The Path from Fukushima: Short and Medium-term Impacts of the Reactor Damage Caused by the Japan Earthquake and Tsunami on Japan’s Electricity Systems

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The Path from Fukushima: Short and Medium-term Impacts of the Reactor Damage Caused by the Japan Earthquake and Tsunami on Japan’s Electricity Systems

The Nautilus Institute for Security and Sustainability, a research institute with offices in San Francisco, Seoul, and Melbourne, have found that reconstruction of the Japanese energy sector using renewable energy and energy efficiency technology will be cheaper, faster, cleaner, and more resilient than traditional thermal and nuclear power plants.

This report, *The Path from Fukushima: Short and Medium-term Impacts of the Reactor Damage Caused by the Japan Earthquake and Tsunami on Japan’s Electricity System*, uses a quantitative model of the Japanese energy sector to compare the costs of rebuilding using energy efficient technology, renewable energy sources, and distributed power generation to using centralized gas and nuclear power plants.

The report finds that the efficient-renewable-distributed energy scenario can be deployed very rapidly and will start to save power immediately while the alternative, even if fast tracked, will take

two to three years longer to implement and meet consumer demand. This unmet demand will increase the cost of energy in Japan and make the centralized nuclear and thermal power option more expensive as the energy efficient alternative. Thus, the Japanese government faces a strategic choice in how it responds to the Fukushima crisis.

In short, rebuilding using green technology and renewable energy will:
- Meet the energy needs of the Japanese people two to three years faster than nuclear and thermal power plants;
- Reduce CO2 emissions in Japan by 50%;
- Cost less by avoiding the price hikes associated with unmet demand.

Read the report.

Read the executive summary.

Dr. David von Hippel, a Senior Associate at the Nautilus Institute, and Dr. Kae Takase, Director of Governance Design Laboratory in Japan, are the principal authors of the study. Dr. Peter Hayes, Nautilus Institute Executive Director, and Dr. Richard Tanter, Nautilus Institute Research Associate, contributed to the report.

Below is the panel discussion with Peter Hayes, Nautilus Institute Executive Director, and Kirk Smith, Professor of Global Environmental Health at UC Berkeley exploring the nuclear crisis in Japan and long-term implications for the environment, energy policy and public health.

This panel discussion was presented in partnership with the Japan Policy Research Institute and the University of San Francisco Center for the Pacific Rim.

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