Y2K Emergency Preparedness and Precautionary Posture

Ontario Hydro Nuclear Year 2000 Project

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Major Topics

• OHN Risk Management Framework
• Year 2000 risks
• Precautionary Posture
• Emergency Preparedness
• References
OHN Risk Management Framework

• Categories of Risk
• Risk Assessment
• Risk Control
• Risk Management Process
Categories of Risk

<table>
<thead>
<tr>
<th>Risk Category:</th>
<th>External</th>
<th>Internal</th>
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<tbody>
<tr>
<td>Source of Risk:</td>
<td>OH External</td>
<td>Other SBU</td>
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<tr>
<td>Point of Failure:</td>
<td>Business Process</td>
<td>Digital Asset</td>
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Risk Assessment

• Analyze business process and dependencies
• Identify criticalities
• Identify risks
• Analyze impact & likelihood of occurrence
• Set priorities for risk mitigation and contingency action
Risk Control

- Identify and evaluate risk mitigation and contingency options
- Develop plans and test strategies
- Execute risk mitigation plans
- Test and execute contingency plans
- Develop Y2K scenarios and modify emergency preparedness plans
Risk Control (cont.)

• Conduct emergency preparedness exercises & drills
• Develop & implement a Precautionary Posture
Risk Management Process

- Perform Risk Assessment & Risk Control Planning
  - identify risks
  - analyze and evaluate risks
  - develop risk mitigation plans
  - develop contingency plans
  - develop emergency response and precautionary posture plans

- Perform Risk Control
  - implement plans
  - monitor planned activity
  - monitor external risks
  - perform tests and drills
  - report status

- Perform Emergency Response and Business Recovery
  - implement emergency response plans
  - institute precautionary posture
  - implement business recovery plan
Year 2000 risks

• Internal operations
  • Systems and digital assets

• External operations
  • customers (power producers, MEUs, major directs)
  • suppliers (telecom, fuels, transportation, banks, other materials & services)
  • regulatory bodies and government
  • liability risks
Precautionary Posture

- Increased surveillance
- Equipment and procedure test
- Special operating procedures
- Special staffing arrangements
- Schedule outages outside the PP periods
- Spare generation & transmission capacity
Precautionary Posture (cont.)

• Coordination of operating plans
• Heightened alert for EROs
• Return to normal operations
Increased surveillance

• General vigilance

• Areas of internal risk
  – residual asset risk
  – fix may fail
  – overlooked assets

• High risk external stakeholders
Equipment and procedure test

• Continued correct operation & operational readiness
• Short procedure or list of observations on asset state
• Procedure for reporting and resolving variances
• Special staffing requirements
Special operating procedures

• Part of asset remediation strategy
• Develop procedures
• Run tests and drills
• Special staffing requirements
Special staffing arrangements

• Cancellation of all leave
• Augmented operations staff in place or ready
• Key maintenance staff ready
• Backup operations and maintenance staff on call
• Shift schedules prepared well in advance
Outages scheduled outside the PP periods

• prevent contention for human resources
• prevent contention for plant capacity
Additional generation and transmission capacity

• State of reserves
• Plan covering all generation capacity
• NERC coordination of BES
Heightened alert for EROs

- EROs in standby status
- Backup communications contingency plan
- EMOs on alert or in a precautionary status
Return to normal operations

• Develop procedures and conduct drills
• Disposition of incidents
Emergency Preparedness

- Identify existing authorities, plans, procedures, organizations
- Develop a set of Y2K risks and scenarios
- Update existing plans for each scenario
- Create new plans as necessary
- Develop tests, exercises and drills
- Include stakeholders
EP operational risks

• Power
• Communications
References

• Consolidated Ontario Hydro Nuclear Emergency Plan, N-PROG-RA-0001, April 14, 1998

• NERC Year 2000 Contingency Planning Guide Version 1.0, October 23, 1998
  ftp://www.nerc.com/pub/sys/all_updl/docs/y2k/contingency.pdf

• Ontario Hydro Year 2000 Program, Risk Management Framework, Release 2.1, November 5, 1998

• Y2K Coordination Plan for the Electricity Production and Delivery Systems of North America,
  http://www.nerc.com/y2k/y2kplan.html