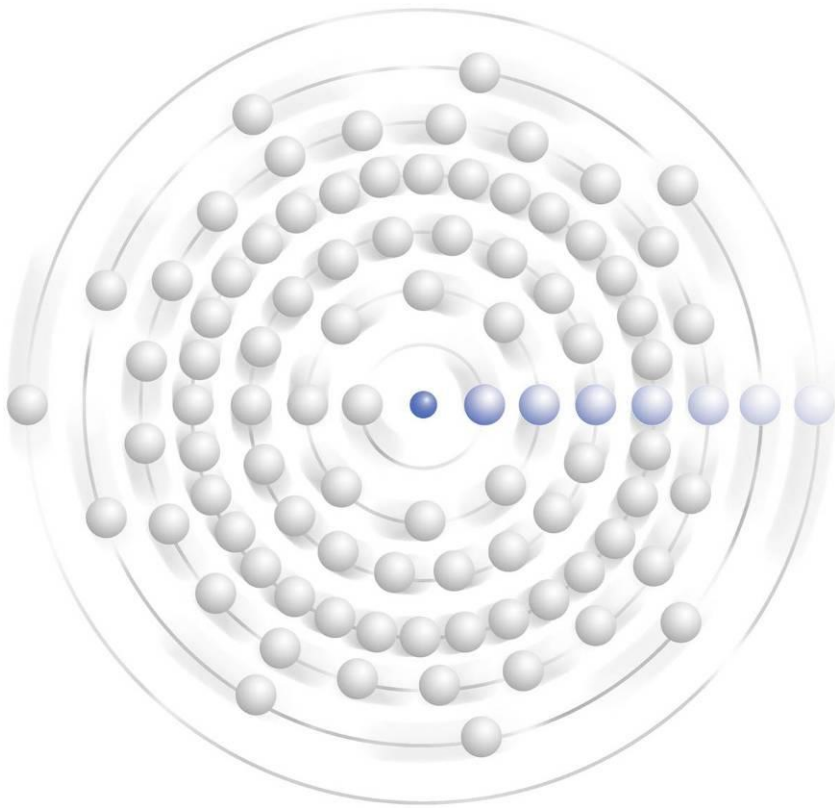




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# Post-Fukushima Nuclear Power: Update

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# Table of Contents

<b>Introduction &amp; Overview</b>	<b>6</b>
Structure of Report.....	6
<b>1 – Update on Fukushima Daiichi NPP Status and Outlook</b>	<b>8</b>
Latest Timeline of Events (June-September 2011).....	8
• June 1 – June 7 .....	8
• June 8 – June 14 .....	8
• June 15 – June 21 .....	9
• June 22 – June 28 .....	10
• June 29 – July 5.....	10
• July 6 – July 12 .....	11
• July 13 – July 19 .....	12
• July 20 – July 26 .....	12
• July 27 – August 2 .....	12
• August 3 – August 9.....	13
• August 10 – August 16.....	13
• August 17 – August 23.....	13
• August 23 – September 2 .....	14
• Summary.....	16
TEPCO Plans for Cold Shutdown and Plant Stabilization.....	16
• Simplified Active Water Retrieve and Recovery System (SARRY).....	18
• Core Spray for Reactor Cooling.....	20
• Reactor Building Cover For Unit 1 .....	20
• Instalment of Water Shield Walls .....	21
• Decontamination Activities.....	23
• Plans for Decommissioning .....	24
<b>2 – Update on Japan</b>	<b>26</b>
Impact on Japan’s Economy .....	27
Impacts on Japan’s Government and Public.....	28
• What’s Next for Recovery? .....	31
The Future of Nuclear Power in Japan .....	32
• Current Status and Near-Term Future .....	33
• Reactor Stress Tests .....	36
• Aging Reactor Capacity .....	37
• Nuclear Regulatory Framework Reform .....	37
• Energy Saving Measures.....	38
Japan’s Future Energy Policy .....	39
Implications for TEPCO.....	41
• TEPCO Oversight Panel.....	43
Impacts on Other Japanese Utilities .....	44
• Kansai Electric Power Co. ....	44
• Chubu Electric Power Co.....	46
• Tohoku Electric Power Co. ....	47
• Kyushu Electric Power Co. ....	48
• Shikoku Electric Power Co.....	48
• Chugoku Electric Power Co. ....	49
• Hokkaido Electric Power Co. ....	49
• Hokuriku Electric Power Co. ....	50
• Japan Atomic Power Co. ....	50
• Electric Power Development Co. (J-Power).....	50
<b>3 – Update on Impacts on Global Nuclear Power</b>	<b>51</b>
Nuclear Safety after Fukushima.....	51
• IAEA Ministerial Conference on Nuclear Safety .....	52
The Role of Nuclear Energy .....	52
The Work of the IAEA.....	52
Strengthening the International Safety Framework.....	52

The Role of the Nuclear Industry.....	53
• IAEA Proposals.....	53
• Working Sessions' Summaries.....	53
Preliminary Assessment of the Fukushima Accident and Actions for Safety Improvements.....	54
Emergency Preparedness and Response.....	54
The Global Nuclear Safety Framework.....	55
• Analysis.....	55
Impact on the Reactor Markets.....	56
Summary.....	56
China's Nuclear Energy Program after Fukushima.....	57
• Initial Reactions to Fukushima.....	57
• Potential Implications for China's Nuclear Energy Program.....	57
The pace of the program.....	57
Reactor Technology.....	58
Reactor Supply Chain.....	59
• Impact on China's Nuclear Energy Growth.....	60
• Summary.....	60
After Fukushima: Switzerland's Long Term Phase-out.....	60
• Response to the Fukushima Accident.....	61
• New Energy Policy.....	61
• Potential Impact on the Nuclear Markets.....	62
• Summary.....	63
After Fukushima: Italy Says "No" to Nuclear Power.....	63
• Nuclear Developments in the Early Years in Italy.....	63
• Italy's Nuclear Revival.....	64
• Recent Developments.....	65
Hurdles Prior and Post Fukushima.....	65
Final Setback.....	66
• Analysis.....	66
What the Results of the Referendum Imply.....	66
Impact on Nuclear Markets.....	67
• Summary.....	67
Germany's Second (and Final) Nuclear Phase-out.....	69
• Response to the Fukushima Accident.....	69
• New Atomic Energy Law.....	70
• Initial Consequences of Nuclear Phase-out.....	70
• Impacts on Germany's Domestic Nuclear Fuel Cycle Industry.....	72
• Analysis.....	72
• Summary.....	73
Latest UxC Nuclear Power Forecasts from 2011-Q3.....	74
• Post-Fukushima Global Nuclear Power Forecast Overview.....	74
• Alternative UxC Reactor Forecast Cases.....	77
• Global Nuclear Power Forecast Comparisons: Q1 vs. Q3 2011.....	78
<b>4 – Update on Lessons from Fukushima Accident.....</b>	<b>79</b>
Japan Government Report to IAEA Ministerial Conference.....	79
MIT Report on Fukushima Daiichi Lessons Learned.....	81
• Emergency Power following Beyond-Design-Basis External Events.....	81
• Emergency Response to Beyond-Design-Basis External Events.....	81
• Hydrogen Management.....	82
• Containment.....	83
• Spent Fuel Pools.....	83
• Plant Siting and Site Layout.....	84
<b>5 – Update on Implications for Operating Reactors.....</b>	<b>85</b>
Reactor Safety Issues Overview.....	85
Latest U.S. NRC Regulatory Requirements.....	86
• Defense-in-Depth Philosophy.....	88
• Japan Task Force Summarized Recommendations.....	89
Regulatory Framework Clarifications.....	90
Protection Enhancements.....	90

Mitigation Enhancements .....	90
Emergency Preparedness Enhancements .....	90
NRC Programs Efficiency Enhancement.....	91
European Stress Tests.....	91
• Reassessing Safety Margins .....	91
• General Scope .....	92
• Technical Scope .....	92
• Other Issues/Transparency.....	93
Utility Responses to Regulatory Requirements.....	94
Update on Implications for Operating Reactors .....	95
• JTF Recommendations Addressing Flooding Provisions .....	98
• Improving Containment Overpressure Protection.....	98
Review of Containment Venting Systems.....	98
Containment Venting System Industry Response .....	101
<b>6 – Update on Implications for New Reactors .....</b>	<b>102</b>
Latest Regulatory Requirements Based on JTF Recommendations .....	102
• Key Implications.....	102
Implications for Specific New Large Reactor Designs .....	106
Implications for Small Modular Reactor Designs .....	106
• SMR Designs Sensitivity to Prolonged SBO.....	107
• SMR Designs Sensitivity to Low-occurrence High-impact Severe Flooding.....	108
• SMR Designs Sensitivity to Multi-unit Events .....	108
<b>7 – Update on Implications for Spent Fuel Management .....</b>	<b>109</b>
Latest Regulatory Requirements.....	109
• Safety Improvements for Storage Fuel Pools .....	109
Utility Responses to Regulatory Requirements.....	111
<b>8 – Update on Commercial Nuclear Industry Impacts .....</b>	<b>113</b>
Impacts on Nuclear Power Utilities .....	113
• U.S. Utilities .....	113
Exelon .....	113
TVA .....	114
Southern Company.....	114
Duke Energy.....	115
PSE&G .....	115
South Carolina Electric and Gas Co.....	115
• European Utilities.....	115
German Utilities (E.ON, RWE, and EnBW) .....	116
EDF .....	118
GDF Suez.....	120
ENEL .....	121
CEZ .....	121
NSSS Vendors.....	122
• AREVA.....	122
• Atomstroyexport (ASE) .....	123
• Chinese Nuclear Plant Developers .....	125
• Mitsubishi Heavy Industries .....	126
• Toshiba Corporation .....	127
• Westinghouse Electric Company .....	127
• General Electric-Hitachi .....	128
• Atomic Energy Canada Ltd. ....	129
Engineering, Procurement, and Construction (EPC) .....	130
• Bechtel Corporation .....	130
• Shaw Group .....	130
• SNC-Lavalin.....	131
• Kajima Corporation .....	132
• Hyundai Engineering & Construction (Hyundai E&C).....	132
• URS Corporation.....	132
Nuclear Component Suppliers .....	133
• Alstom .....	133

- Babcock & Wilcox (B&W)..... 133
- Curtiss-Wright ..... 134
- Chinese Companies..... 135
- Doosan Heavy Industries and Construction..... 136
- Siemens AG..... 136
- Rolls Royce ..... 137
- Heavy Forgings Suppliers..... 137
- SMR Designers ..... 138
  - In Focus: Recent SMR Developments in the U.S. .... 139
    - Congressional Hearings..... 139
    - Westinghouse ..... 141
    - B&W..... 141
    - NuScale ..... 143
    - Holtec..... 143
    - Korea Atomic Energy Research Institute (KAERI) ..... 144
    - OKBM Afrikantov..... 145
- Nuclear Waste and D&D Industry ..... 146
  - AREVA..... 146
  - Shaw Group ..... 146
  - EnergySolutions..... 146
- 9 – Summary and Conclusions ..... 147**
  - The Positives..... 147
  - The Negatives ..... 149
  - Looking Forward..... 151
- Appendix A – UxC Meeting Summaries from June-August 2011 ..... 152**
  - ATOMEXPO 2011 ..... 152
  - Nuclear Power Europe Plenary Session ..... 154
  - Senate Oversight Hearing on NRC Safety Review ..... 156
  - Platts European Nuclear Power Conference..... 159
  - Platts Webinar: The Aftershocks of Fukushima ..... 165
  - Senate Hearing on Light Water SMR Safety and Economics ..... 166
  - NEI Washington Representatives Meeting: Industry Stance on NRC Actions ..... 169
  - NEI Wall Street Briefing..... 170
  - Senate Hearing on NRC’s Japan Task Force Recommendations ..... 172
  - NRC Public Hearing to Solicit Comments on Japan Task Force Report..... 175

## List of Figures

Figure 1. Fukushima Daiichi Contaminated Water Treatment Flow Diagram .....	18
Figure 2. Graphical Representations of SARRY .....	19
Figure 3. Design Overview of Reactor Building Cover for Unit 1 .....	20
Figure 4. Computer Enhanced Graphic of Reactor Building Cover for Unit 1 .....	21
Figure 5. Construction of Metal Frame for Reactor Building Cover for Unit 1 .....	21
Figure 6. Cross Section View of Water Shield Walls.....	22
Figure 7. Overview of Water Shield Walls .....	23
Figure 8. Japan Nuclear Capacity Forecast by Month through May 2012 .....	35
Figure 9. UxC Nuclear Generating Capacity Forecast, 2008-2030.....	75
Figure 10. UxC Base, High, and Low Case Nuclear Capacity Forecasts, 2008-2030 .....	77
Figure 11. UxC Nuclear Power Projections, 2008-2030.....	78
Figure 12. NEI Chart on “The Way Forward After the Fukushima Accident” .....	97
Figure 13. Fukushima Daiichi NPP Unit 3 and 4 Shared Vent Stack .....	100
Figure 14. B&W mPower Safety Features.....	142
Figure 15. NuScale Design Safety Features .....	143
Figure 16. Holtec HI-SMUR Design Safety Features .....	144

## List of Tables

Table 1. Current Status and Planned Outages for Japanese NPPs .....	33
Table 2. Japan Nuclear Capacity Forecast by Month through May 2012 .....	35
Table 3. Swiss Reactor Scheduled Shutdown Years .....	63
Table 4. Italian Reactors (Historical Data) .....	64
Table 5. Reactor Units & Nuclear Capacities Anticipated by Country by 2030 .....	75
Table 6. UxC Base, High, and Low Case Nuclear Reactor and Capacity Forecasts, 2008-2020 .....	77
Table 7. Global Nuclear Power Forecasts – Pre- & Post-Fukushima .....	78
Table 8. NEI Comparison of U.S. vs. Japanese Nuclear Operations .....	95

## 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

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## 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.