

Workshop on the Security of Small Modular Reactors



Vienna, Austria

 5–6 March 2019

 Arcotel Kaiserwasser

Please take note of the dates. Further details, including a preliminary programme, will be available shortly.

The World Institute for Nuclear Security (WINS) is pleased to announce an International Workshop on the Security of Small Modular Reactors.

INTRODUCTION

The emergence of Small Modular Reactors (SMRs) has noteworthy potential to provide energy in numerous countries all over the world. The important reduction in costs, maintenance, and ease of operation are strong incentives for the use of SMRs in a wide range of environments and geographical locations. SMRs are inherently safer than commercial nuclear power plants in operation, could be located closer to densely populated areas, and effectively provide energy where needs are. Moreover, due to their flexibility, SMRs could play a key role in the emerging decentralised power supply energy market providing clean, safe, competitive and reliable energy while protecting the environment.

The security implications associated with these new reactors need to be identified and addressed as early as possible. The design and technological choices will impact the risk picture and might require evolution in the regulatory approach. Considering nuclear security from an early stage will support the acceptance and successful implementation of this new technology. One key milestone for the sustainable operation of these new facilities is to reduce the cost of security without compromising safety or security.

OBJECTIVES OF THE WORKSHOP

The purpose of this workshop is to review and discuss all security matters related to the design, commissioning and operation of Small Modular Reactors (SMRs) including:

1. SMRs technologies and their impact on security

- What will be the main security risks associated with SMRs? How do they differ from the ones for current NPPs?
- What are the different SMR technologies (LWR, FNR, MSR, etc)? How do they differentiate in term of security?
- Is security a business enabler for SMRs? What are the possible options to reduce the security risks while keeping the costs down?
- What is the expected cost of security? Are we anticipating a significant reduction in term of security costs? Will new technologies, in particular those remotely operated, be a game changer?
- What kind of legal considerations need to be considered for ownership of SMRs and do they impact security governance and oversight?



2. Security by design / Nuclear safety and security integration.

- How can you implement security by design during siting, design, construction, operation and decommissioning of SMRs?
- How can you implement defence-in-depth for SMRs?
- Is security a relevant and decision-making criterion for selecting underground, above-ground, underwater or portable units?
- What is the basis for security design? Do all vendors have minimum security standards? What is the role of Design Basis Threats in the design process?
- What are the security benefits of nuclear safety design basis events for SMRs (e.g. demonstrating Aircraft Impact Rule (AIR): Reactor core remains cooled and the containment remains intact; spent fuel pool cooling or spent fuel pool integrity is maintained)?
- Are we expecting any security challenges from the operations and safety choices?
- What are the specific risks related to IT and IC systems? How will cybersecurity issues be dealt with? What are cybersecurity challenges from an insider threat perspective?

3. Impact of SMRs on the security of the fuel cycle facilities

- What are the expected changes in the fuel cycle processes and practices? Do they have any security implications?
- What transport needs are foreseen? If SMRs are being transported turnkey, how will security be implemented during transport? Could international transport be an issue?

4. Impact of SMRs on the regulatory framework

- What is the expected impact of SMRs on licensing and inspection practices?
- From a regulatory perspective, how does the security of SMR affect the Generic Design Assessment (GDA) process? Is security at the same level of importance as safety and environmental implications of new SMR designs?
- Would additional regulations be necessary for countries already operating NPPs? What would be needed for newcomer countries? Would there be new border regulations and agreements between different nations when transporting SMRs?
- How would SMRs affect the size of Emergency Planning Zones (EPZ)? Would there be a new assessment of Loss of Large Areas (LOLA) and Integrated Response Planning (IRP)?
- What security performance testing measures would be necessary and how would they be conducted at the site?



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TARGETED AUDIENCE

This workshop will aim at bringing together experts and leading thinkers in SMRs and security matters. Attendees will be expected to meet their own costs for travel and accommodation. Workshop cost will be met by WINS. **No registration fee is required.**

This 2-day event will target a group of 25 delegates and will be organised in March 2019 in Vienna, Austria.

We will welcome applications from the following:

- SMR vendors
- Nuclear engineers and system designers
- Leading researchers and practitioners in SMRs
- Experts in data analytics and associated technological fields
- Business managers who approve security expenditure
- Security managers
- Regulators and other governmental organisations
- Transport security experts
- Security experts, consultants and vendors

WORKSHOP VENUE

The workshop will be held at:

**Arcotel Kaiserwasser, Wagramer Str. 8,
1220 Vienna, Austria**

CONTACT INFORMATION AND REGISTRATION

If you wish to register or obtain more information on this event, please contact:

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World Institute for Nuclear Security (WINS)

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WINS is promoting gender diversity in its events and female participants are highly encouraged to apply to this workshop. As part of our Gender Champions programme, funding support for travel and WINS Academy participation might be available.

