

OurPlanet

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Inclusive Green Economy Building Bridges to a Sustainable Future



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Employment is booming as the world enters the clean energy economy.



Nicole Lederer

*Chair and co-founder
of Environmental
Entrepreneurs (E2)*

You may not have felt the ground shaking, but the energy world underwent a seismic shift in 2015. The impacts of the Paris climate agreement, and other energy policy advances, on people everywhere in the world and at every level of the economy will be beneficial and profound. Last year launched us all in into the 21st-century clean energy economy, and 2016 is the year that true democratization of energy begins.

The US Clean Power Plan, which sets our nation's first-ever limits on carbon emissions from power plants, is a great example of transformative energy policy. It will stimulate innovation in technologies like low-carbon energy generation, efficient energy storage and transmission, energy efficiency for buildings, low-carbon transportation, and grid modernization. Since markets for these technologies will be ever-expanding, entrepreneurs are responding by starting new companies that create jobs. In fact, according to the upcoming "Clean Jobs America" report by Environmental Entrepreneurs (E2), the US-based, non-partisan group I chair, hundreds of thousands of people already work in clean energy in America – and employment in the sector grows every day.

More than 208,000 people work in the US solar energy sector alone, a 20 per cent increase over last year. Solar is adding jobs at a rate that's ten times faster than in the rest of the American economy.

Solar jobs attract a lot of attention, but the clean energy jobs that E2 tallied cross multiple sectors. They include machinists who manufacture wind turbine blades,

carpenters who retrofit schools to make them more energy efficient, chemical engineers who develop advanced biofuel technologies, and military veterans who are now deploying as civilians in the fast-growing and technology-driven precision agriculture industry. Up and down international supply chains, good clean-energy jobs are proliferating.

The Clean Power Plan isn't the only US policy sending a strong market signal to clean energy businesses to increase capital investments and scale up their workforce. Innovative state-level policies are also pioneering new ways to encourage and reward low-carbon energy.

Where I live in California, for example, Governor Jerry Brown signed a law last year that ensures we will generate half our electricity from renewable resources by 2050. That's on top of our Global Warming Solutions Act of 2006, which created an economy-wide cap-and-trade system for reducing carbon emissions, and our Low Carbon Fuel Standard, which lowers transportation sector emissions. While these laws have obvious climate benefits, they've also incentivized innovation in information technology, automotive design, water efficiency, and agriculture.

The successes we've had in this state, which has an economy larger than India's, can serve as an international model. As Governor Brown said in December: "California has cut carbon pollution and grown its economy at the same time – and so can the rest of the world".

One attribute of a clean energy economy is that by providing opportunities to earn – and save – money, it extends benefits to people across diverse income levels. For example, as solar expands across my state, it's increasingly deployed in low- and middle-income areas. Innovative financing models allow property owners to install solar



Photo: © Dennis Schroeder / NREL

*According to the International Renewable Energy Association, renewable energy employed **7.7 million people**, directly or indirectly.*

panels with little or no up-front costs, and rate-payers realize energy bill savings – in perpetuity. At the same time, workers who install and maintain these panels are often employed by small, local companies. Distributed energy generation and improved efficiency also provide greater stability and energy security. These benefits are affordable and inclusive – for workers, for consumers, and for businesses seeking to boost their bottom lines.

While US businesses closely watch federal and state policies, they also welcome participation in the global transition to clean energy. In the wake of the Paris climate agreement – which received strong support from the US business community – companies are realizing the gargantuan emerging economic opportunity of democratizing global energy systems. In short, they view the Paris agreement as the mother of all market signals.

According to a recent Standard & Poor's report, carbon-reduction pledges made in Paris by China and India alone could double the world's solar capacity within 15 years. To meet every nation's commitment, a staggering amount – \$16.5 trillion – in investment is needed by 2030, according to S&P.

That means jobs, both in the U.S. and around the world. According to the International Renewable Energy Association, renewable energy employed 7.7 million people, directly or indirectly, in 2014. Mirroring the growth of the U.S. solar sector, international renewable energy jobs grew 18 per cent over the previous year's data.

To keep this growth going – to expand a virtuous cycle of ever-stronger carbon-reduction policies that spur more innovation and investment, more economic growth, and more jobs – there are some steps we can take, right now, in both the US and abroad, that help build upon the remarkable international momentum from Paris.

First, we must apply pressure on elected officials and policymakers. For my part, for example, I'll remind energy ministers from around the world - when they meet in June for their seventh Clean Energy Ministerial in San Francisco - that the private sector demands strong climate action from their governments.

Second, we must urge all countries to officially sign the Paris agreement on April 22 at the United Nations in New York, then accept the agreement through their own domestic processes as soon as possible.

And third, we must ensure carbon-reduction commitments made at the climate summit are updated in a transparent way that holds countries accountable for their results.

Solving climate change is the central environmental challenge of our time, but it's also this century's defining economic opportunity. By providing more stability, security, and jobs, the new clean energy economy allows us to power our future with resources accessible to all. ▲

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