

Doubling Research and Development for Clean Energy: "Mission Innovation"

December 1, 2015 (IN10403)

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On November 30, leaders of 20 countries, including President Barack Obama, launched a new initiative, "[Mission Innovation](#)," to double to \$20 billion over the next five years their public investment in research and development (R&D) in "clean energy" technologies. President Obama announced an intention to double U.S. R&D on clean energy as well, from a current level of about \$5 billion annually. The leaders announced Mission Innovation at the conference of the United Nations Framework Convention on Climate Change (UNFCCC). According to the White House, the 20 countries participating so far in Mission Innovation represent 80% of current investment in all clean energy R&D.

The [21st Conference of the Parties \(COP21\)](#) of the UNFCCC is meeting in Paris, France, to negotiate by December 11, 2015, an agreement under the UNFCCC to address climate change that is expected to be legally binding. If an agreement is reached, it would take effect in 2020. The Mission Innovation announcement is related to, but not part of that expected UNFCCC agreement.

Countries Participating in Mission Innovation

as of November 30, 2015

Australia	Denmark	Italy	Saudi Arabia
Brazil	France	Japan	Sweden
Canada	Germany	Rep. of Korea	United Arab Emirates
Chile	India	Mexico	United Kingdom
China	Indonesia	Norway	United States

Source: White House, "Fact Sheet: Mission Innovation," November 30, 2015, <https://www.whitehouse.gov/the-press-office/2015/11/29/fact-sheet-mission-innovation>.

The White House indicated that Mission Innovation would be complemented by a private, high-risk financing effort to bridge the "[Valley of Death](#)" between emerging technologies and commercial markets. The government-supported

R&D would focus on innovation at the base, "concept" stage of research.

The [Breakthrough Energy Coalition](#) (BEC) is a group of 28 international investors from 10 countries that announced an effort intended to complement the Mission Innovation initiative. The BEC committed to provide "truly patient flexible risk capital" aiming to facilitate a near-zero emissions future in the long-term. The initial BEC investor group includes Jeff Bezos (Amazon), Bill Gates (Gates Foundation), Richard Branson (Virgin Group), Patrice Motsepe (African Rainbow Minerals), Neil Shen (Sequoia Capital China), Ratan Tata (Tata Sons India), Mark Zuckerberg (Facebook), and Jack Ma (Alibaba Group).

The investors, said to be collectively worth \$350 billion, would provide capital support for the high-risk stage of scaling up innovative technologies from the laboratories. The investors would attempt to rapidly scale up promising clean energy and "enabling" technologies while reducing costs and preparing them for commercial viability to broad markets internationally.

The BEC intends to invest broadly in energy generation and storage, transportation, industrial energy use, agriculture, and energy system efficiency. The BEC also intends to give priority to investing in countries that are "making a serious commitment to using smart government spending to increase the rate of domestic innovation" by participating in Mission Innovation.

Each government participating in Mission Innovation has agreed to report on its progress toward the goals agreed to as part of the initiative.

CRS offers a number of related CRS products, including:

- CRS Report R44004, [DOE's Office of Energy Efficiency and Renewable Energy: FY2016 Appropriations](#), by Fred Sissine;
- CRS Report R42853, [Nuclear Energy: Overview of Congressional Issues](#), by Mark Holt; and
- CRS Report R43227, [Federal Climate Change Funding from FY2008 to FY2014](#), by Jane A. Leggett, Richard K. Lattanzio, and Emily Bruner.