

## PF-6

### Fukushima and Electric Power Industry R&D

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#### Abstract

The Fukushima accident left a global impact that will reverberate for many decades to come. Although the event clearly has direct implications on nuclear power and safety, its consequences are propagated far beyond the boundaries of nuclear community. This presentation gives an EPRI perspective on the tragic event with a focus on lessons learned and their implications on future research and development in nuclear and other power industries.

The incident has since spawned new research activities in a number of critical nuclear safety areas identified by EPRI on behalf of the nuclear industry. Due to the far-reaching ramifications of the incident, the event has also influenced non-nuclear areas such as fossil generation, renewable energy, power delivery and grid system, and environment, in terms of planning and developing strategies for future scientific research and technology developments in energy industry. For instance, reliance on fossil power generation, particularly natural gas power, as well as renewables, is projected to increase in Japan and a few other countries. From an environmental point of view, decommissioning and clean-up issues are looming large. Also, meeting the carbon emission reduction goal to mitigate global warming may pose a major challenge for a number of countries that announced to go non-nuclear. As for the power grid system, enhancement of the grid reliability and resiliency may become an important area of technology development.

Despite the Fukushima-originated temporary setback of nuclear development, an overall view of the future energy mix indicates that nuclear power must continue to play a major role in order to meet energy security and global carbon reduction goals.