caliber universities, and entrepreneurial U.S. firms can accelerate the development of low-cost clean energy technologies that can provide affordable clean energy for every American. Direct public investment is also critical to spur the deployment of emerging clean energy technologies, harness economies of scale to drive down costs, and give innovative, entrepreneurial companies a chance to take cutting-edge technologies to market. Together, these public investments can catalyze the emergence of new, clean, American-made energy technologies that can affordably harness our nation’s vast renewable energy reserves.

**Public investment in clean energy creates jobs and spurs economic growth.** Investments to jump-start the clean energy economy will create millions of new jobs across sectors both old and new. From steel welders and machinists to engineers and electricians, clean energy investments put hardworking Americans back on the job. At

the same time, investments in new clean energy technologies pave the way for the growth industries of the future. Every billion dollars invested in clean energy technology and infrastructure creates 16,700 good-paying American jobs, almost four times as many jobs as a similar investment in expanded oil and natural gas production.<sup>1</sup>

**Public investment in clean energy will put U.S. industries at the forefront of a burgeoning growth sector.**

The energy sector is one of few sectors of the economy capable of serving as a major new engine of economic growth. Already a \$1.5 trillion annual industry in the U.S., the nation's aging energy infrastructure as well as pressing energy security and climate challenges all demand substantial deployment of new energy technologies. Global energy demand is predicted to grow by 50 percent in the next two decades<sup>2</sup> creating major opportunities for export of new energy technologies. Advantage in this new growth sector will fall to 'first movers,' the nations that most rapidly develop and commercialize clean, cheap energy sources capable of replacing fossil fuels and powering the world economy.

**Public investment in the clean energy sector will help restore America's economic competitiveness.** The United States invented solar energy technology and the first wind turbines. Yet these technologies took root in nations such as Germany, Denmark and Japan. There, direct public investments led to burgeoning domestic renewable energy industries.<sup>3</sup> Today, entrepreneurial American firms are ready to recapture the lead in clean energy technology, but they need the same kind of direct incentives enjoyed by their competitors in Asia and Europe. Instead of sending billions overseas to import oil or purchase foreign-made wind turbines or solar panels, we can invest here in American technology, and jobs.

**Public investment has always been a cornerstone strategy for American growth.** Historic public investments transformed the U.S. economic landscape, laid the foundation for lasting prosperity, and put our nation at the forefront of technological development. Public investments built the railroads, highways, and fiber optic cables that have united a transcontinental nation and enabled ever more efficient commerce. Public investments electrified rural America and irrigated the arid West. And it was public investment in technological innovation that gave birth to jet engines and commercial aviation, gas turbines and nuclear power, microchips and the Internet. Each of these smart public investments supported and catalyzed innovative American firms and businesses, spurred lasting economic growth, and served as the foundation of the nation's economic competitiveness.<sup>4</sup>

**Public investment in clean, American energy sources strengthens our energy independence.** Our nation sends roughly a billion dollars overseas every day to purchase imported oil, sapping our economy, strengthening dangerous regimes, and funding Islamic extremism in the process.<sup>5</sup> Public investment to spur the deployment of solar, wind, next generation biofuels, plug-in hybrid cars and other clean energy technologies will reduce the nation's dependence on oil and begin making America energy independent. These investments not only create good new jobs, they must be at the core of any effort to strengthen America's economic and national security.

**Americans overwhelmingly supports public investments in clean energy technology.** Recent polling found a vast majority of Americans favor policies to expand new supplies of renewable energy (77% support) compared to fossil fuels (16% support). The same poll found that 86% of respondents see investments in clean energy as an engine of job creation.<sup>6</sup> Extensive public opinion research conducted by American Environics and EMC Research in 2007 found similarly broad public support for major public investments to make clean energy cheap, spur economic growth, strengthen national security, and address climate change. An AE/EMC national survey found a strong majority (68%) favored reducing the price of clean energy. In contrast, just 18% favored policies to reduce energy consumption through increased energy prices, and a majority (58%) opposed establishing a significant carbon price. When presented with three climate policies proposals, a program to invest \$300 billion over ten years in clean energy technology was the clear favorite, drawing support from 85% of respondents, compared to 62% for cap and trade and 51% for a cap and dividend proposal. When respondents were presented with likely arguments against each proposal, the clean energy investment plan maintained the highest level of support and was the only one to retain support from a majority of respondents (58%).<sup>7</sup>

**Public investment in clean energy can significantly reduce the cost of climate regulation.** Reinvesting the revenues from cap and trade legislation in clean energy technology makes our carbon dollars do double duty; first they serve as a market signal, spurring private investment, and second as a catalyst of clean energy technology development and deployment. Investing in clean energy will lower the cost to businesses and households of climate policy and accelerate the transition to a prosperous clean energy economy. Furthermore, by investing in innovation and the direct deployment of emerging technologies at scale, we can drive down the real, unsubsidized cost of clean energy over time and truly make clean energy cheap.

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#### NOTES:

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<sup>1</sup> Pollin, Robert. "Testimony before House Committee on Education and Labor Hearing on "Building an Economic Recovery Package: Creating and Preserving Jobs in America." Political Economy Research Institute (October 24, 2008).

[URL: [http://www.peri.umass.edu/fileadmin/pdf/other\\_publication\\_types/pollin\\_testimony.pdf](http://www.peri.umass.edu/fileadmin/pdf/other_publication_types/pollin_testimony.pdf)]

<sup>2</sup> U.S. Energy Information Administration. *International Energy Outlook 2008*. [URL: <http://www.eia.doe.gov/oiaf/ieo/highlights.html>]

<sup>3</sup> See Arnold, Zachary *et al.* *Case Studies in American Innovation*. Breakthrough Institute (April 2009).

[URL: <http://thebreakthrough.org/blog/Case%20Studies%20in%20American%20Innovation.pdf>]

<sup>4</sup> Arnold *et al.* (2009)

<sup>5</sup> 2007 net crude oil imports were 20.03 million barrels per day, \$1 billion per day at \$50 per barrel average price. Source: U.S. Energy Information Administration. *Annual Energy Outlook 2009*. [URL: <http://www.eia.doe.gov/oiaf/aeo/index.html>]

<sup>6</sup> Bittle, Scott, *et al.* *The energy learning curve*. Public Agenda and Planet Forward (2009).

[URL: [http://www.publicagenda.org/files/pdf/energy\\_learning\\_curve.pdf](http://www.publicagenda.org/files/pdf/energy_learning_curve.pdf)] Survey Jan. 2009, n = 1001, MoE ± 4%.

<sup>7</sup> See (1) Whaley, John and Jeff Navin. *Global warming and renewable energy focus groups*. American Environics (2007).

[URL: [http://www.americanenvironics.com/PDF/AE\\_GWFocusGroup%20Report\\_Tucson1007.pdf](http://www.americanenvironics.com/PDF/AE_GWFocusGroup%20Report_Tucson1007.pdf)] Focus Groups conducted October, 2007. (2) Navin, Jeff.

*Energy attitudes: Rising public demand for government action on energy independence even as global warming remains a low priority for voters*. American Environics (2007). [URL: <http://americanenvironics.com/PDF/EnergyAttitudesSummer2007.pdf>]. (3) Whaley, John and Alex Evans. *New poll finds hurdles, opportunity on global warming*. American Environics and EMC Research (2007) [URL:

<http://thebreakthrough.org/blog/files/GlobalWarmingSurveyRelease92507.pdf>] Survey conducted Aug-Sept. 2007, n = 1,517, MoE = ± 3%.