Expanding Enterprise Resilience Concepts within the Utility Industry

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About NYPA and Biography

• Established by the NY State Legislature in 1931. Largest state public electric utility in the USA.
• Provides about 25% of New York State’s electricity. No electric distribution.
• 2020 Net Gen. 31.89 billion kWh; 79% hydro; 21% gas/oil.
• Transmission: 1,400+ circuit miles; 115kV, 230kV, 345kV & 765kV.
• New York State Canals is a subsidiary.
• Does not use tax revenues or state credits, finances projects through bond sales and cash from operations.

• About me
  • SVP – SENY Operations
  • 21 years industry experience / 12 years at NYPA
  • Mathematics / Electrical Engineering / MBA
  • Soccer youth coach
Agenda

• Defining resilience
• Why resilience?
• Expanding the resilience service catalog
• NYPAs journey
• Alignment with NYPAs strategy
Defining resilience
Enterprise Resilience:
The ability to identify, prepare for, anticipate, respond to, recover and bounce forward from known and unknown risks.
The term "resilience" means the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.

- Presidential Policy Directive 21 (PPD) – 2013
  Critical Infrastructure Security and Resilience
Why resilience?
Why Resilience?

When, Not If

Increased Transparency

Seizing Opportunities
Why Resilience?

COVID-19
“The real organizational risk is a lack of imagination.”

- Participant at Toffler Associates’ 2018 Future Shock Forum
Expanding resilience
Expanding the Resilience Service Catalog

**Traditional Service Catalog**
- Disaster Recovery (IT and OT Systems)
- Business Continuity Planning (Key Business Process)
- Emergency Management (NYPAn and Canals)
- Grid Security & Physical Security

**Expanded Service Catalog**
- Cyber Security
- Insider Threat
- Supply Chain Security
- Workforce Resilience
- Extreme Weather
Enterprise Resilience Helps Us

Broaden View of Risk Types & Impacts

Challenge Traditional Ways of Thinking

Facilitate Systematic, Fact-Based Resilience Reviews

“Bounce Forward” from Disruption

Cross Functionally Solve Problems

Create Advantage in the Marketplace
The What If Mind Set

- Set smalls goals to align with larger NYPA Enterprise Resilience Strategy and Goals
- Build time into meetings and strategic planning to reflect on NYPA’s Enterprise Resilience posture
- Adopt flexible thinking viewing problems as opportunities
- Consider “worst case” scenarios to identify resilience gaps
- When you see resilience news headlines ask yourself “what if this happened at NYPA?”
- Ask team members to present and lead Resilience Moment conversations
NYPAs’s journey
NYPA’s legacy is an innovative and groundbreaking power authority. As NYPA moves into the highly interconnected, dynamic and digitized future, its ability to achieve its strategic vision will be tested. NYPA’s leadership recognizes that the enterprise needs to be more resilient to thrive in the future.

Since 2017, NYPA has invested in enhancing the resilience of the enterprise. The focus began with an executive-level Stress Test to assess NYPA’s ability to navigate disruptions and bounce forward in the new digital world. At the conclusion, NYPA leadership aligned around the value of resilience and acknowledged change was needed. NYPA named a new ER executive sponsor and established an ER Program. Business Unit leaders identified representatives to serve on an Enterprise Resilience Team (ERT) that meets regularly to support the development of the ER Program.
Energy Security and Resilience Programs

**Vision**

Drive NYPA’s strategic vision and culture in resilience efforts for a secure grid, positioning NYPA as a leader in public power and energy sector

**Purpose**

The purpose of Energy Security and Resilience Programs is to lead and support efforts to prepare and secure NYPA against all hazards (current and emerging), reduce the impact of disruptive events, and respond to and rapidly recover from disruptions

**ESRP is not:**
- Risk Management
- Internal Audit
- Compliance-driven
- A band-aid or a quick fix
- A siloed effort within Operations
- The flavor of the month
- A short-term effort
- A cookie-cutter program(s)
Where We Are: Vision 2030

• A thriving, resilient New York powered by clean energy.

Key Drivers*

- Energy Efficiency
- Electrification
- Demand and Flexibility
- Clean Supply
- Enterprise Digitization
- Workforce & Communities

*From Vision2030

- Supply Chain Security
- BCP / Disaster Recovery
- Cyber Security
- Workforce Resilience
- Insider Threat
- Extreme Weather
Enterprise Resilience Program Objectives

NYPA’s Enterprise Resilience program will ingrain resilient behaviors into the culture and how it works. Program objectives include creating the organizational ability to:

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<td>Broaden the view of risk types, consequences, and opportunities that could impact NYPA</td>
<td>Operationalize systematic, fact-based, and NYPA-wide reviews and decisions about risks and opportunities</td>
<td>Establish new ways of operating by including proactive risk mitigation to more effectively prepare for possible disruptions, and even improve the situation more quickly</td>
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The new Enterprise Resilience Program will help NYPA work towards achieving these objectives as it works to become a more resilient enterprise.
The ERT evaluated NYPA’s current ER maturity using Toffler Associates’ Enterprise Resilience Maturity Model and aligned on a desired end state for the NYPA ER Program by FY2021.

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<th>Current State Maturity and Future State Goals</th>
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<td>Organic, Ad Hoc [in some Business Units (BUs)]</td>
<td>Enterprise View of Resilience, BU Activity Ad Hoc</td>
<td>Enterprise View of Resilience, BU Activity Consistent but not Integrated</td>
<td>Fully Integrated, Enterprise View with Consistent BU Execution</td>
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<td>Risk Lens</td>
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- **Current State** (black dots)
- **Future State** (white dots)
High-Level Enterprise Resilience Roadmap

- **RISK LENS**: Define requirements for non-traditional risks
  - 2019: Implement non-traditional risk sensing processes at the Enterprise level
  - 2020: Implement non-traditional risk sensing requirements at the BU level

- **RESOURCES & PLANNING**: Onboard and build Enterprise Resilience team
  - 2019: Develop project management tools, resilience in job descriptions & enterprise plan
  - 2020: Operationalize business unit & site governance expectations

- **GOVERNANCE**: Enterprise Resilience Program policy developed
  - 2019: Formal campaign & ER included in new employee training
  - 2020: Formal lessons learned process & regular drills, tabletop exercises

- **EDUCATION & IMPROVEMENT**: Basic training materials & All Hands roll out
  - 2019: Resilience integrated into daily conversations
  - 2020: Stakeholder management efforts refined and supported

- **CULTURE**: Key stakeholder accountabilities defined
  - 2019: Existing metrics identified & ER dashboard developed
  - 2020: ER metrics refined and enhanced

- **METRICS**: Implementation and programmatic metrics tracked

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**Notes:**
- Define requirements for non-traditional risks:
  - 2019: Identify and prioritize non-traditional risks.
  - 2020: Implement sensing processes.

- Onboard and build Enterprise Resilience team:
  - 2019: Recruit and train initial team members.
  - 2020: Expand team with additional resources.

- Enterprise Resilience Program policy developed:
  - 2019: Draft policies and procedures.
  - 2020: Policies approved by Board of Trustees.

- Basic training materials & All Hands roll out:
  - 2019: Create training materials.
  - 2020: Roll out training to all employees.

- Key stakeholder accountabilities defined:
  - 2019: Identify key stakeholders.
  - 2020: Define roles and responsibilities.

- Implementation and programmatic metrics tracked:
  - 2019: Establish measurement systems.
  - 2020: Continuously monitor and adjust metrics.

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**Timeline:**
- **2019**: Focus on foundational work.
- **2020**: Continuation and expansion.
- **2021**: Refinement and enhancement.
The enterprise resilience function should provide oversight and quality assurance on risk ownership and mitigation

### Rationale for resilience as an enterprise function

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<th>Certain strategic risks require the “risk owner” to be focused at the enterprise level</th>
<th>Highly interconnected enterprise creates “weakest link” vulnerabilities and blind spots, which require continuous analysis</th>
<th>Resilience needs to be embedded in every project; a dedicated effort is required to make this a cultural norm</th>
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<td>• Provides a comprehensive understanding of context and external drivers</td>
<td>• Analyzes dependencies and interdependencies across the entire NYPA, customer, partner, third party ecosystem</td>
<td>• Examines what will stand in the way of success and ensures it is well understood across the enterprise</td>
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<td>• Recognizes that mitigation and responses to certain risks cross multiple functions</td>
<td>• Challenges assumptions and biases and infuses healthy paranoia</td>
<td>• Leverages ERM risk quantification</td>
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<td>• Enables establishing a common, enterprise-wide acceptable level of risk</td>
<td>• Connects the dots between different functions</td>
<td>• Holds stakeholders to an established standard</td>
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<td>• Leverages case studies and lessons learned</td>
<td>• Maintains indicators and warnings</td>
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<td>• Educates and drives awareness</td>
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Alignment to strategy
Vision2030 and Resilience

• Resilience is the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions.

• Resilience includes the ability to withstand and recover from deliberate attacks, accidents or naturally occurring threats or incidents. Any disruption could threaten our ability to achieve our mission.

• NYPA is accelerating the adoption of an enterprise-wide resilience strategy to prepare for a more distributed and uncertain operating environment, one with constantly evolving threats.
VISION2030 provides a new opportunity to focus, elevate and accelerate the adoption of resilience across the NYPA ecosystem

Resilience is appropriately a strategic theme in VISION2030

* Modified by Toffler Associates
Where is NYPA going?

Resiliency is a muscle memory we need to exercise continuously on an ongoing basis. When there’s an internal or external shock that comes into our enterprise, we can recalibrate very quickly and redirect the organization to our North Star. It needs to be part of our DNA and pervasive across the organization and individuals that are part of our team.

**VISION2030**

- Resilience is embedded across and throughout the enterprise
- Resilience is both strategic and tactical, bottom-up and top-down
- Workforce acceptance and understanding of resilience and its importance

**Strategic**

- Resilience posture and concepts assimilated by all business units and personnel and fused with established processes. Resilience becomes part of our DNA
  - Program(s) are funded and resourced to achieve success
  - Resilience mindset and importance is promulgated from the top-down and bottom-up

**Tactical**

- Business Unit Resilience Champions partner with Resilience to drive the entire portfolio forward
  - Resiliency concepts are operationalized
  - Personnel take accountability for questioning and mitigating “what if” scenarios