Planning for Disaster

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For the power industry, responding to the damage caused by earthquakes, hurricanes, floods or other disasters, while rare, is a distinct possibility. When a disaster occurs, there is little opportunity to stand back and consider the desired strategic outcome. During natural disasters, the decisions of electricity executives may have life and death implications and it makes sense to prepare for such unlikely situations.

To help form a strategic approach to dealing with disasters, Cigre undertook a major study of a number of disasters across continents and natural environments. We studied the following disasters in depth:

- New Zealand: Christchurch Earthquake, 2011
- Spain: Cyclone Klaus, 2009
- Brazil: Generation Shutdell, 2001
- Japan: Tsunami, 2011
- Canada: Ice Storms, 1998
- Australia: Queensland Floods, 2010-2011
- China: Ice Storms, 2008
- Australia: Victorian Bushfires, 2009
- United States: Hurricane Sandy, 2012
- India: Blackouts, 2012

A number of trends and common themes presented below were identified from these case studies and disaster responses. In addition, feedback from those on the front line who have responded to and managed disaster responses was used to enhance understanding and test the findings.

- **Each Disaster Response is Different.** The response to a disaster will vary from country to country and is highly dependent on inherent resilience and disaster response preparedness. Generally, it is unhelpful to prepare a handbook or detailed plan for a major disaster. While disasters often damage physical infrastructure, it is important to recognise that the response to disasters and those skills or capabilities in management is much more effective than trying to leverage corporate risk management systems or other traditional processes for extra-ordinary events. However, strong business continuity practices and processes are still critical.
- **Each Disaster is Different: Prepare for the Worst.** While some extreme events may be classified as "highly unlikely" and typically outside the general ambit of probability, the unexpected could occur. Neglecting to consider the possibility of such low-probability, high-impact crises could cost a greater toll than allocating time and resources to cater for a worst case scenario, even if the likelihood is low.
- **People Management.** Mobilisation of a workforce and thoughtful, ongoing interaction with employees/ contractors/volunteers is important. While the China response of mass mobilisation would probably only be possible in a centrally and control economy, the lessons of the New Zealand Christchurch Earthquake, Brazil Generation Shutdell, Hurricane Sandy, are more relevant for developed, western nations. These measures highlight the need for strong human resource and management processes, which are not excessively rigid, but provide the tools for middle-management to make timely decisions during a disaster.
- **Policy Implications.** The Japanese tsunami impacted not only Japan's energy mix, but also had broader, global policy implications concerning a desirable generation fleet. Frequently, non-technical policy makers and political leaders will draw comparisons between electrical systems and come to conclusions about the implications of a disaster in one country. While the Japanese tsunami may not necessarily have any direct implications for other nations, industry and trade organisations should still respond to both media and policy makers to help differentiate external crises from internal issues. This could reduce knee-jerk responses that can be costly and often ineffective in achieving their stated aim.
- **National Cohesion and Psychological Management.** Perception management of the target audience was important in the aftermath of the China ice storm, with the Chinese Government publicising its high-level involvement in disaster response and garnering sympathetic coverage in the media. In the US, Hurricane Sandy, the blackouts and failure to cower with power restoration had less than positive implications for its national image on the global economic stage. While governmental thinking and responses vary depending on political structures, issues can arise if, for example, a disaster occurs around the time of [illegible]

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