



WANO

GLOBAL LEADERSHIP IN **NUCLEAR SAFETY**

WANO and the Commercial Nuclear Industry



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What is WANO?



- Formed by commercial nuclear power industry in 1989
- **Vision:** WANO and its members will be worldwide leaders in pursuing excellence in operational nuclear safety for commercial nuclear power
- **Mission:** To maximise the safety and reliability of nuclear power plants worldwide by working together to assess, benchmark and improve performance through mutual support, exchange of information, and emulation of best practices
- **Membership:** More than 125 members with approximately 460 operating units worldwide and 60 under construction – every commercial nuclear power plant operator in the world is a member
- **Structure:** Regional centres in Tokyo, Atlanta, Moscow and Paris, with offices in London and Shanghai

WANO's strategy is focused on **three** key areas

-  **1** Improve Global Industry Performance
-  **2** Transform WANO
-  **3** Influence the Evolution of Global Nuclear Power



A Safe, Reliable and Sustainable Industry

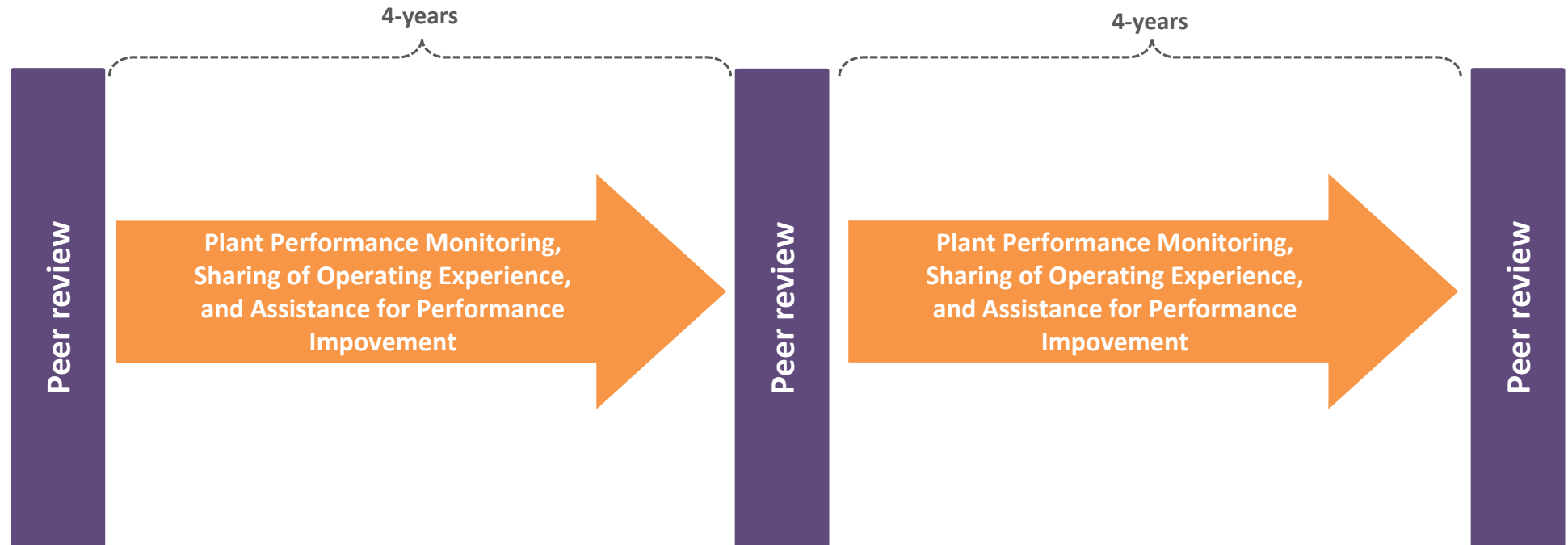
A Strong, Adaptable and Sustainable WANO

WANO standards of excellence



- Since WANO's formation in 1989, great improvements made in safety and performance of nuclear power stations
- WANO Performance Objectives and Criteria are standards of excellence that promote the highest levels of performance in the operation, maintenance, support and governance of commercial nuclear facilities
- WANO standards reflect the highest international practices of operation. Therefore, even the strongest performers have gaps between current performance and the highest standards
- WANO helps plants to identify areas for improvement, and then coordinates WANO and industry resources to help plants improve

Member interaction cycle – operating stations



WANO provides Operating Experience Reports, Performance Indicators, Guidelines and Good Practices, and information gained from more than 3 decades of worldwide operations

Corporate Peer Reviews are conducted at 6-year intervals

Recent Industry Performance



- Overall industry performance is improving slowly
- Two adverse trends were recently identified:
 - Increase in Significant Events (events that may cause some reduction in nuclear, radiological, or conventional safety or operational reliability)
 - Increase in Loss of Offsite Power (LOOP) events
- WANO is working with members to address these trends and further improve industry performance

Influencing the future of Global Nuclear Power



- An important way WANO approaches the future of nuclear power is through its New Unit Assistance (NUA) service
- Through NUA, WANO helps members safely, efficiently and effectively move through the new plant construction process, and transition into safe and reliable commercial operation
- WANO provides an Operational Readiness Assessment (ORA) about 12-18 months before first fuel load to help the member identify any gaps to be addressed prior to operation
- Pre-startup Peer Review is conducted about 2-3 months before first fuel load to help operators further ensure the plant is ready for operation
- NUA reduces risk of setbacks during construction, a delay to startup, or reliability issues in the transition to commercial operation

Influencing the future of Global Nuclear Power



- New technologies
 - Nuclear fleet will soon be affected by full-scale deployment of innovative nuclear technologies, including Small Modular Reactors (SMRs)
 - WANO will help ensure nuclear safety culture is embedded in operation of new technologies
- Extended operating life
 - Many plants are considering extension of operating life to 60 years or beyond
 - WANO will support the safety of all nuclear units through conclusion of commercial operation

Ensuring the safety of nuclear power plants near Armed Conflict



- ◇ WANO has closely monitored the situation in Ukraine since its outset
- ◇ WANO's Governing Board has directed the Association to assist Ukraine to the extent possible in ensuring nuclear safety
- ◇ WANO remains in regular contact with its Ukrainian member, and has provide some assistance via virtual means
- ◇ WANO works closely with the International Atomic Energy Agency (IAEA), which has staff at each plant site in Ukraine. IAEA is one of the most accurate and credible sources of information about the nuclear plant situation in Ukraine

Focus on Zaporizhzhya Nuclear Power Plant

- WANO Executive Task Force on Zaporizhzhya NPP established to help ensure timely and accurate exchange of information
- Safety status of Zaporizhzhya is Compromised
 - Degraded status of 7 Nuclear Safety Pillars established by IAEA
 - Loss of Offsite Power events
 - Loss of Kakhovka reservoir



Source: Image Planet Labs from Aviationweek.com

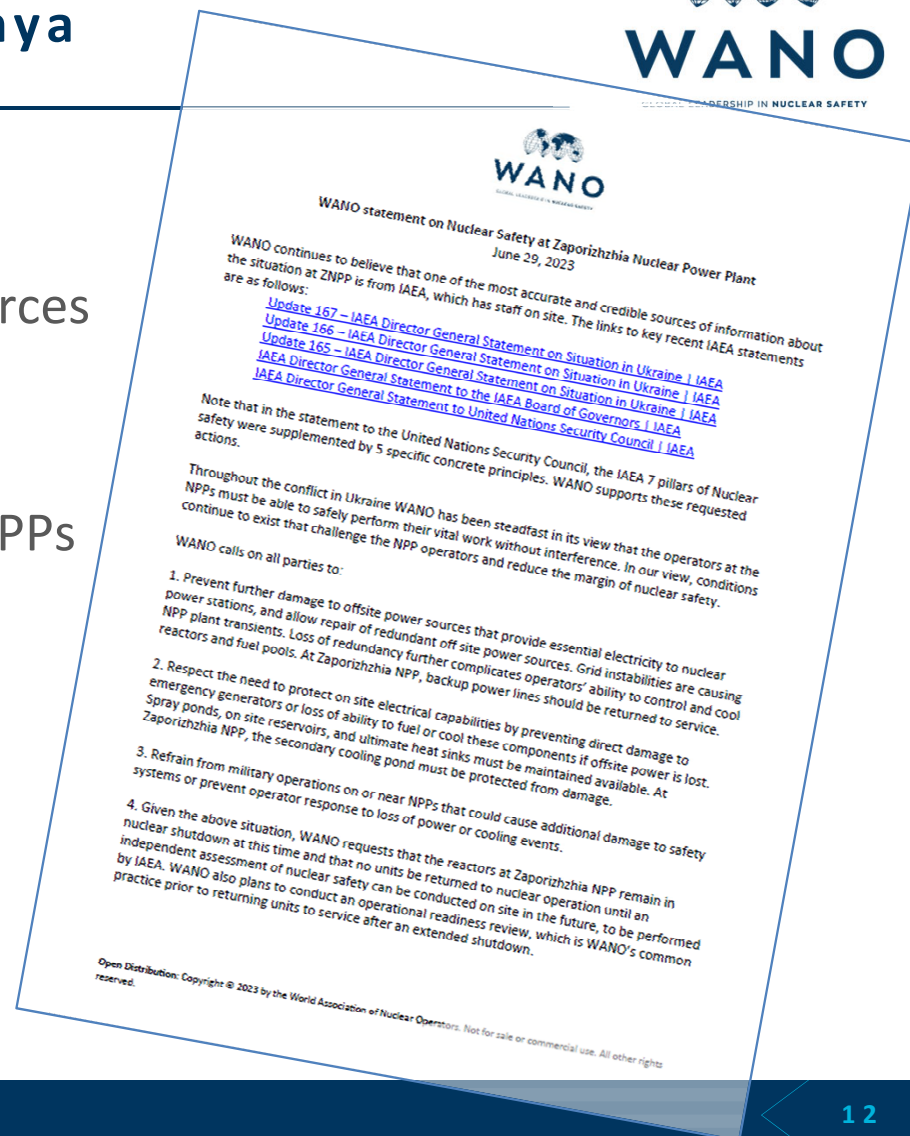


Source: Image Google Maps from European Nuclear Society

WANO public statement on Zaporizhzhya



- WANO calls on all parties to:
 - Prevent further damage to offsite power sources
 - Respect the need to protect on-site electrical capabilities
 - Refrain from military operations at or near NPPs
 - Keep reactors at ZNPP in nuclear shutdown until independent assessment of nuclear safety can be conducted



WANO relationship with regulatory bodies



- ◇ WANO and nuclear regulatory bodies share a common goal of ensuring the safety but approach the goal differently
- ◇ Regulators assure that nuclear stations fully comply with technical specifications to ensure plants meet regulatory safety standards
- ◇ WANO assesses stations against highest international standards of excellence, coordinates industry resources to help all stations achieve and sustain excellence
- ◇ At a global level, no formal WANO relationship with regulators
- ◇ WANO regional centres may interact with regulators, primarily to ensure no overlap in activities
- ◇ WANO collaborates closely with IAEA to maximise the efforts of both organisations to enhance nuclear safety

THANK YOU FOR LISTENING

FOR MORE INFORMATION PLEASE VISIT

Public wano.info

WANO Members members.wano.org