Lesson Learned
Pandemic Response

Primary Interest Groups

Transmission Operators (TOP)
Generator Operators (GOP)
Balancing Authorities (BA)
Reliability Coordinators (RC)

Problem Statement

By the early 2000's, most entities had created business continuity plans (BCP) for various disaster scenarios, including a major pandemic, and had periodic scenario drills to practice these plans. The COVID-19 pandemic resulted in actual use of these plans early in 2020. The first time a plan is executed with a real-life situation, it can be expected that adjustments will need to be made, and lessons will be learned to improve the effectiveness of future pandemic response plans and possibly improve response to other scenarios contained within the BCP.

Details

A primary concern within a pandemic response plan is how the health and safety of essential staff while working in a public setting can be protected while continuing to perform essential operations. Additional items of concern are potential supply chain and contract services interruptions. When a disease outbreak occurs, the exact nature of transmission and the most effective counteractions may not be known initially, so generic actions that cover a wide range of circumstances are prudent to adopt. After more is known, adjustments may be made to provide better protection. The Centers for Disease Control and Prevention[1] is generally referenced by entities (and other critical services) for notification of outbreaks, appropriate initial response actions, and adjustments to the response over time.

In mid-March 2020, many entities took early generic actions, like having a reduced staff presence in their corporate offices with most of the office staff conducting business via work-from-home (WFH) arrangements. Physical staffing in generating plants and transmission/distribution operation centers and field service centers was changed to just essential workers, and various forms of "reverse-quarantine"[2] were used to protect them.

The Federal Energy Regulatory Commission, NERC, the Electric Power Research Institute, the North American Transmission Forum, the Department of Energy, and other electric-industry-related agencies and corporations worked together with utilities to determine useful actions. Links to information about much of that effort may be found here.

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[1] The Centers for Disease Control and Prevention COVID-19 website is https://www.cdc.gov/coronavirus/2019-ncov/index.html

[2] Traditionally, a quarantine isolates those that are ill from the healthy population. A "reverse quarantine" isolates a healthy group in an attempt to protect them. The majority of reverse quarantines in the past were done to protect populations with a known vulnerability, such as the elderly, the very young, those with immune-deficiencies/organ transplant recipients, etc. The COVID-19 lockdowns were the first general population use of reverse quarantine methods.

COVID-19 Activities and Resources

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Planning for emergencies, specifically health-related emergencies, requires much preparation and forethought due to the potential for impacts to staff, supply chain, and support services. With that in mind, NERC has taken on a number of initiatives to inform stakeholders and protect the health of its workforce regarding the novel coronavirus known as COVID-19. During this challenging time, the ERO Enterprise recognizes the importance of prioritizing the health and safety of personnel and the continued reliability and security of the bulk power system. We will continue to evaluate the situation to determine whether additional guidance, extensions, and resources are needed.

Headlines

10/27/20: ERO Enterprise Further Extends Self-Logging Program Expansion and Deferment of On-Site Activities

08/13/20: ERO Enterprise Extends Self-Logging Program Expansion and Deferment of On-Site Activities

07/07/20: Robb to Speak at FERC Technical Conference on COVID-19 Impacts

06/02/20: NERC Finds Resources Sufficient to Meet Demand; COVID-19 Response Impacts Summer Preparation and Critical Workforce

05/28/20: ERO Enterprise Releases New Guidance Temporarily Expanding Self-Logging Program Due to Coronavirus Impacts

05/14/20: Resource Developed to Help Organizations Update Pandemic Response Plans

04/24/20: ERO Enterprise Opts to Extend On-Site Activity Deferral

Key Resources
- Electricity Subsector Coordinating Council (ESCC) Resource Guide
- NATF-NERC-DOE-FERC Epidemic/Pandemic Response Plan Resour
- ERO Enterprise Guidance: Potential Noncompliance Related to Co
- COVID-19 Logging Spreadsheet - Template
- Level 2 NERC Alert
- Joint NERC-FERC Industry Guidance for COVID-19
- FAQs for Joint NERC-FERC Industry Guidance
- Pandemic Preparedness and Operational Assessment (Spring 202

Industry Resources
- Centers for Disease Control (CDC)
- Electric Power Research Institute (EPRI)
- Electricity Subsector Coordinating Council (ESCC)
- Federal Energy Regulatory Commission (FERC)
- North American Transmission Forum (NATF)
- Western Area Power Administration (WAPA)

Actions Taken

Over the first few months, entities refined their response methods, often by using a combination of the following:

- Monitoring the virus at critical locations and employing effective contact tracing protocols

- Management of critical functions for reliability (Control Centers, Generation Stations, Field work, IT support, warehouses, storm response, supply chain, etc.) and/or reduction of noncritical functions (canceling/delaying capital projects)

- Adjusting initial response plans

- PPE, increased sanitization of work locations, installation of Plexiglas barriers, entry/exit path restrictions

- Sequestering, when used, involved swapping primary/backup control centers to separate crews or accommodate periodic sanitizing or movement upon discovery of an infected crew member

- Adding medical/nursing/"safety officer"/cleaning staff for facility entry health checks, contact tracing, protocol enforcement, then reducing those as pandemic response is exited

- Procurement of additional WFH equipment and accommodations for less than optimal WFH situations/focus on maintaining work group communications, especially with essential staff, and implementation of COVID time-off pay practices

- Different protocols developed for hiring and on-boarding new staff, such as office, control center, field workers, etc.

- Some entities reduced the number of people present in the control center by finding non-certified or non-licensed functions that could be offloaded from control room personnel to others who could perform those tasks remotely (WFH).

- The required training for system control operators was modified with technology. Training programs took advantage of various technologies (e.g., WebEx, Zoom, Microsoft Teams) and each operator was provided a work laptop. Classroom sessions were done with remote training and required each operator to have their camera on to encourage participation. Simulator training was conducted where the operator came into the training room and the trainer was to maintain established safety protocols.

- Some entities sought to improve performance within their pandemic response by completing the following:

  - Conducting challenge meetings to get input on potential changes to safety protocols and practices on both small and larger changes (and run those changes through simulation exercises) prior to implementing the change

  - Running table top exercises on various scenarios of how a disease could impact operations crews, field crews, critical office workers (accounts receivable/payable, etc.) to get an idea of the potential impact and how to adjust (That information was used to help develop or improve procedures and protocols.)

  - Seeking ways to enhance WFH processes

- Many entities have created post-pandemic return to the workplace reentry processes by basing reopening of locked down facilities on milestones that include federal and local government guidance changes, lifting of emergency orders, vaccine or treatment availability, etc.

Lesson Learned

- The particulars of a pandemic response plan have to be in generic terms, because the nature of future significant infectious agents are unknown. In 2020, the Department of Energy, the Federal Energy Regulatory Commission, NERC, and the North American Transmission Forum produced an [Epidemic/Pandemic Response Plan Resource](https://www.natf.net/docs/natf/documents/resources/resiliency/epidemic-pandemic-response-plan-resource.pdf)[3] that has been updated as additional tactics have been incorporated.

- BCPs need to be re-examined, adjusted, and communicated when exercised in a real world case. The changes in pandemic protocols when the nature of the virus is better understood are an example of this.

- Consider updating plans for primary and back up control center operation centers to ensure that in the event primary center need to be evacuated for virus exposure the backup center is readily available. A pandemic presents a unique challenge where the potential for both primary and back up sites to get contaminated may exist.

- Many construction and maintenance activities prohibited social distancing. Entities had to review work practices and make modifications to ensure work needed to maintain system reliability can continue.

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[3] "Epidemic/Pandemic Response Plan Resource" https://www.natf.net/docs/natf/documents/resources/resiliency/epidemic-pandemic-response-plan-resource.pdf

- Communication between entities is an area that should be reviewed in BCP. The pandemic presented unique challenges of communicating with neighboring utilities or where an entity shared a work site with another entity. Sharing details about worksite contamination due to virus or employee sickness when working with other entities at a common worksite may create some issues.

- Reopening/return to the workplace milestones need to be communicated when defined.

  - Entities should consider creation of criteria for return that are best set on defined conditions as employees should be able to see how close or far their locations are from reopening criteria.

  - Entities should also determine whether and how reopening processes will be followed in geographic locations that have met those criteria while other locations have not.

- The main transportable experience from the COVID-19 responses were expanded and improved WFH processes.

  - Any BCP aspect that could benefit from or require remote working can benefit from the remote working experience gained in the COVID-19 pandemic response.

  - Additionally, many organizations are now working to determine and improve their WFH-related business processes for normal conditions as there were many cases of reduced overall costs. This requires re-examining potential WFH use by function and per business need.

  - Entities should review their situations and lessons learned from any BCP use: what changes from that experience should be incorporated into normal business processes?

- Consider the psychological and mental health needs of employees as well as their knowledge levels. There are practices that may need to be adjusted to accommodate mindsets so they can concentrate on business related matters and remain productive.

  - Communicate available employee support resources periodically.

  - Consider voluntary or phased return to offices or other locations recognizing employees may have different comfort levels. Identify essential workforce needs as office staff returns and interaction between these groups increase.

For more Information please contact:

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