



## UNITED STATES

Because of the world-leading size of its economy, the United States is a clean energy leader, but unless it adopts additional policies, it will continue to fall short of its potential. While the United States retains second place in all scenarios, there is a huge gap between its investment levels and those of China. Under current policies United States clean power investments increase to \$27 billion, about \$23 billion less than the world leader, China. In contrast, if the United States adopts ambitious clean energy policies, annual investments increase by 237 percent over 2010 levels and reach \$53 billion annually. In the enhanced policy scenario, the cumulative investment potential in the United States over the next decade is projected as \$342 billion, which would leverage installation of 171 GW of renewable energy generating capacity.

To date, efforts to promote renewable energy have mostly been done at the state, rather than federal, level, leading to a hodgepodge of policies with varying degrees of ambition across the country. For instance, some 30 states have Renewable Electricity Standards in place requiring certain proportions of energy to be produced using renewable energy sources. However, no two programs are alike, with variations in different targets, timing, carve-outs, eligible technologies, compliance penalties and procurement eligibility. Since 2009, two prominent proposals for a federal RES that would provide uniformity have emerged from

the House and Senate, but neither received final approval.

Continued policy uncertainty at the federal level has forced states to lead the way in establishing pro-renewable energy policies. Most notably, California's Solar Initiative subsidy plan has been highly successful with approximately 900 MW of photovoltaic solar now installed there. In addition, the state has stepped up its renewable electricity standard (RES) to require that 0.1 in 0.3 gigawatt-hours of generation in 2020 come from clean sources.

Roughly 30 of the 50 states have some form of an Renewable Electricity Standard on their books. At the federal level, the United States recently finalized its fuel efficiency rules for automakers and laid out regulations governing the second phase of its renewable fuels standard, which mandates that 36 billion gallons of biofuels be mixed into the overall United States fuel supply by 2022. In February 2009, Congress approved the American Recovery and Reinvestment Act (the "stimulus bill") allocating \$66 billion in funding for manufacturing, project build-out, and research and development of clean energy technologies.

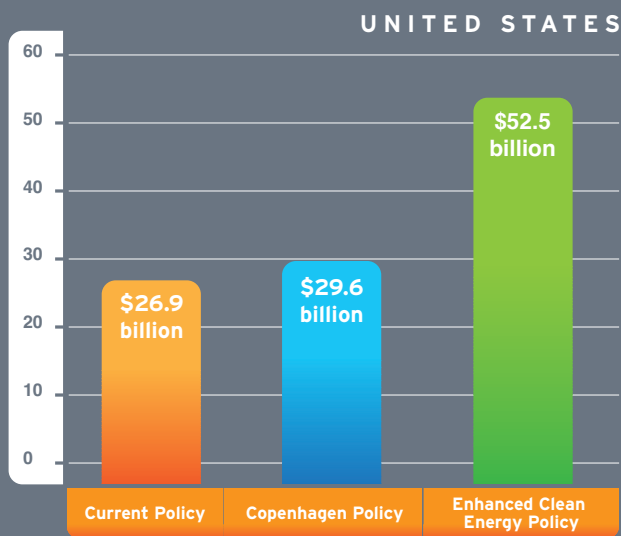
Despite successful efforts to subsidize the supply of clean energy, the United States has done virtually nothing at the national level to boost demand for renewable energy. This has proven particularly difficult given the current

economic environment and historically low natural gas prices. Congress adjourned before the 2010 elections after failing to pass either a national cap-and-trade program to cut domestic carbon emissions or a national RES setting clean energy targets. In the short term, both are critical to the United States cutting emissions and building a successful clean energy economy.

On the international stage, the United States has committed to a reduction "in the range of 17 percent" below 2005 levels by 2020 following the climate summit in Copenhagen. This pledge was made by President Barack Obama and reflects the commitment made in the "Waxman-Markey" bill passed by the United States House of Representatives in June 2009. That legislation later languished in the United States Senate.

Above all, the United States needs policy certainty to draw in cautious developers, manufacturers and investors who have historically been reluctant to make major investments in the country. First, Congress can pass a national RES and legislation that puts a price on carbon. The federal government could also extend the production-based incentives, beneficial accounting rules and research programs created under the economic stimulus programs. To encourage development in all regions regardless

**FIGURE 38. INVESTMENT IN RENEWABLE ENERGY ASSETS, 2020 (BILLIONS OF \$)**



NATIONAL CLEAN ENERGY POLICIES	
Carbon Cap	
Carbon Market	
Renewable Energy Standard	
Clean Energy Tax Incentives	✓
Auto Efficiency Standards	✓
Feed-in Tariffs	
Government Procurement	✓
Green Bonds	

FINANCE AND INVESTMENT (2009) <sup>1</sup>	
Total Investment	\$18.6 billion
G-20 Investment Rank	2
Percentage of G-20 Total	16.4%
5-Year Growth Rate	102.7%

INSTALLED CLEAN ENERGY (2009)	
Total Renewable Energy Capacity	53.4 GW
Total Power Capacity	4.0%
Percentage of G-20 Total	18.5%
5-Year Growth Rate	24.3%
Key Renewable Energy Sectors	
Ethanol	47 m liters
Wind	31,900 MW

KEY CLEAN ENERGY TARGETS (2022)	

KEY INVESTMENT INCENTIVES <sup>2</sup>	
Wind, Solar	Production Tax Credit / Investment Tax Credit
Cleantech	Federal loan guarantees
Wind, Solar, Power Storage	Federal Manufacturers Tax Credit

<sup>1</sup> Includes investments in venture capital and public markets, and asset finance for all clean energy technologies including biofuels and energy efficiency.

<sup>2</sup> Incentives provided by local, state and federal governments.