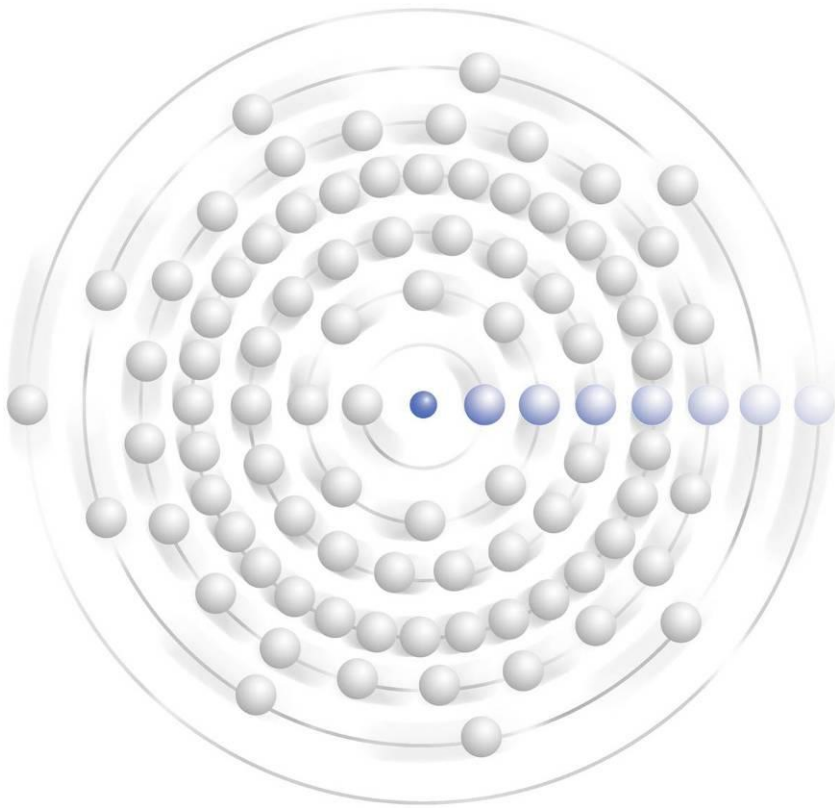




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# Post-Fukushima Nuclear Power: Update

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## Introduction & Overview

Following the successful publication in early June 2011 of The Ux Consulting Company's (UxC) special report on *Nuclear Power in the Post-Fukushima Era*, there have continued to be many important related developments and new information emanating both from Japan and the rest of the world. The primary objective of this update report is to review and analyze the latest developments and new information that has come to light since the initial June report was issued. This update report provides coverage of important developments through early September 2011.

This update report presents both technical and commercial analysis, including:

- Analysis of the current status at the Fukushima Daiichi nuclear power plant (NPP) and future steps for recovery and clean-up
- Review of new reactor regulatory requirements (e.g. U.S. NRC Japan Task Force and EU stress tests)
- Evaluation of reactor upgrades and industry plans to comply with new regulations
- Updates on policy changes in Japan as well as other key countries, such as Germany, U.S., China, Switzerland, and Italy
- Latest 2011-Q3 UxC proprietary nuclear power forecasts for the period through 2030 from our latest edition of *Nuclear Power Outlook* (NPO)
- Impacts on industry players (e.g. Utilities, NSSS vendors, SMR developers, EPCs, and other suppliers)
- Assessment of future important reactor developments going forward in the post-Fukushima era

## Structure of Report

This comprehensive update report follows along the same structure as the original report on *Nuclear Power in the Post-Fukushima Era* and provides detailed assessments and analysis on both technical and commercial levels. In addition to this **Introduction & Overview**, the report includes multiple chapters as follows:

**Chapter 1 – 1 – Update on Fukushima Daiichi NPP Status and Outlook** reviews the timeline of events at the Fukushima site and plans for cold shutdown, clean-up, and decommissioning.

**Chapter 2 – Update on Japan** examines the latest status of the economic and political ramifications of the accident in Japan as well as detailed discussion of the future of nuclear power in the country.



**Chapter 3 – Update on Impacts on Global Nuclear Power** presents new information on global policy level activities related to nuclear safety as well as specific developments for nuclear power programs in key countries, such as China, Germany, Switzerland, and Italy. Additionally, this chapter presents UxC’s latest 2011-Q3 proprietary nuclear power forecasts through 2030 (updated in August 2011).

**Chapter 4 – Update on Lessons from Fukushima Accident** offers some new analysis and discussion of the latest opinions on what the Fukushima accident has taught the world in terms of nuclear reactor engineering, operations, and safety regulations.

**Chapter 5 – Update on Implications for Operating Reactors** reviews the specific new regulatory requirements resulting from Fukushima assessments that are beginning to emerge in the U.S. and Europe and how this will impact the overall nuclear industry, especially nuclear power plant operators.

**Chapter 6 – Update on Implications for New Reactors** similarly looks at specific impacts of new regulations after Fukushima and how these will need to be implemented by new reactor developers. Moreover, some new detailed analysis of safety requirements post-Fukushima for small modular reactor (SMR) designs is included.

**Chapter 7 – Update on Implications for Spent Fuel Management** examines the latest regulatory developments and how these could affect changes to spent fuel management after Fukushima.

**Chapter 8 – Update on Commercial Nuclear Industry Impacts** provides updates to our previous analysis of the Fukushima impacts on the various companies involved in the nuclear reactor supply chain and related industry sectors.

**Chapter 9 – Summary and Conclusions** offers UxC’s conclusions from this new analysis of the Fukushima accident and examines some of the likely key issues that will continue to be discussed going forward as a result of this accident.

The **Appendix** also includes a number of *UxC Meeting Summaries* of relevant industry and government meetings and conferences that have occurred since May 2011 and reflect on the new post-Fukushima nuclear power environment.