Paris Climate Conference Will Boost Demand for Cleantech

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The representatives of 196 nations are gathering in Paris to forge a historic agreement. The 2015 Paris Climate Conference is the culmination of a process that began in Rio de Janeiro in 1992, when the United Nations Framework Convention on Climate Change (UNFCC) was created. The objective is a legally binding global agreement to reduce carbon emissions so that atmospheric warming is limited to 2° Celsius.

At the heart of the agreement are Intended Nationally Determined Contributions--INDCs—each country's commitment to cut its emissions of greenhouse gases (GHGs). Optimism is justified because the world's largest carbon polluters already have announced their INDCs. The European Union has committed to reduce its carbon emissions by 40% by 2030 as compared to 1990 levels. The United States has pledged to cut its carbon output by 2025 by 26% to 28% from 2005 levels.

China's emissions will peak by 2030. This is huge because China had never been willing to place an absolute limit on its carbon emissions. It would only commit to reduce carbon dioxide production as a percentage of gross domestic product. A year ago President Obama and Chairman Xi Jinping announced a bilateral agreement. China—the world's largest carbon polluter by far—would cap its emissions by a date certain. Many observers believe China's emissions actually will peak well before 2030 because it is investing so heavily in renewable energy and more efficient electric power generation. Already last year, China's coal consumption peaked as it rapidly closed down dozens of inefficient coal-fired power plants and industrial facilities.

The implications for cleantech are enormous. In 2014 China invested $83 billion in renewable energy, Europe invested $57 billion, the US $38 billion and Japan $36 billion. Worldwide investment in clean energy was approximately $270 billion last year.¹ The International Energy Agency projects that global investment in renewable energy will reach $7.4 trillion by 2040, at which point renewable energy will generate 25% of the world's energy.²

If the EU, the United States, China and five other large polluters deliver on their INDCs, clean energy production will more than double, from 8,900 terawatt hours in 2012 to 19,900 terawatt hours in 2030. (This compares to 4,000 terawatt hours of electricity consumed in the US from all sources—renewable and conventional.)³ Resources also flowing not only into solar and wind technology, but also into energy efficiency, including in industry and in the built environment (lighting, HVAC, etc.), mass transit, electric vehicles and infrastructure, energy storage, and the smart grid. As a result, opportunities abound for cleantech developers and investors.

