Seven Nuclear Plants Get COVID-19–Related NRC Work-Hour Exemptions

To help nuclear generators manage worker fatigue amid the intensifying COVID-19 pandemic, the Nuclear Regulatory Commission (NRC) has so far granted individually requested exemptions from work-hour controls to seven U.S. nuclear power plants.

As described by NRC Director of Nuclear Reactor Regulation Ho Nieh in March 28 letters sent to at least three industry leaders, the exemption from Part 26 of Title 10 of the Code of Federal Regulations (10 CFR 26.205(d)(1)-(7) is an emergency measure the federal regulatory body will consider on a case-by-case basis to help provide more flexibility as the sector grapples with COVID-19–related workforce issues. "The underlying purpose of 10 CFR 26.205(d) is to prevent impairment from fatigue due to duration, frequency, or sequestering of successive shifts," the NRC said. (The NRC on April 8 published an addendum to the letter to remove a reference to fuel facilities and two citations. It is also regularly updating a "frequently asked questions" page related to the Part 26 work-hour control exemption.)

The exemptions typically apply narrowly—only to plants that can show staffing levels are affected by the pandemic, the NRC said. Licensees must also show they can no longer meet the work-hour controls outlined in the rules, and they can institute site-specific administrative controls for pandemic fatigue management for personnel as outlined in the rules.

The seven U.S. nuclear plants that have so far sought exemptions and expedited review received them from the NRC within less than 24 hours to 3 days. All plants described alternative controls for similar positions—including operators, health physics and chemistry, fire brigade, maintenance, and security. All requests also noted that near the end of the 60-day exemption period, if COVID-19 conditions persist, generators would

consider submitting a request to extend the exemption period.

Limerick (Exelon). Granted on April 3, the exemption for this two-unit plant near Philadelphia, Pennsylvania, is effective until June 2. "By implementing the alternate work hour controls, [Limerick station] is proactively taking steps to complete necessary work, testing, and inspections in a manner that supports worker and neighboring community safety to limit the spread of the COVID-19 virus," the company wrote in its request.

Also notable is that Exelon on April 13 announced it completed its 2020 spring refueling outage at Unit 1 in 16 days—a full two weeks faster than the U.S. average, and a station record—even though it reported two confirmed cases of COVID-19 during the outage. "We continue to follow a rigorous pandemic preparedness plan that includes strict governance to prevent and slow the spread of the virus following the outage," the company said.

Ginna (Exelon). Granted on April 7, the exemption for the 576-MW plant in Ontario, New York, is effective until June 5. Ginna began its planned 49-day refueling outage on April 6. Exelon told the NRC that "Ginna's operation and outage must be conducted such that the plant is available when needed, including during the critical peak summer loads."

Quad Cities (Exelon). Granted on April 8, the exemption for this two-unit, 1,900–MW plant in Illinois, will be effective until June 9.

Braidwood (Exelon). Granted on April 13 (and effective on April 20), the exemption for the 2,389-MW plant in Illinois will be effective until June 19. Braidwood 2 began a scheduled 20-day refueling outage on April 20. "As part of Braidwood's comprehensive COVID-19 safety precautions all employees and contractors must pass a symptom screening and body temperature check prior to entering every shift. We're also requiring social distancing, remote work where possible, frequent hand washing, and increased facility cleaning and disinfection," Exelon said in a fact sheet about the outage.

Seabrook (NextEra). Granted on April 13, the exemption for the 1,246-MW plant in New Hampshire will be effective until June 12. Seabrook 1 began an expected 27-day outage on April 1.

On April 20, however, members of Congress sought details from the NRC about the process by which it is deciding to extend regulatory exemptions, and how the NRC will ensure the extended work-hour order does not compromise worker health and safety. The NRC's general notification to nuclear licensees fails "to identify the regulations subject to exemptions or describe the criteria for their approval," the lawmakers wrote. "The notification thus appears to offer the prospect of broad relief from regulatory requirements—including critical health and safety regulations—engendering confusion about how and why plants such as Seabrook could qualify." In a statement to *POWER* on April 22, the NRC said it would respond to the lawmakers through its "existing correspondence process."

Palo Verde (Arizona Public Service Co.). Granted on April 13, the exemption for the three-unit 3,937-MW Arizona plant will be effective until June 15. Palo Verde 2 began a planned 28-day refueling outage on April 4. "We have about 2,000 full-time employees at Palo Verde," Greg Cameron, director of APS Nuclear Communications, told *POWER* in early April. "For a typical refueling outage, we bring in [an additional] 800 to 1,000 contractors. They do various jobs and have different skills. Some are radiation protection technicians, some are specialized welders, some do other specialized jobs. Typically, not all of them are on-site on the same day."

Beaver Valley (Energy Harbor Nuclear Corp.). Granted on April 18, the exemption for the two-unit 1,872-MW plant in Shippingport, Pennsylvania, is effective until June 18. Beaver Valley 2 began a scheduled 23-day refueling outage on April 12.

In its April 18 letter to the NRC, Energy Harbor Nuclear (as FirstEnergy Solution's was renamed after it emerged from financial restructuring on Feb.

27) said it identified "a need for an exemption" while Unit 1 was fully operational and Unit 2 was offline, and it urged the NRC to grant verbal approval. Energy Harbor, which is now a standalone independent power producer and a fully integrated retail energy producer, on March 13 rescinded a March 28, 2018, notice to PJM Interconnection planning to shutter the plant in 2021. The decision to keep the plant, which employs about 1,000 workers, open was driven largely by Pennsylvania Gov. Tom Wolf's decision to join the Regional Greenhouse Gas Initiative (RGGI).

The NRC is likely to grant more work-hour exemption requests as the pandemic intensifies in densely populated areas. As of April 22, according to the Energy Information Administration (EIA), about 18.1 GW of the nation's total 98.1-GW nuclear capacity was offline, most for spring outage-related work, which typically attracts hundreds of specialized workers to help deliver projects—including for crucial maintenance—within short timeframes of between 30 and 60 days.

As *POWER* has reported, this year, 56 of the nation's 58 operating nuclear reactor sites have scheduled refueling and maintenance outages. According to national energy services company Southland Nuclear's regularly updated Nuclear Outage Schedule (which spans 2020 and 2021), 14 North American reactors this April and three others in May are scheduled to go offline for planned outages in preparation for the summer peak demand season. Planned shutdowns will pick up again later in the year, as 22 reactors enter staggered outages, mostly in the fall.

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