

Nuclear Facilities in Ukraine

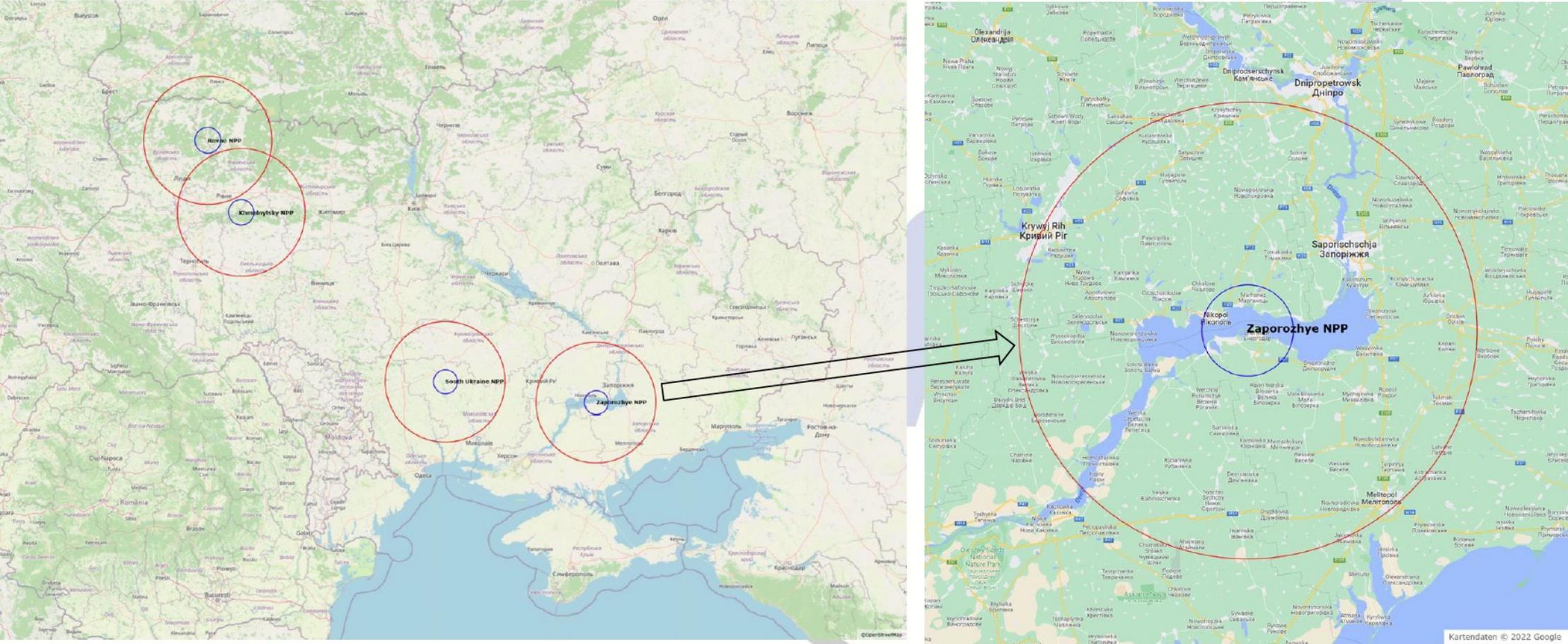


15 operating NPPs in Ukraine on 4 sites which are all Russian designed VVER types (mostly 1000 MW). The VVER NPPs in Ukraine are relatively modern (mainly built in the 1980s and 1990s) and are water cooled and water moderated.



The night of 3 to 4 March 2022 –
attack on the Zaporizhzhya NPP

Nuclear Facilities in Ukraine



The Ukrainian regulator, the 'State Nuclear Regulatory Inspectorate of Ukraine (SNRIU)'

Planning radii of extended evacuation up to 20km and sheltering up to 100km for protection measures.

WGE Task Force – Ukraine Support Overview

Tier 1 countries

Ukraine
Poland
Slovakia
Hungary
Romania
Moldova?

+ HERCA



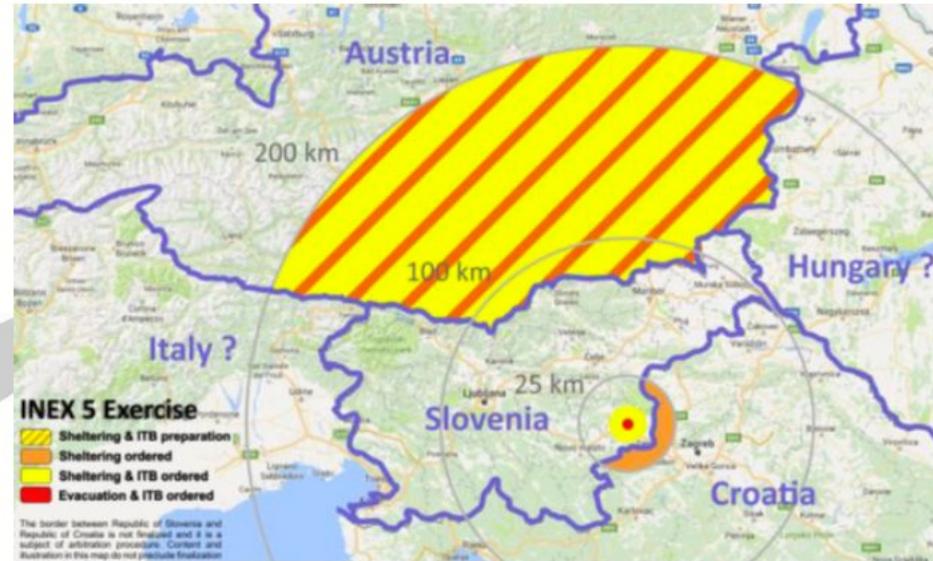
Met 6 times to date

Tier 2 countries

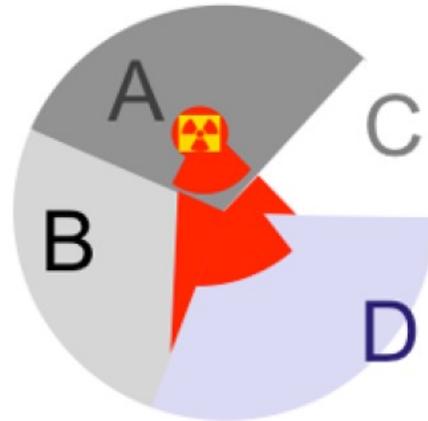


Met twice to date

Example exercise scenario where different countries adopted different protective actions for an event in Slovenia.

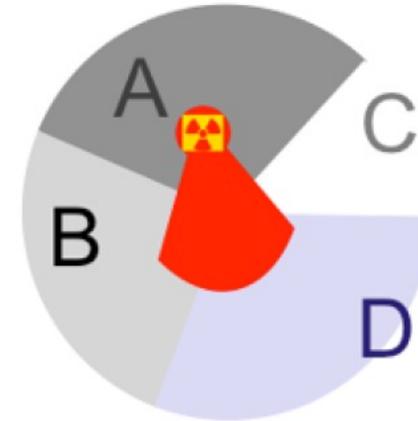


Poor coordination



WGE - Mandate
Pragmatic / Operational

Good coordination



Purpose

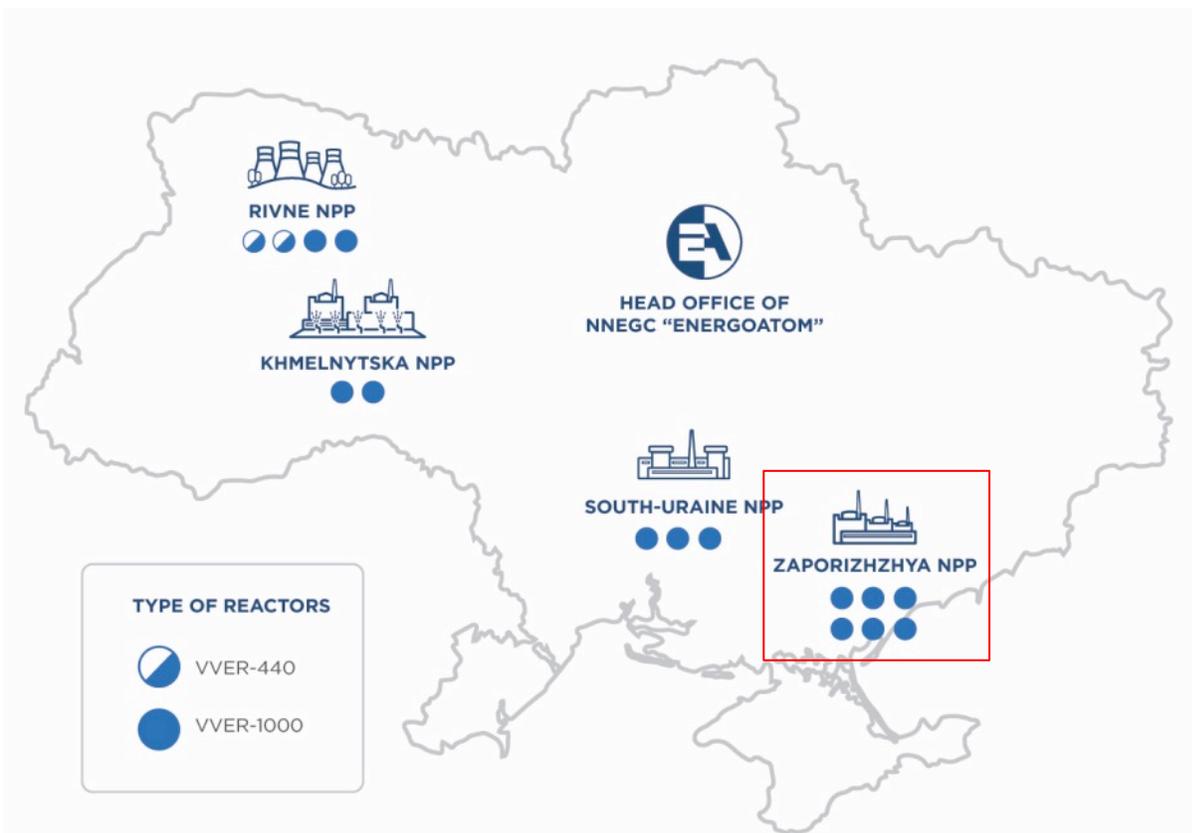
- The HWA aims to improve coordination of protective actions taken during a nuclear emergency, so that populations living on both sides of a national border would feel to be protected in the same way.

Zaporizhzhya NPP - Today

On August 25, 2022, as a result of shelling, for the first time in the history of its operation, Zaporizhzhia NPP lost external power.



In total, the ZNPP has been in blackout 5 times already when it had to rely only on diesel generators.



Since 11 September 2022 all six power units of the ZNPP have been put in a shutdown state.

Ecological, fire and radiation conditions are within the established limits. The radiation situation corresponds to the natural radiation background.

The plant's six reactors are in shutdown but still require power for cooling and other essential nuclear safety and security functions.

Anti-Crisis Headquarters activity

After the seizure of Zaporizhzhia NPP the Headquarters' activity was focused on resolving the following issues:

- Preservation of ZNPP control system
- Provision of communication with ZNPP management
- Resolving of staff issues
- Coordination of management actions
- Provision of additional technical support
- Improvement of emergency preparedness
- Involvement of international organizations
- Public awareness

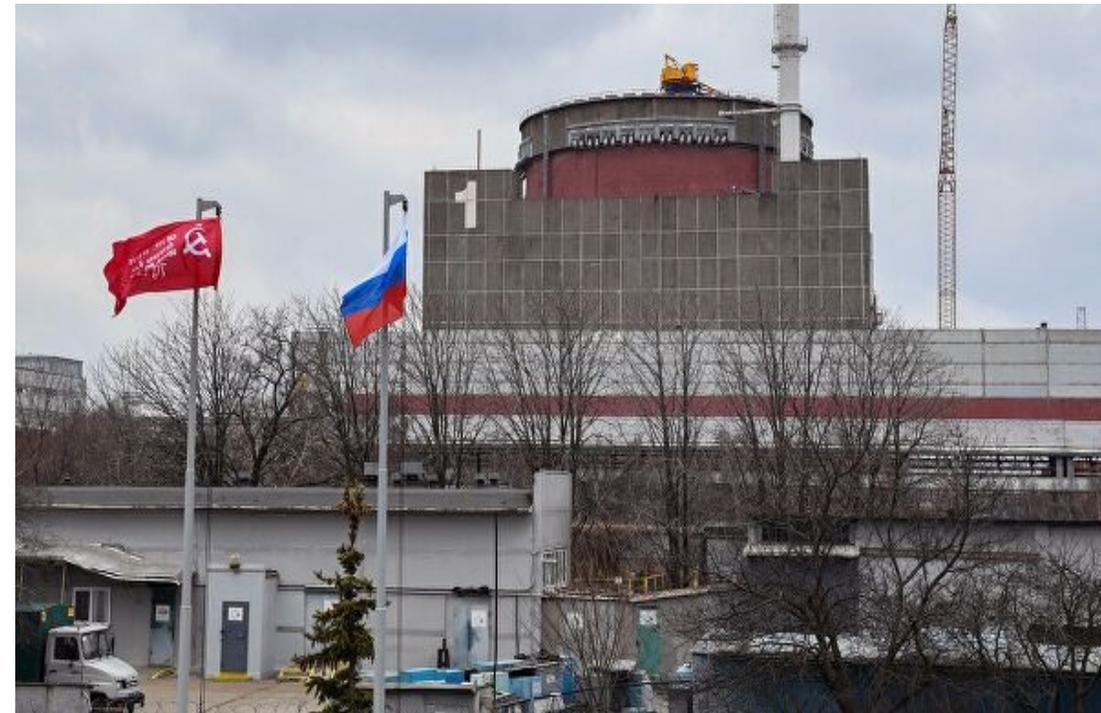
On March 30, 2022, an emergency drill was conducted for ZNPP personnel in case of NPP blackout. The effectiveness of the drill was later confirmed



Zaporizhzhya NPP - Today

The Kremlin has been implementing a system policy of appropriating the ZNPP by Russia:

- ❑ turned the ZNPP site into a military base by deploying numerous military equipment, weaponry and explosives
- ❑ turned the ZNPP to a constant target for missile attacks and tasked the russian military to take all possible measures to disconnect the plant from the Ukrainian power grid
- ❑ established the fake russian enterprises within Rosatom and granted one of them the status of an operating organization of the ZNPP.
- ❑ started unauthorized construction at the spent fuel storage of the plant, which is interference in the design of the nuclear installation
- ❑ plant workers are intimidated, beaten and kidnapped to force Ukrainian personnel to sign employment contracts for their transition under the russian authority.
- ❑ harm not only the infrastructure of the seized ZNPP, but also animals and the environment that can lead to an ecological disaster



Russia's occupation of the ZNPP, the militarization of the plant's territory, illegal actions toward its "privatization", unauthorized interference in the design of the nuclear installation, bullying of the Ukrainian plant personnel and other illegal activities on its territory are the first international crimes of such kind in the history of global nuclear energy.

Other Ukrainian NPPs are relatively safe:

There are no violations of the conditions of safe operation of power units. Radiation, fire and environmental conditions at the industrial sites of nuclear power plants and adjacent territories have not changed and are within current limits.

But the threat of shelling of these and other nuclear facilities in Ukraine remains high.

As long as this war continues, no nuclear facility in Ukraine is protected.

The highest risks, apart from the Zaporizhzhya NPP, are related to the South Ukraine NPP, which is located in the immediate vicinity of the combat zone.

Ukraine recorded five cases, when the Russian cruise missiles similar to the “Kalibr” missile flew over the industrial sites of Ukrainian NPPs, one case was recorded at Zaporizhzhya NPP, one – at Khmelnytsky NPP, and three cases recorded at South Ukraine NPP.

