

Ensuring Energy Reliability Throughout the COVID-19 Pandemic: Testing and Protecting Mission-Essential Control Center and Generation Facility Personnel Is Fundamental

As the COVID-19 pandemic continues to impact our nation and our economy, America's investor-owned electric and natural gas companies, public power utilities, and electric cooperatives are focused on protecting the health and safety of their employees and their customers, while continuing to produce and deliver the safe and reliable electricity and natural gas that are so critical to our way of life and to our response to this crisis.

There is a subset of highly skilled energy workers who are unable to work remotely and who are mission-essential during this extraordinary time. While we understand the current limitations of COVID-19 testing, there is a critical need for a targeted approach—endorsed by federal, state, and local partners—that ensures testing of these workers.



Keeping a limited pool of highly skilled workers available to operate control centers and generation facilities is a top priority. Access to testing will help isolate healthy operators so they can remain available. Based on an analysis by the electricity subsector, the nuclear sector, and the natural gas distribution segment of the oil and natural gas subsector, the mission-essential portion of the energy workforce that needs priority COVID-19 testing should be identified based on factors that include, but are not limited to:

- workers' functional connections to maintaining reliability;
- the amount of lead time required to train these personnel;
- the limited pool of people with these qualifications;
- the risks to regional reliability if this workforce is severely impacted.

Our requests for testing and other priority needs for these workers (e.g., PPE, access to restricted areas, cleaning products) are informed by tracking the spread of COVID-19 across the country and in individual communities.

Sequestration and Control Rooms

Many electric and natural gas companies, public power utilities, and electric cooperatives consider a 10-percent infection rate in their service territory a trigger to begin sequestering mission-essential employees. Some sequestration is underway in certain areas, with employees and contractors living on-site at power plants and other facilities. It is critical that sequestered employees who are in close quarters be tested before and during sequestration. This health monitoring allows teams to adjust duties quickly if colleagues test positive for COVID-19 and need to be quarantined.

In the mission-essential and secure control rooms, operators use specialized equipment to monitor and control generation, transmission, and distribution and to perform switching to deliver energy to critical services and end-use customers. Operators also coordinate emergency response and restoration in the event energy flow is interrupted for any reason.

By design, and in adherence to federally mandated reliability and cybersecurity regulations, control rooms are closed quarters, with several people working in tight proximity for 8-12 hours per shift. These functions cannot be performed remotely. If one or more employees working a shift becomes infected, current guidance requires a 14-day quarantine of the entire shift, removing these operators from the workforce for at least two full weeks.

To maintain reliability, it is necessary to have a backup shift pre-tested and ready to step in. Without adequate testing, energy companies could exhaust the limited supply of these mission-essential employees in a matter of a few weeks. And, without adequate control room teams and other mission-essential workers, we would face service interruptions for electricity and natural gas customers; unavoidable power plant shutdowns; regional load instability; and multi-region brownouts or blackouts, especially in more extreme weather months or other significant energy grid events, such as a cyberattack.

Identifying Mission-Essential Staff

The following categories of workers are mission-essential staff for whom priority access to COVID-19 testing is paramount.

GENERATION NON-NUCLEAR

Generating facilities or power plants generally are isolated, physically secure, and conducive to sequestering staff on-site. The specialized workers in these facilities have years of experience and specific knowledge of a plant's systems, and other employees cannot be shifted easily or trained in a short time.

The types of employees include:

- Control room operators and supervisors
- Operator technicians
- Instrument and control technicians (I&C Techs)

GENERATION NUCLEAR

The training, licensing, and qualifications for nuclear power plant workers can be more stringent than for other sources of electric power generation. If any one of these positions goes unstaffed on a shift, a plant is at significant risk of triggering multiple Nuclear Regulatory Commission violations and a mandatory shutdown order from the federal government.¹ The types of employees include:

- Licensed control room operators and designated supervision
- Non-licensed operators
- Radiation protection technicians
- Fire brigade members and designated supervisors
- Maintenance personnel (I & C, electrical and mechanical)
- Armed security officers, armed responders, and other committed positions in the physical security plan
- Emergency response organization positions described in the licensee's emergency plan

ELECTRIC TRANSMISSION AND DISTRIBUTION

As with generation facilities, electric transmission and distribution control centers generally are well-situated for sequestration of mission-essential workers. Due to the specialized nature of these jobs and the tools required to maintain energy grid operations, the limited number of employees with these qualifications requires a high priority for protection. The types of employees include:

- Control room operators and supervisors
- Reliability engineers

NATURAL GAS DISTRIBUTION

These operators are fully responsible for controlling the flow of natural gas, including ensuring system operational integrity, identifying abnormal operating conditions, and maintaining system security. They have specialized training stipulated by pipeline safety regulations under the authority of the Department of Transportation and, therefore, require a high priority for protection. The types of employees include:

- Control center operators
- Facility operators

We know that we are lifeline industries, and we take our responsibility to the customers and communities we serve very seriously. To ensure energy reliability throughout the COVID-19 pandemic, it is critical that we test and protect our mission-essential workforce.

¹Title 10 Code of Federal Regulations (CFR), Parts 50 and 73, essential workers for commercial nuclear power reactors are specified in each facility's licensing basis. The applicable licensing basis documents are the licensee's Technical Specifications, Physical Security Plan, and Emergency Plan. These documents describe the site-specific positions required for plant operations, physical protection of the plant, and implementing emergency measures—all of which are needed to maintain the plant's operating license.



Following are actual examples of instances in which mission-essential employees have been impacted by COVID-19 and of how on-demand test kits could have prevented exposure to other employees, helping maintain critical energy operations:

- On Day 1, the last night shift of a scheduled rotation, a generation control room operator began having a cough (the employee practiced correct social distancing). Ten days later, the employee returned to work, still with a cough. The plant manager heard it and sent the employee home. After a diagnosis of bronchitis by a physician, the employee returned on Day 16 and worked until Day 18. On Day 20, the employee returned to the physician not feeling well and was tested for COVID-19; the positive test result did not come until Day 22. Due to the positive test, the operator's two crewmates also were sent home for 14 days of self-quarantine, though neither had symptoms. As a result, the generation unit was taken offline.
- Three IT security support engineers at a nuclear power plant were quarantined due to prolonged close contact with another engineer exhibiting mild coronavirus symptoms. Because the symptoms were mild, that engineer was unable to get tested, leaving the plant without these key workers for 14 days. Two other plant engineers were quarantined due to close contact with another manager experiencing coronavirus symptoms who was tested but whose test results were not expected for nine days.
- Three armed security officers at a nuclear power plant were quarantined due to possible exposure to COVID-19 outside of work. The company must use workers from other shifts to compensate for their absence from their critical positions, even though the company is trying not to overwork the team in case sequestration at the plant becomes necessary.
- A lineworker, who is a member of a dedicated six-person crew, reported testing positive for COVID-19. As a result, the company asked his teammates—who represent 15 percent of its employees in that area—to self-quarantine at home.