

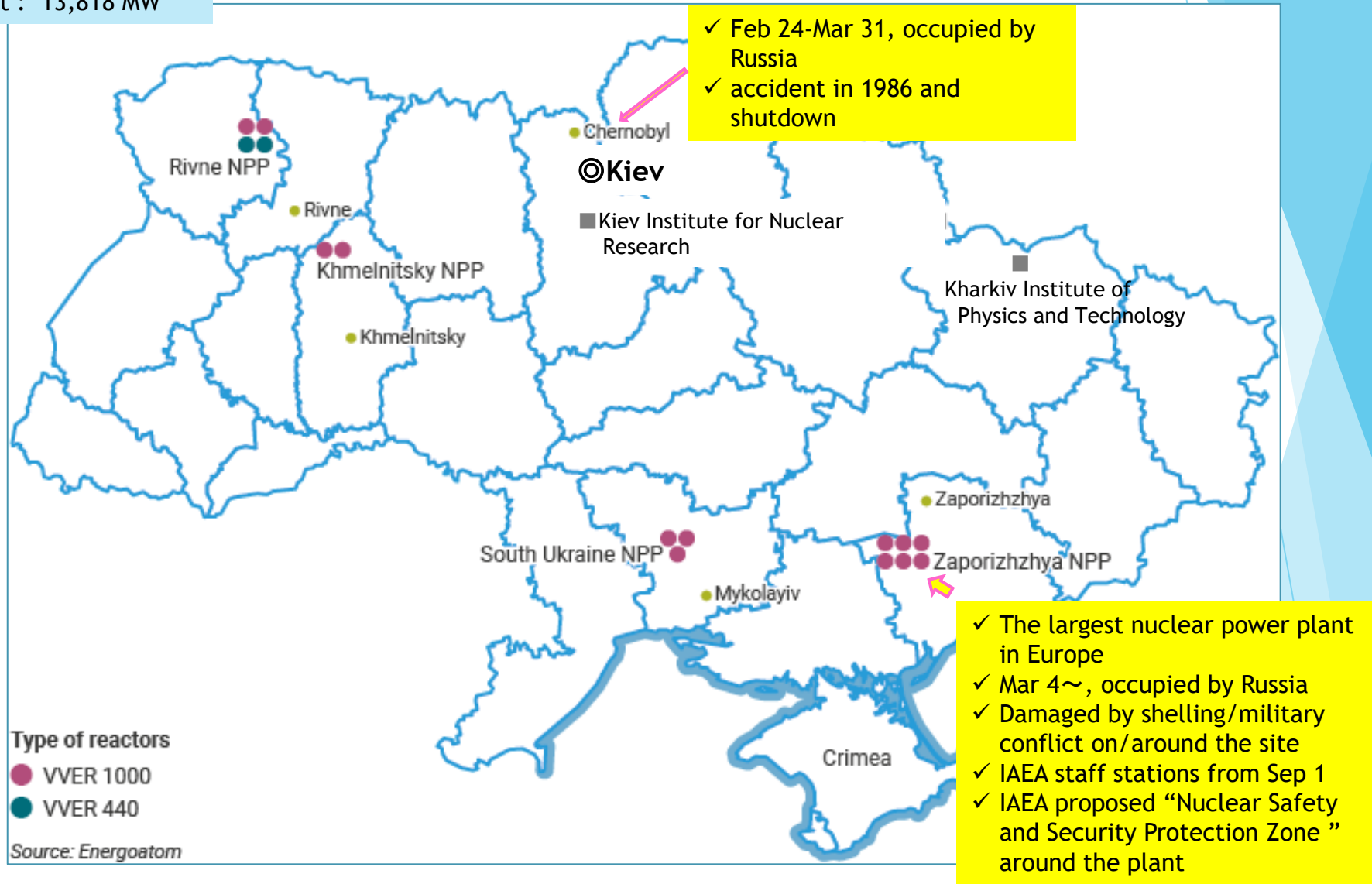
ISCN/JAEA: International Forum
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**The Impact and Challenges of Russia's Aggression
against Ukraine on Nuclear Nonproliferation, Nuclear
Security, and Peaceful Use of Nuclear Energy**

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Nuclear related facilities In Ukraine

- 15 Nuclear Power Stations
- Total out put : 13,818 MW



Source: World Nuclear Association and Japan Atomic Industrial Forum, INC HP, and modified

1. Nuclear Facilities in Ukraine after Russia Invasion, February 24 (1/3)

- The first incident that foreign state occupies large scale civil nuclear power plant and military conflict arise around there
- Serious risk for nuclear facilities, especially safety and security
- All of 4 nuclear power stations lost their off site power supply in the week of Nov 21 and regain Nov 25
- Temporary blackout/shortage of power supply, caused by military conflict on/around NPPs, are serious issues for Ukraine approaching severe cold winter

Zaporizhzhya Nuclear Power Plant(ZNPP)

- Russia notified IAEA that Russia put this NPP under its control (Mar 2), missiles hit ZNPP, fire caused by explosives/shelling (Mar 4), internet connection cut off(Mar 6)
- And IAEA reiterated the need to visit ZNPP for safe and security of the plant and its employees
- Occasionally lost off-site power supply
- IAEA Director General and his team visited Ukraine and ZNPP and IAEA team stationed ZNPP(Sep 1-)
- IAEA proposed “Nuclear Safety and Security Protection Zone” around ZNPP at UN Security Council(Sep 6)



Photo: Energoatom

1. Nuclear Facilities in Ukraine after Russia Invasion, February 24 (2/3)

- ZNPP Director General was detained for 3 days and relieved, and resigned(Oct 3)
- Russia President Putin signed a Decree which officially admitted Russia occupation of ZNPP
- By Russia occupation, serious difficult issues arise, that is which country is responsible for the safety, security and safeguards of this plant

Rivne, South Ukraine, Khmelnytsky NPPs

【Rivne NPP】



Photo: *oenergetice.cz*

【South Ukraine NPP】



Photo: *Uatom.org*

【Khmelnytsky NPP】



Photo: *Uatom.org*

- Ukraine Regulatory Authority confirmed missiles were flying over South Ukraine Nuclear Power Plant(SUNPP) (Apr 16)
- Shelling around SUNPP and temporarily damaged external power supply(Sep 19)
- Khmelnytsky Nuclear Power Plant(KhNPP) and Rivne Nuclear Power Plant(RNPP) lost connection to access to power grid(Nov 23)

1. Nuclear Facilities in Ukraine after Russia Invasion, February 24 (3/3)

Chornobyl Nuclear Power Plant(CNPP)

- Russian troop occupied Feb 24 until Mar 31, shelling on/around CNPP, recorded higher radiation measurement
- Occasionally lost off-site power supply(Mar 9~)
- IAEA Director General and his team visited Ukraine and CNPP(Apr 1~)

Other Facilities

- Electrical transformer at a low-level radioactive waste disposal site was damaged, in Kharkiv (Feb 2)
- Missiles hit a radioactive waste disposal facility in Kyiv(Feb 27)
- IAEA inspected 3 locations in which Russia asserted clandestine dirty bomb manufacture is conducted, and IAEA concluded there is no indications of undeclared nuclear activities(Nov 3)

2. Responses of International Society to Ukraine Situation(1/3)

1)IAEA

- Very active to cope with Ukraine situation such as issuing information and supporting activities
- Board of Governors Resolutions(Mar 3, Sep 15, Nov 17) to condemn Russia invasion
- “Seven Pillars” for ensuring nuclear safety and security(Mar 4)
 - 1)Physical integrity, 2)Safety and Security, 3)staff fulfillment of duties, 4)off-site power supply, 5)logistic supply,6)radiation monitoring, 7)communication with regulator
- Summary Report on the situation of nuclear facilities of Ukraine
 - First Summary Report : Feb 24~ Apr 28 ; 2nd Summary Report : Apr 28~Sep 5
- Several IAEA missions visited Ukraine, and IAEA team stationed at Zaporizhzhya Nuclear Power Plant (Sep 1~)
 - ✓ IAEA missions to Ukraine nuclear facilities
 - Apr 25-28: Chornobyl
 - May 30-Jun 4: Chornobyl
 - Sep 1~: Zaporizhzhya
 - early Nov: three nuclear related facilities
 - Nov 8-10: Kharkiv Institute of Technology
 - late Nov(a week): Chornobyl
 - late Nov to early Dec: three nuclear power stations: South Ukraine, Rivne and Khmelnytsky

2. Responses of International Society to Ukraine Situation(2/3)

2)G7 statement on Ukraine

- Several statements were made to condemn Russia's invasion, support IAEA activities and condemn Russia's annexation of Ukraine's four states

3)NATO, EU

- From the onset, condemn Russia's invasion of Ukraine as undermining international security and stability, violation of international law and causing immense human suffering
- Ukraine submitted an application for EU membership and was admitted by the EU as a candidate state (June 23)
- Ukraine announced its will to join NATO (September 30)
- Finland and Sweden submitted applications to NATO (May)

2. Responses of International Society to Ukraine Situation(3/3)

4) United Nations

- Special Session Resolutions on Ukraine
 - ✓ Condemn Russia invasion to Ukraine (Mar 1)
 - ✓ Condemn military attack on civilian and civil facilities(Mar 23)
 - ✓ Accountability at General Assembly to a veto at Security Council (Apr 27)
 - ✓ Invalidate annexation of 4four Ukraine state to Russia(Oct 12)
 - ✓ Compensation for damages caused by Russia invasion (Nov 15)
- Human Rights Council(UNHRC)
 - ✓ Establishment of Commission of Inquiry on Ukraine (Mar 4), Russia rejected
 - ✓ Condemn Russia invasion to Ukraine(May 12)
- Export of Grain from Ukraine
 - ✓ By the mediation of Secretary General and Turkey, grain export restarted in June and extended in November

5) G20 Summit

- Many participating states condemn Russia invasion to Ukraine (Nov 16)

3. International Law and Legal Gaps

War time International Laws- Protocols Additional to the Geneva Conventions

- Protection of works and installations containing dangerous forces, including nuclear power stations
 - ✓ Protocol I applies to international armed conflicts
 - ✓ Protocol II applies to non-international armed conflicts
- Nuclear Terrorism Convention and Convention of Physical Protection do not apply during wartime

International Court of Justice (ICJ)

- March 16: Ukraine's filing of an application instituting proceedings against Russia. The Court delivered the order on the provisional measures based on the request from Ukraine.

4. Negative Impact on Safeguards, Nuclear Nonproliferation, Nuclear Security and Peaceful Use of Nuclear Energy(1/2)

Safeguards

- Normal inspection activities by IAEA or fulfilling its obligations under the safeguards agreement by the Ukraine authority are not possible.
- Staff detained and threats to the operation staff under Russia have the negative impact on the safe operation of nuclear power plants in Ukraine

Nuclear nonproliferation and disarmament

- Lowered the “Threshold for the use of nuclear weapons”
- Increased the “political value of nuclear weapons”
 - ✓ Inducing states with nuclear ambition and autocratic states’ leadership to follow Russia to develop nuclear weapons.
 - ✓ US Defense Secretary Austin’s statement in Halifax
- Reaffirmed the usefulness of nuclear deterrence and decrease priority of nuclear disarmament.
- Weakened in NPT's centripetal force
- Failure to provide security under the Budapest Memorandum of Understanding

4. Negative Impact on Safeguards, Nuclear Nonproliferation, Nuclear Security and Peaceful Use of Nuclear Energy(2/2)

Nuclear Security

- No application of Nuclear Terrorism Convention and Amendment Convention on the Physical protection of Nuclear material
- Wartime International laws apply: Geneva Convention AP I & II
 - ✓ Are there legal gaps to secure nuclear security in wartime?
- Threats from “insiders” both in Russia and Ukraine troops, who may steal nuclear materials and hand over terrorists

Peaceful Use of Nuclear Energy

- No states have decided to withdraw nuclear energy
- Russia’s invasion raised concern and increased uncertainties among the states with nuclear reactors, especially the neighbor states of Ukraine, over safe operation, protection of the reactors and emergency preparedness
- Increase awareness of defending the reactors in wartime

5. Future Actions

As the President of G7, and as a non-permanent member of UN Security Council....

Japan should lead the international efforts to protect every nuclear facility in Ukraine

Diplomatic Efforts

- Support for IAEA's activities in Ukraine by international community; Japan's role as G7 President
- Call to Protect Ukraine's Nuclear Facilities
 - ✓ Working with BRICs, CIS and other international frameworks to dissuade Russia to attack Zaporizhzhya and others
 - ✓ Mobilizing states with nuclear reactors (30+Taiwan) to send strong messages for protecting nuclear reactors in wartime

UN Role

- Dispatching PEACE KEEPERS to protect nuclear power plants in Ukraine
- Adopt UNGA resolution requesting the suspension military attack to Zaporizhzhya and support the IAEA's efforts for establishing "Nuclear Safety and Security Protection Zone"
- Encourage UNSG's "Good Office" to get consents from Russia and Ukraine on Limited cease fire in Zaporizhzhya region
- Adopt UNGA resolution based on "Uniting for Peace(UNSC resolution 377)" for organizing peace-keeping operation to protect Zaporizhzhya Nuclear Reactor
- Japan's role as a non-permanent member of the Security Council