

NFLA Policy

Briefing No. 229a



Date: 4 March 2022

Subject: Update on the Ukrainian Power Plants

Russian forces have attacked and occupied the Zaporizhzhia Nuclear Power Plant (ZNPP) complex in Southeastern Ukraine

The plant is the largest nuclear power plant in Europe, located near the city of Enerhodar, on the southern shore of the Kakhovka Reservoir on the Dnieper river. The plant has 6 VVER-1000 pressurized light water nuclear reactors (PWR), each fuelled with Uranium 235 (LEU) and generating 950 MW_e, for a total power output of 5,700 MW_e. This is nearly half of the Ukraine's nuclear-generated electricity, and more than a fifth of total electricity generated in Ukraine. It therefore constitutes in every sense critical national infrastructure.

On 3 March 2022, Ukraine informed the International Atomic Energy Agency (IAEA) that a large number of Russian tanks and infantry "broke through the block-post" to the town of Enerhodar, a few kilometres from the ZNPP, subsequently the plant was shelled overnight (3-4 March), with a projectile hitting a training building in the vicinity of one of the plant's reactor units, causing a localized fire that was later extinguished. In the morning of 4 March, the Ukrainian authorities reported that the site has been occupied by Russian forces. Two people are reported injured.

The ZNPP continues however to be operated by regular staff, there had been no release of radioactive material, and the safety systems of the plant's six reactors appear not to have been affected (but authorities have conceded that it has been impossible with the military situation to conduct a complete inspection). Of the plant's reactor units, Unit 1 is shut down for maintenance, Units 2 and 3 have undergone a controlled shut down, Unit 4 is operating at 60 percent power, and Units 5 and 6 are being held "in reserve" in low power mode.

IAEA Director General Rafael Mario Grossi has spoken with the Ukrainian Prime Minister Denys Shmyhal, the national nuclear regulator and the operator about the serious situation. The IAEA Incident and Emergency Centre (IEC) has been put in full response mode due to the events at Zaporizhzhia NPP. The IEC will be manned around the clock to continuously receive, assess and disseminate information about developments. The Director General held a press conference on the situation at the plant at 10:30 CET, 4 March.

<https://www.iaea.org/newscenter/pressreleases/update-9-iaea-director-general-statement-on-the-situation-in-ukraine>

<https://www.iaea.org/newscenter/pressreleases/update-10-iaea-director-general-statement-on-situation-in-ukraine>

<https://www.iaea.org/newscenter/pressreleases/update-11-iaea-director-general-statement-on-situation-in-ukraine>

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