

'Energy [R]evolution': Nearly 100% renewable is doable, says report



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Dramatically reduce carbon emissions and the use of fossil fuels. Create millions of new jobs in the renewable energy sector and beyond. Democratize the energy system by increasing local control of production and resources.

Not only can all this be accomplished, say researchers and experts, it can be done with readily available technologies and on an expedited timeline that -- if executed -- would prove humanity capable of acting to address the crisis of planetary climate change before it's too late.

Produced by both Greenpeace and the Global Wind Energy Council, which represents the international wind industry, a new report released Monday -- titled [Energy \[R\]evolution - A Sustainable USA Energy Outlook](#) (pdf) -- details how by 2050, renewable energy sources could be producing close to 97% of electricity in the U.S. and approximately 94% of the country's needs for heating and cooling homes and businesses.

"The driving goal of the Energy [R]evolution," reads the report's introduction, "is stopping global climate disruption, which is caused primarily by burning coal, oil, and methane gas. But the reasons to modernize our energy system are innumerable."

The five key principles behind the "Energy [R]evolution" will be to:

- Implement renewable solutions, especially through decentralized energy systems and grid expansions
- Respect the natural limits of the environment
- Phase out dirty, unsustainable energy sources
- Create greater equity in the use of resources
- Decouple economic growth from the consumption of fossil fuels

Following on the heels of the IPCC's latest review of the international scientific consensus on the perils of climate change in April and the U.S. National Climate Assessment last week, the report presents the case for a radical and rapid energy transformation and a pathway for meeting the reduced emissions that the scientific community says is urgent.

"The E[R] demonstrates that transitioning to a renewable energy economy can free resources for economic development," said Kyle Ash, senior legislative representative for Greenpeace USA. "It means more and better jobs, greater energy independence, and it is more democratic as citizens attain more control of energy production."

The blueprint would lead to about 1.5 million energy-related jobs in 2030, say the authors of the report, which is a full 35% more than projected under the "business as usual" scenario outlined by the Energy Information Agency in its [2013 Annual Outlook](#) (pdf).

According to the report, the renewable energy strategy is designed "to wean the economy off dirty fuels as thoroughly and quickly as possible, and in a way that is technologically, politically, and ecologically realistic."

Sven Teske, a renewable energy expert with Greenpeace International, says that the climate realities and the economics of "business as usual" simply cannot be reconciled and that swift action must be taken.

"Growing concerns about climate change and air pollution, along with quickly falling costs of renewable energy, are already upending the utility industry's business model and threatening to turn fossil fuel reserves into stranded assets," said Teske. "The Energy [R]evolution report demonstrates that the rapid changes in the energy sector could expand dramatically, with major implications for many industries."

In order to shift the rules that govern energy production and deployment in the U.S., the report argues that the following policies -- at the local, state, and/or federal level -- should be enacted to make such an "energy [R]evolution" possible:

1. Abolish all subsidies, including any policies which confer a financial benefit, to fossil fuels and nuclear energy. The End Polluter Welfare Act, introduced by Senator Bernie Sanders (I-VT) and Representative Keith Ellison (D-MN) is an example of federal action that must move forward.
2. Internalize the currently socialized cost of industrial climate pollution, such as with a federal carbon fee.
3. Mandate strict efficiency standards for all energy consuming appliances, buildings and vehicles.
4. Establish legally binding targets for renewable energy and combined heat and power generation.
5. Reform electricity markets by guaranteeing priority access to the grid for renewable power generators.



Railroad crossing sign at Roscoe Wind Farm, Texas. The 627 wind turbines are producing 751 megawatts, which is enough energy to supply a quarter-million households in Texas. (Photo: Greenpeace.)

6. Provide defined and stable returns for investors, for example by feed-in tariff schemes.
7. Implement better labeling and disclosure mechanisms to provide more environmental product information.
8. Increase research and development budgets for renewable energy and energy efficiency.