

SUN DAY CAMPAIGN

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SUSTAINABLE ENERGY STUDY #6

U.S. Can Cut Greenhouse Gas Emissions by 72 Percent by 2050 Through Increased Energy Efficiency and Renewable Energy Technologies:

A report released on January 25, 2007 by Greenpeace USA and the European Renewable Energy Council shows that it is not only economically feasible, but also economically desirable, to cut U.S. CO2 emissions by 72 percent by 2050. This would be accomplished with increased energy efficiency to cut energy demand and greatly increased use of renewable fuels and power. According to the plan, these reductions can be achieved without nuclear power, and while virtually ending U.S. dependence on coal.

The 92-page report, commissioned by the German Aerospace Center, finds that America's oil use can be cut by more than 50 percent by 2050 by using much more efficient cars and trucks, increased use of biofuels and a greater reliance on electricity for transportation through technologies including plug-in hybrid vehicles. The report also finds that with its plan, carbon dioxide emissions can be reduced 50 percent globally by 2050.

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Energy [R]evolution - A Blueprint for Solving Global Warming:

Global warming has become one of the biggest challenges and it is time to start focusing on solutions.

The new report, "Energy [R]evolution: A Blueprint for Solving Global Warming," released by Greenpeace USA and the European Renewable Energy Council (EREC), details a worldwide energy scenario where nearly 80% of U.S. electricity can be produced by renewable energy sources; where carbon dioxide emissions can be reduced 50% globally and 72% in the U.S. without resorting to an increase in dangerous nuclear power or new coal technologies; and where America's oil use can be cut by more than 50% by 2050 by using much more efficient cars and trucks (potentially plug-in hybrids), increased use of biofuels and a greater reliance on electricity for transportation.

The 92-page report, commissioned by the German Aerospace Center, used input on all technologies of the renewable energy industry, including wind turbines, solar photovoltaic panels, biomass power plants, solar thermal collectors, and biofuels, all of which "are rapidly becoming mainstream."

The alternative scenario in this report, which urgently calls for new policy and standards, corrects the record on nukes and coal. The United States can indeed address global warming without relying on nuclear power or so-called "clean coal" -- as some in the ongoing energy debate claim -- and still provide affordable energy and economic growth.

A Brief Review of the Plan:

The new study details a worldwide energy scenario where:

In the United States, nearly 80% of the nation's electricity can be produced by renewable energy sources.

Carbon dioxide emissions can be reduced 50% globally and 72% in the U.S. without resorting to an increase in dangerous nuclear power or new coal technologies.

America's oil use can be cut over 50% by 2050 with much more efficient cars and trucks, potentially including new plug-in hybrids, increased use of biofuels, and greater reliance on electricity for transportation.

The plan also details how large developing countries like India, China and Brazil can develop and grow using renewable energy to avoid the mistakes of old climate-changing energy economies of developed countries. We can make a safe and sustainable global energy scenario a reality.

Introduction from the Report:

The good news first. Renewable energy, combined with energy efficiency, can meet half of the world's energy needs by 2050. This new report, "Energy [R]evolution: A Blueprint for Solving Global Warming," shows that it is not only economically feasible, but also economically desirable, to cut U.S. CO₂ emissions by almost 75% within the next 43 years. These reductions can be achieved without nuclear power, and while virtually ending U.S. dependence on coal. Contrary to popular opinion, a massive uptake of renewable energy and efficiency improvements alone can solve our global warming problem. All that is missing is the right policy support from the President and Congress.

The bad news is that time is running out. The overwhelming consensus of scientific opinion is that the global climate is changing and that this change is caused in large part by human activities; if left unchecked, it will have disastrous consequences for Earth's ecosystems and societies. Furthermore, there is solid scientific evidence that we must act now. This is reflected in the conclusions of the Intergovernmental Panel on Climate Change (IPCC), a collaborative effort involving more than 1,000 scientists. Its next report, due for release early this year, is expected to make the case for urgent action even stronger.

In the United States there is a groundswell of activity at the local and state levels. Many mayors, governors, and public and business leaders are doing their part to address climate change. But

they can only do so much; action is needed at the federal level. Now is the time for a national, science-based cap on greenhouse gas emissions.

It's time for a national plan to address global warming. Such a plan will create jobs, improve the security of America's energy supply, and protect Americans from volatile energy prices. It will restore America's moral leadership on the critical international issue of climate change. And real action in the United States will inspire confidence as the rest of the world negotiates future global commitments to address climate change. In addition to global warming, other energy-related challenges have become extremely pressing. Worldwide energy demand is growing at a staggering rate. Over-reliance on energy imports from a few, often politically unstable, countries, and volatile oil and gas prices, have together pushed energy security to the top of the political agenda, while threatening to inflict a massive drain on the global economy. But while there is a broad consensus that we need to change the way we produce and consume energy, there is still disagreement about what changes are needed and how they should be achieved.

The Energy Scenario:

The European Renewable Energy Council (EREC) and Greenpeace International commissioned this report from the Department of Systems Analysis and Technology Assessment (Institute of Technical Thermodynamics) at the German Aerospace Centre (DLR). The Worldwatch Institute was hired to serve as a technical consultant for the U.S. and North American portions of the report. The report presents a scenario for how the United States can reduce CO₂ emissions dramatically and secure an affordable energy supply on the basis of steady worldwide economic development through the year 2050. Both of these important aims can be achieved simultaneously. The scenario relies primarily on improvements in energy efficiency and deployment of renewable energy to achieve these goals. The future potential for renewable energy sources has been assessed with input from all sectors of the renewable energy industry, and forms the basis of the Energy [R]evolution Scenario.

The Potential for Renewable Energy:

Renewable energy technologies such as wind turbines, solar photovoltaic panels, biomass power plants, solar thermal collectors, and biofuels are rapidly becoming mainstream. The global market for renewable energy is growing dramatically; global investment in 2006 reached US\$38 billion, 26% higher than the previous year. The time window available for making the transition from fossil fuels to renewable energy is relatively short. Today, energy companies have plans to build well over 100 coal-burning power plants across the United States; if those plants are built, it will be impossible to reduce CO₂ emissions in time to avoid dangerous climate impacts. But it is not too late yet. We can solve global warming, save money, and improve air and water quality without compromising our quality of life. Strict technical standards are the only reliable way to ensure that only the most efficient transportation systems, industrial equipment, buildings, heating and cooling systems, and appliances will be produced and sold. Consumers should have the opportunity to buy products that minimize both their energy bills and their impact on the global climate.

From Vision to Reality:

This report shows that business as usual is a recipe for climate chaos. If the world continues on its current course, CO2 emissions will almost double by 2050, with catastrophic consequences for the natural environment, the global economy, and human society as a whole. We have the opportunity now to change that course, but the window is narrow and closing quickly.

The policy choices of the coming years will determine the world's environmental and economic situation for many decades to come. The world cannot afford to stick to the conventional energy development path, relying on fossil fuels, nuclear, and other outdated technologies. Energy efficiency improvements and renewable energy must play leading roles in the world's energy future.

For the sake of a sound environment, political stability, and thriving economies, now is the time to commit to a truly secure and sustainable energy future - a future built on clean technologies, economic development, millions of new jobs, and a livable environment.

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To read the 20-page Executive Summary, go to:

<http://www.greenpeace.org/usa/press/reports/energy-r-evolution-introduc>

To read the full 92-page study, go to:

http://www.erec.org/documents/energy_revolution/energy_revolution.pdf

or to either of the following two web sites:

<http://www.greenpeace.org/usa/press/reports/energy-r-evolution-a-bluepr.pdf>

<http://www.energyblueprint.info>

A news release about the study can be found at: <http://www.greenpeace.org/usa/news/global-energy-scenario>

See also the article at RenewableEnergyAccess.com:

<http://www.renewableenergyaccess.com/rea/news/infocus/story;jsessionid=70724D3122DCDE115EED00E4490C9EDD?id=47208>