

The Way Forward - Strategic Goals

1. The nuclear workforce remains focused on safety and operational excellence at all plants, particularly in light of the increased work that the response to the Fukushima event will represent.
 - a) Unplanned shutdowns at record low number
 - b) Safety System Availability exceeded 93%
 - c) Capability Factor at 91.2%
 - d) **Cumulative Impact**
- ✓ 2. Timelines for emergency response capability to ensure continued core cooling, containment integrity and spent fuel storage pool cooling are synchronized to preclude fuel damage following station blackout or challenges to the ultimate heat sink.
 - a) Cooling System Monitoring
 - b) FLEX
 - i. Walk-downs & compensatory actions in areas of low physical margin
 - ii. Strategies and procedures for use portable equipment
 - iii. Portable equipment added
 - iv. Regional Response Centers Progressing
 - c) Reliable Hardened Vents
 - i. **Severe Accident Capable – Wetwell / Drywell**
 - ii. **Technical rigor for design conditions**
- ✓ 3. The U.S. nuclear industry is capable of responding effectively to any significant event in the U.S. with the response being scalable to support an international event, as appropriate.
 - a) Industry Response Protocol
 - b) INPO Emergency Response Center
 - c) Drill and Exercise Enhancements
 - d) INPO Assist Visits
 - e) **International Response**
4. Severe accident management guidelines, security response strategies (B.5.b), and external event response plans are effectively integrated to ensure nuclear energy facilities are capable of a symptom-based response to events that could impact multiple reactors at a single site.
 - a) EOP, SAMG, EDMG, FLEX integration work is progressing
 - b) **Training impact from new procedures**
5. Margins for protection from external events are sufficient based on the latest hazards analyses and historical data.
 - a) Flooding compensatory actions in place and re-analysis proceeding
 - b) Seismic added augmented approach and re-analysis proceeding
 - c) **Other external events**
- ✓ 6. Spent fuel pool cooling and makeup functions are fully protective during periods of high heat load in the spent fuel pool and during extended station blackout conditions.
 - a) Added administrative protective controls for Fuel Pool Cooling
 - b) FLEX equipment capable of providing fuel pool make-up & cooling as needed
7. Primary containment protective strategies can effectively manage and mitigate post-accident conditions, including elevated pressure and hydrogen concentrations.

Filtering Strategies for Mark I and II containments
8. Accident response procedures provide steps for controlling, monitoring and assessing potential radiation and ingestion pathways during and following an accident, including timely communication of accurate information.

STAKEHOLDERS AND DESIRED OUTCOMES

General Public

The industry will ensure that the general public is well-informed of the collective approach in response to the Fukushima accidents. Special attention will be paid to engaging stakeholders (residents, elected officials and other stakeholders) immediately surrounding nuclear energy facilities to maintain confidence in their plant's continued safe operations and ability to protect public health and safety.

Employees

The industry will provide information to its employees to understand the operating experience from Fukushima as part of their training to execute their jobs with excellence and be advocates for nuclear safety.

Emergency Response Organizations

The industry will continue to communicate and cooperate with federal, state and local emergency response organizations and government entities to ensure that emergency response plans reflect the lessons learned from the Fukushima Strategic Response Plan. These organizations include, but are not limited to, state and local police; fire officials; health officials/paramedics; federal, state and local governments; and transportation companies. Interactions will be focused on increasing confidence in the industry's and local government emergency preparedness programs.

Integrated extreme event drills to be conducted

Industry

Utilities, industry vendors and owners groups, architect-engineers, manufacturers and companies and organizations involved in the nuclear fuel cycle, working as a collective worldwide industry, will continue to strive for operational excellence. These actions and goals will continue the ongoing contribution to the legacy of safe, reliable, environmentally responsible production of electricity at nuclear energy facilities. The industry will work with all interested parties to ensure the benefits of nuclear energy for future generations.

Regulators

The industry will maintain relationships with federal and state regulators to ensure the industry participates in the regulatory process and can effectively implement any regulatory changes.

Technical Partners

The industry will continue to collaborate with technical associations and organizations to ensure information is disseminated and understood by all interested parties so that the benefits and positions of nuclear energy are appreciated and support the industry's long-term objectives.

Policymakers and Opinion Leaders

The industry will proactively communicate lessons learned and industry actions such that policy and opinion leaders at the local, state and national level recognize the proactive, unwavering industry response to the Fukushima accident. The industry will continue to focus on improving confidence in the safety of U.S. nuclear energy facilities and assuring support for industry legislative proposals and programs that enhance safety.

Communications of differences and accomplishments

International Community

The U.S. nuclear industry will interact with international nuclear energy companies and organizations to compile and assess recommendations and actions for applicability to U.S. facilities and to make the international industry aware of U.S. improvements.

Building Blocks

- ✓ 1. **Maintain Focus on Excellence in Existing Plant Performance (INPO):** focus on continued performance improvement of U.S. reactors.
- ✓ 2. **Develop and Issue Lessons Learned from the Fukushima Events (INPO):** focus on comprehensive analysis of the Fukushima event and that lessons learned are applied to the U.S. nuclear industry and shared with the World Association of Nuclear Operators (WANO).
3. **Improve the Effectiveness of U.S. Industry Response Capability to Global Nuclear Events (INPO/NEI):** focus on identified lessons learned from the U.S. industry response to the Fukushima event, allowing for more effective integrated response to future events.
 - a) Good progress on establishing regional response capability
 - b) **More work needed in response to International Events**
- ✓ 4. **Develop and Implement a Strategic Communications Plan (NEI):** focus on managing the industry's strategic communications and outreach campaigns to recover policymaker and public support for nuclear energy.
5. **Develop and Implement the Industry's Regulatory Response (NEI):** focus on managing the industry's regulatory interactions and resolution of applicable industry regulatory issues from the incident.
 - a) Steering Committees have been effective
 - b) **Continue working through transition to new normal**
- ✓ 6. **Participate and Coordinate with International Organizations (INPO/EPRI):** focus on ensuring the results from international investigations are captured and effectively used to inform actions with the other building blocks.
7. **Provide Technical Support and R&D Coordination (EPRI/NSSS Owners' Groups):** focus on existing technical solutions and research and development activities and deliverables necessary to address recommended actions of this plan.
 - a) **Significant work on models and methods for hazard re-analysis**
 - b) **Technical rigor driving solutions vs. ambitious schedules**