## Recommendation to Industry

**Coronavirus Disease (COVID-19) Pandemic Contingency Planning**  
Initial Distribution: March 10, 2020

Coronavirus Disease (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus, which was first identified in Wuhan, China on December 8, 2019. The virus has since spread internationally to include confirmed cases in the United States, Canada, and other countries. The U.S. Centers for Disease Control and Prevention (CDC) and Public Health Agency of Canada (PHAC) both assess the current risk to the American and Canadian public as “low” as of March 4, 2020, although it is anticipated that the number and geographic dispersion of infected patients will increase in the coming weeks to months. To ensure reliability through the potential range of future developments, organizations should understand and consider the actions discussed in the Recommendation.

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| Status: | Acknowledgement Required by Midnight Eastern on March 12, 2020  
Reporting Required by Midnight Eastern on March 20, 2020 |
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**PUBLIC: No Restrictions**  
More on handling >>

### Instructions:

This Level 2 NERC Alert provides specific recommended actions that NERC registered entities should consider in response to a particular issue. Pursuant to Rule 810 of NERC’s Rules of Procedure, NERC registered entities shall (1) acknowledge receipt of this advisory within the NERC Alert System, and (2) report to NERC on the status of their activities in relation to this recommendation (as provided below). For U.S. entities, NERC will aggregate the responses and provide an anonymized report to the Federal Energy Regulatory Commission.

This Level 2 NERC Alert is not the same as a Reliability Standard nor does it create a mandatory obligation to take the recommended actions. Your organization will not be subject to penalties for failure to implement the recommendations. Issuance of this recommendation, however, does not alter the requirements of any approved Reliability Standard nor excuse the failure to follow the practices discussed in the recommendation if such failure constitutes a violation of a Reliability Standard. Registered entities must continue to comply with applicable Reliability Standards.
**Distribution:**

**Initial Distribution:** All Regions, All Entities, All Functional Groups

*Who else will get this alert? >>*

**Primary Interest Groups:**

- Cyber Security – Control Systems
- Cyber Security – Corporate IT
- Generation Engineering
- Generation Operations
- Physical Security
- System Operators – System Protection
- System Operators – System Protection
- Transmission Engineering
- System Operators – System Protection
- Transmission Planning

**Recommendation:**

This Recommendation to Industry, a Level 2 NERC Alert requests NERC registered entities to:

- Acknowledge receipt of this advisory within the NERC Alert System.
- Consider the recommendations below.
- Review and complete the reporting instructions below.

To the extent that Canadian jurisdictions have implemented laws or requirements that vary from Section 810 of the ROP, NERC requests that entities in such jurisdictions voluntarily participate in acknowledgement and reporting pursuant to this Alert.

**Recommendation #1:** Develop and maintain suitable situational awareness of the current status of the spread of COVID-19 and credible future estimates of its spread and impacts. Incorporate the CDC’s most current travel advisories into event planning and travel arrangements, and consider practices to increase awareness of employees’ personal travel plans to areas with active advisories.

**Recommendation #2:** Reinforce good personal hygiene practices across the workforce. Consider measures to increase the frequency and extent of cleaning and disinfecting surfaces and equipment that comes into routine contact with multiple people, particularly in business critical spaces or confined spaces that may be more conducive to disease communicability. Such areas may include control rooms, shared vehicles, conference rooms, and break areas. Consider implementing additional access restrictions such as limiting visitors or non-essential meetings within these spaces, and segregation of crews on shift work schedules.

**Recommendation #3:** Review and update existing business continuity plans to ensure they are adequate to mitigate the direct impacts of a pandemic outbreak in the organization’s footprint that creates staffing constraints for reliability and business functions. Recognize that a pandemic outbreak affecting the organization will also have similar effects on third-party contractors and supporting resources in the same footprint. Validate or develop thresholds and triggers for implementing increased flexible workforce
arrangements and for more disruptive mitigations, and ensure these mitigations are harmonious with guidance from the CDC or PHAC and local health agencies. Consider testing or exercising business continuity plans against a pandemic scenario.

Recommendation #4: Assess the organization’s resilience against disruption to the availability of critical components, materials, and support resources with supply chains originating or traversing significantly impacted regions globally. At the present time, this includes China and nearby southeast Asian nations, so the most likely impact is expected to be to electronics, personal protective equipment and sanitation supplies, chemicals, and raw materials that are eventually transformed into goods directly purchased and used by North American asset owners and operators. Global transportation disruptions will also have ripple effects on the availability of these goods, particularly for “just-in-time” logistics systems. Organizations should work with their suppliers to understand current inventories of critical components throughout the supply chain as well as their anticipated use and resupply rates, and identify changed risks to routine, planned, and contingency operations to prioritize efforts appropriately.

Recommendation #5: Assess the need to adjust planned construction and maintenance activity schedules to prioritize the most important projects. Consider third-party support requirements and facility outage windows, and understand consumption rates of spare parts and supplies required for both planned and contingency work. Adjust plans as needed to maintain safe and reliable operations through potential workforce availability or supply chain disruptions.

Recommendation #6: Anticipate and prepare for coronavirus-themed opportunistic social engineering attacks. Spearphishing, watering hole, and other disinformation tactics are commonly used to exploit public interest in significant events. Take steps to ensure continued visibility and maintenance of cyber assets in the event of staffing disruptions. Ensure information and communications technology resources are appropriate to accommodate increased use of remote work arrangements consistent with business continuity plans, without compromising security. Consider conducting planned stress tests for these arrangements.

Reporting Instructions: Initial acknowledgement of receipt is required by March 12, 2020, Midnight Eastern via the NERC Alert System. Responses to the questions below are required to be submitted via the NERC Alert System by March 20, 2020, Midnight Eastern.
A valid response in the NERC Alert System consists of the following three steps by the submitting entity:

1. Acknowledgement of Alert
2. Submission of Response
3. Approval of Response

The NERC Alert System contains menu options for each of the above commands that are available to authorized individuals upon login. A response will not be considered valid until all three steps have been completed.

All registered entities belonging to the Balancing Authority, Distribution Provider, Distribution Provider-UFLS, Frequency Response Sharing Group, Generator Owner, Generator Operator, Planning Authority, Reliability Coordinator, Resource Planner, Regulation Reserve Sharing Group, Reserve Sharing Group, Transmission Owner, Transmission Operator, Transmission Planner, Transmission Service Provider functional groups are required to acknowledge receipt of this Alert and respond as applicable.

All registered entities covered by this Recommendation are required to provide an approved response as defined above to the following questions:

1. Does your organization have a written response plan, either standalone or incorporated into other written plans, which covers response to pandemic emergencies?
   A) Yes
   B) No, but we plan to develop one informed by this situation
   C) No, and we have no plans to develop one

2. Has your organization reviewed staffing requirements and resources for critical roles in a potential future COVID-19 pandemic emergency in North America?
   A) Yes
   B) No

3. In the event of a future COVID-19 pandemic emergency that does NOT directly impact your organization’s geographic footprint, does your organization anticipate being able to offer traditional or non-traditional mutual aid to other industry participants, subject to appropriate agreements?
   A) Yes
   B) No
4. Has your organization reviewed supply chains for goods and services critical to reliable bulk power system operations that could be disrupted by the global COVID-19 pandemic emergency?
   A) Yes
   B) No

5. Does your organization presently anticipate any specific additional risks for the reliable and secure operations of your organization’s portion of the bulk power system in a potential future COVID-19 pandemic emergency in North America?
   A) Yes
   B) No

6. If you answered A) Yes to Question 5, please briefly describe those specific risks your organization’s portion of the bulk power system in the free-text entry box below.

[1400-character entry box available in NERC Alert System]

**Additional Information:**

According to the CDC, COVID-19 can spread from person-to-person and is part of a larger family of viruses that are common in many different species of domesticated and wild animals. Other coronavirus variants that have affected the global community in the past include Severe Acute Respiratory Syndrome (SARS) in 2003, and the Middle East Respiratory Syndrome (MERS) in 2012.

Many of the details about this particular outbreak are still unclear, and epidemiological estimates continue to evolve with the spread of the virus. The following authoritative resources contain information about the virus, situational updates, and preventative measures:


The Johns Hopkins Center for Systems Science and Engineering maintains a situational awareness tracker at [Coronavirus COVID-19 Global Cases](https://coronavirus.jhu.edu/).

NERC’s [Electricity_Sector_Influenza_Pandemic_Planning,_Preparation,_and_Response_Reference_Guide](https://www.nerc.com) provides relevant industry-specific recommendations developed during the 2006-07 H5N1 Influenza pandemic.

planning and preparation on pages 47-60; this guidance focuses on the staffing and direct business impacts.


Assessment processes for supply chain disruptions and resultant business risks from a pandemic is not fundamentally different from other geopolitical or socioeconomic causes. DHS’s 2019 Supply Chain Resilience Guide gives an overview of these considerations.

The Electricity Subsector Coordinating Council (ESCC) maintains a consolidated list of online resources at the ESCC Workroom (login credentials required).

The E-ISAC has been monitoring this issue and sharing information with its members as it becomes available via the E-ISAC Portal, and will continue to do so. Continue to share voluntary information on situation assessments and unmet needs with E-ISAC and other trusted partners.

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**Alert ID:** R-2020-03-10-01

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