

Nuclear Security at the Multilateral and Industry Levels: Bridging the Gap

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Introduction

Effective global nuclear security requires engagement, collaboration, and consultation with a wide range of relevant stakeholders, including at the multilateral policymaking level, where the broad shape and content of the international legal, regulatory, and assistance architecture is defined. However, following a peak of activity during and shortly after the Nuclear Security Summit (NSS) process, when many state and non-governmental stakeholders joined in multilateral initiatives to bolster global nuclear security, industry engagement at this level has significantly waned.

In the context of slowing progress on the enhancement of global nuclear security, and an emerging renaissance in deploying nuclear energy and other peaceful applications of nuclear technology, there remains no obvious forum for coordinated and inclusive International Atomic Energy Agency (IAEA)-government-industry dialogue on nuclear security priorities and issues.¹ This poses a challenge for the international community in ensuring its policies, guidance, advice, assistance, and national-level security regimes address real-world security risks faced by the civil nuclear industry, and are agile enough to adapt to changes in the political, economic, and technological context.

Both governments and the nuclear industry, in partnership with other stakeholders such as the non-governmental organisation (NGO) community, must work together to ensure vital experience and insights are not excluded as the global nuclear security regime evolves. Nuclear Transport Solutions offers a useful case study for proactive industry engagement with various elements of the multilateral nuclear security architecture, through its efforts to assist the U.K. and U.S. governments, IAEA, and various academia and NGO partners with policy and strategy development and global capacity building.

The Role of Industry

Despite the common refrain at the intergovernmental level that responsibility for nuclear security within states falls to those states alone, the practical reality is not so clear-cut. States set

¹ “Progress on Global Nuclear Security Has Slowed Significantly, According to 2020 NTI Index,” Nuclear Threat Initiative (2020), <https://www.ntiindex.org/news/progress-on-global-nuclear-security-has-slowed-significantly-according-to-2020-nti-index/>.

and enforce relevant laws and regulations within their jurisdictions and appoint a competent authority to ensure compliance with them. However, within these national frameworks, the responsibility for the design, implementation, operation, and maintenance of security measures at nuclear facilities, and for nuclear materials in transport, falls principally to licensees, operators, and transporters, and to some degree their supply chains.²

The special responsibility of industry for nuclear security is explicitly set out in the Amendment to the Convention on the Physical Protection of Nuclear Material (ACPPNM) and in the Fundamental Principles of Physical Protection of Nuclear Material and Nuclear Facilities, which assert that, “the State should ensure that the prime responsibility for the implementation of physical protection of nuclear material or of nuclear facilities rests with the holders of the relevant licenses or of other authorizing documents (e.g., operators or shippers).”³

Industry’s key role in interpreting and implementing physical protection requirements within their national jurisdiction extends to other nuclear security disciplines, including insider threat mitigation, cybersecurity, transport security, and material accounting and control, etc. This is particularly acute in states that have introduced partially or fully outcomes-focused regulatory regimes for nuclear security, such as the United Kingdom through the Office for Nuclear Regulation’s Security Assessment Principles (SyAPs). Under SyAPs, dutyholders are expected to deliver defined security outcomes by designing and implementing bespoke solutions, which are tailored to their site and operational requirements, and informed by the Design-Basis Threat and current threat intelligence.⁴

The civil nuclear industry is thus a key recipient, and stakeholder in the development, of the various outputs of the IAEA, including its policymaking organs, standards and guidance committees, consultancy and technical meetings, ad hoc working groups, and capacity-building activities.

The Challenge

Indications exist of some recognition of industry’s important role at the multilateral level, reflected in the expressed appetite among many IAEA Member States for greater involvement of industry in supporting global nuclear security initiatives.

For example, the Nuclear Security Resolution of the 66th General Conference recognises “the importance of maintaining and strengthening the dialogue between relevant government bodies

² Hereinafter, these groups will be referred to collectively as “the civil nuclear industry” or simply “industry.” This collective is difficult to define on a global scale, as in many countries nuclear design, construction, operation, transport, and decommissioning, or elements of these, are undertaken directly by government organisations or by state-owned enterprises where the division between state and industry is blurred. Equally, government or quasi-government organisations can also be licensees and responsible for the security of both civil and defence nuclear materials and facilities, for example national laboratories.

³ IAEA, *Amendment to the Convention on the Physical Protection of Nuclear Material*, INFCIRC/274/Rev.1/Mod.1 (Corrected), (October 18, 2021), <https://www.iaea.org/sites/default/files/publications/documents/infcircs/1979/infcirc274r1m1c.pdf>.

⁴ Office for Nuclear Regulation, “Security Assessment Principles for the Civil Nuclear Industry,” 2022 Edition, Version 1, <https://www.onr.org.uk/syaps/security-assessment-principles.pdf>.

and the nuclear industry...on nuclear security,” and encourages Member States to pursue “dialogue and cooperation with the nuclear industry” to enhance nuclear security culture.⁵ Similarly, the Ministerial Declaration of the 2020 International Conference on Nuclear Security (ICONS) “note[s] the contribution of...relevant institutional entities, such as regulators and industry” in supporting the IAEA and Member States’ efforts to strengthen nuclear security culture.⁶

These are, however, limited references that tend to focus on national-level government-industry collaboration on the specific topic of security culture, and some Member States resist encouraging broader IAEA-industry links. It is notable that the Outcome Document of the 2022 Conference of the Parties to the ACPPNM makes no direct reference to the nuclear industry, despite industry’s responsibility for the implementation of physical protection measures, and its necessary involvement in sharing knowledge and good practice, which is strongly encouraged throughout the text. From another perspective, it is also unfortunately noteworthy that of the 11 NGOs that attended as observers, only one industry entity (Nuclear Transport Solutions) and one industry representative body (the World Nuclear Transport Institute, WNTI), were registered.⁷

This is indicative of the broader challenge of access for the nuclear industry to high-level multilateral fora on nuclear security in the post-NSS era. Arguably, the ICONS series of conferences offers the only current high-level forum where industry can engage directly in multilateral discussion on a broad range of nuclear security topics with Member States, the IAEA, and the NGO community. The ICONS 2020 Co-Presidents’ Report offers multiple references to the importance of industry input espoused during the high-level panels and technical sessions, such as the role of industry in developing and reviewing nuclear security transport regimes, addressing new and evolving threats, and contributing to the international exchange of information on nuclear security.⁸

However, given the absence of a mechanism for expressing collective industry views on issues, challenges, opportunities, and commitments at ICONS, the opportunities for industry are limited in comparison to the NSS. The Nuclear Industry Summits held in parallel with the NSS offered a valuable opportunity for industry inputs to the NSS process and the production of industry-led communiqués, commitments, and working group recommendations across governance and

⁵ IAEA, *Nuclear Security—Resolution Adopted on 30 September 2022 During the Eleventh Plenary Meeting*, GC(66)/RES/7, (September 2022), <https://www.iaea.org/sites/default/files/gc/gc66-res7.pdf>.

⁶ IAEA, *Ministerial Declaration—International Conference on Nuclear Security: Sustaining and Strengthening Efforts*, February 10–14, 2020, <https://www.iaea.org/sites/default/files/20/02/cn-278-ministerial-declaration.pdf>.

⁷ IAEA, *2022 Conference of the Parties to the Amendment to the Convention on the Physical Protection of Nuclear Material—Outcome Document*, ACPPNM/RC/2022/4 (March 28–April 1, 2022), https://www.iaea.org/sites/default/files/22/04/english_acppnm_rc_2022_4_outcome_document_approved.pdf.

⁸ IAEA, *“Co-Presidents” Report—2020 International Conference on Nuclear Security: Sustaining and Strengthening Efforts* (February 14, 2020), <https://www.iaea.org/sites/default/files/20/06/cn-278-president-report.pdf>.

security culture, cybersecurity, and security of materials in use, storage, and transport.⁹ The influence of industry engagement can be readily seen in the range of commitments and “Gift Baskets,” which directly referenced the inclusion of industry in specific activities to bolster and maintain global nuclear security.¹⁰

This momentum appears to have rapidly diminished following the final summit in 2016. Two of the key products of the NSS linked to maintaining industry involvement are cited as the establishment of the World Institute for Nuclear Security (WINS), as a focal point for developing good practice guides and professional certification, and forming the Nuclear Industry Steering Group for Nuclear Security (NISGS).¹¹ Although WINS continues to produce and update an impressive range of operator “Best Practice Guides,” training, education, and self-assessment tools, and other pertinent outputs that draw on engaged industry partners’ expertise, the NISGS does not appear to have produced any notable outputs. Despite being “reformed” in 2018,¹² the group no longer appears to convene or function.¹³

Beyond these high-level political fora, which are infrequent and focused on the diplomacy of negotiating consensus-outcome documents, other routes available to industry entities to engage in intergovernmental nuclear security work tend to be ad hoc, issue-specific, and largely dependent on in-reach from national governments to their domestic nuclear sector experts.

For example, although industry entities may be consulted by their national regulatory body or government on draft IAEA security guidance documents, attendance at Nuclear Security Guidance Committee meetings tends to be limited to regulators on behalf of their national authorities, with observer status granted to certain industry representative bodies, such as the World Nuclear Association (WNA) and WNTI.¹⁴

Advisory bodies such as the Director-General’s Advisory Group on Nuclear Security (ADSEC) appear, based on the information available regarding membership,¹⁵ to be populated principally by government and regulatory officials. Similarly, the International Nuclear Security Education

⁹ Debra Decker, Lovely Umayam, Jacqueline Kempfer, and Kathryn Rauhut, *Re-Energizing Nuclear Security: Trends and Potential Collaborations Post Security Summits* (Washington, DC: Stimson Center, 2017), 21, <https://www.stimson.org/wp-content/files/file-attachments/Nuclear-Energy-R7-WEB.pdf>.

¹⁰ For a comprehensive summary of the NSS outputs see Alex Barrow, Wyn Bowen, Matthew Cottee, Christopher Hobbs et al., *Nuclear Security Briefing Book* (King’s College London, 2022), <https://www.kcl.ac.uk/csss/assets/nuclear-security-briefing-book-2022.pdf>.

¹¹ Matthew Bunn, Nickolas Roth, and William H. Tobey, *Revitalizing Nuclear Security in an Era of Uncertainty* (Cambridge, MA: Project on Managing the Atom, Belfer Center for Science and International Affairs, Harvard Kennedy School, January 2019), <https://www.belfercenter.org/sites/default/files/2019-01/RevitalizingNuclearSecurity.pdf>.

¹² Bunn, Roth, and Tobey, *Revitalizing Nuclear Security*, 133.

¹³ Bunn, Roth, and Tobey, *Revitalizing Nuclear Security*, 133.

¹⁴ IAEA, “About NSGC,” *Nuclear Security Information Portal (NUSEC)*, <https://nusec.iaea.org/portal/User-Groups/NSGC/About-NSGC>.

¹⁵ IAEA, “AdSec Member Directory,” *Nuclear Security Information Portal (NUSEC)*, <https://nusec.iaea.org/portal/Directory/rolename/AdSec>.

Network (INSEN), despite the important role of industry entities in providing training and competency management for their security professionals, overwhelmingly consists of universities, technical institutes, and government agencies.¹⁶

Finally, the IAEA's rolling programme of technical conferences, ad hoc working groups, and consultancy and technical meetings offer more scope for industry engagement in developing IAEA outputs on specific topics. However, it is unclear how much influence the outputs of these technical conferences have on the multilateral policymaking process, and they tend to be of less interest to government officials. It is also commonly noted in the nuclear security community that invitations to consultancy and technical meetings favour a limited group of pre-selected consultants and organisations, making access by new stakeholders difficult.

All of this is not to say that industry has necessarily been barred from multilateral policymaking regarding nuclear security. The record of the NSS shows that where there is sufficient political attention, and where industry proactively works to coordinate itself, its inputs and commitments are valued as a key part of the overall outcome. Smaller groups exist where engaged industry entities seek to maintain collaboration with the wider international community, such as the WNA's Security Working Group and Stimson's International Nuclear Security Forum. However, there appears to be little visible drive from the industry more broadly to promote its inclusion in high-level multilateral deliberations.

This suggests that a coherent effort to increase industry engagement at this level requires both an unambiguous demand signal from the policymaking community, which highlights and invites industry's important potential contributions, and proactive outreach from the industry itself to reinforce its own relevance to the process and ensure that engagement yields business benefits.

The Opportunity

This apparent lack of industry engagement in multilateral-level policymaking on nuclear security matters threatens both the efficacy of decisions and outputs at the highest levels of the global nuclear security architecture, and the pace and effectiveness of their implementation "on the ground."

The multilateral system moves notoriously slowly to instigate and incorporate significant change; meanwhile, the challenges and potential opportunities facing the nuclear sector are rapidly accelerating in breadth and sophistication, not least across the oft-cited list of "emerging technologies" such as drones, offensive cyber tools and artificial intelligence (AI), and small and advanced reactors. While diplomatic debate continues over the extent to which these technologies impact nuclear security in a manner that requires political attention, security managers at nuclear facilities and transporters are already grappling with these challenges and devising new tools and mitigations in accordance with the requirements of their national regulatory regimes.

¹⁶ IAEA, "INSEN Members," *Nuclear Security Information Portal (NUSEC)*, <https://nusec.iaea.org/portal/User-Groups/INSEN/INSEN-Members>.

The important, and so far under-utilised, function of industry in spurring appropriate action at the multilateral level should be to help policymakers (1) assess at what point these technologies necessitate a re-evaluation of the adequacy of existing international arrangements, (2) weigh the pros and cons of incorporating new technologies into their security plans, and (3) incorporate lessons learned from the implementation of novel security measures, or mitigation of emergent security risks, into the multilateral process.¹⁷ To revisit an earlier point, lack of attendance by industry entities at the Conference of Parties to the ACPPNM is an indication that industry needs to be encouraged by governments, regulators, and other active players in the community to participate in processes that assess the adequacy of the international nuclear security regime.

Linked to this, a further important potential role for industry is to inform a shared understanding at the multilateral level of what constitutes a “reasonable and practicable” approach to implementing responsibilities arising from the ACPPNM and other elements of the global legal and regulatory regime.¹⁸ Whether considering geographical and cultural differences that influence divergence in security practices between countries or changes in the technology and security context over time, the definition of “reasonable and practicable” is inherently non-static and requires constant dialogue between practitioners and policymakers to remain relevant.¹⁹

Several more practical contributions that industry entities are uniquely well-placed to offer, and that suggest the need for more structured channels for ongoing engagement, include:

- **Collating and disseminating case studies** reflecting different potential approaches to addressing identified vulnerabilities, noting the divergence in interpretation and implementation of the content of Nuclear Security Guidance and legal conventions, which would particularly benefit security practitioners in nuclear newcomer countries;
- **Learning and experience from instances where security threats have materialised** and tested the efficacy of mitigation measures in identifying, deterring, delaying and/or responding, requiring a suitable process for independent collection, anonymisation and distribution similar to the function of the IAEA’s Incident and Trafficking Database;
- **Providing operationally informed and experienced subject matter expertise** to support international nuclear security outreach, promotion, and capacity-building work,

¹⁷ Nickolas Roth, *The Risks and Rewards of Emerging Technology in Nuclear Security*, Project on Managing the Atom, Belfer Center for Science and International Affairs Harvard Kennedy School, paper presented to the NTI Global Dialogue, February 2020, https://www.nti.org/wp-content/uploads/2021/09/the_risks_and_rewards_of_emerging_technology_in_nuclear_security.pdf.

¹⁸ IAEA, *Amendment to the Convention on the Physical Protection of Nuclear Material*, INFCIRC/274/Rev.1/Mod.1 (Corrected), Article 2A Clause 3, (October 18, 2021), <https://www.iaea.org/sites/default/files/publications/documents/infcircs/1979/infcirc274r1m1c.pdf>.

¹⁹ D. Decker, R. Howsley, K. Rauhut, *Industry’s Potential Role in Implementing the CPPNM Amendment and Improving Nuclear Security*, paper presented at the IAEA International Conference on Nuclear Security: Commitment and Actions, 2016, <https://www.stimson.org/wp-content/files/file-attachments/Industry%E2%80%99s%20Potential%20Role%20in%20Implementing%20the%20CPPNM%20Amendment%20and%20Improving%20Nuclear%20Security.pdf>.

particularly that of the IAEA, which is typically based heavily on familiarisation with the content of Nuclear Security Guidance and less so on real-world case studies; and

- **Designing and conducting tabletop and live exercises**, offering a methodology for “proof of concept” testing and demonstration for new security measures, initiatives, or technologies, and nuclear security readiness assurance for newcomers.

One particularly impressive example of this latter point was an exercise conducted by the IAEA and Sweden in 2015 to test and evaluate a new IAEA guide on planning, conducting, and evaluating transport security exercises. The live exercise involved key personnel from the Swedish Radiation Safety Authority, national police, the coast guard, and the Swedish Nuclear Fuel and Waste Management Company, utilised a Swedish nuclear material transport vessel, and included observers from the IAEA and 15 partner countries.²⁰

Case Study: Nuclear Transport Solutions

The efforts of Nuclear Transport Solutions (NTS), in seeking to contribute to and inform international nuclear security dialogue and capacity-building initiatives, offer a useful case study to illustrate one possible model for industry engagement.

NTS is part of the U.K.’s Nuclear Decommissioning Authority (NDA), a public body responsible for ensuring the safe and efficient clean-up of the U.K.’s civil nuclear legacy. Its work includes transporting spent fuel within the U.K., returning reprocessing products to customers overseas, and performing a range of consultancy services to NDA and external customers. Although publicly owned, NTS operates on a commercial basis and is funded through revenue generated from its services.²¹

As a nuclear material transporter frequently carrying high-hazard nuclear material up to and including Category 1 cargoes, NTS has developed a sophisticated security and resilience capability. Since 2021, NTS has proactively worked to leverage this expertise and engage in promoting effective nuclear security, particularly transport security, in the U.K. and overseas. The strategic drivers for this effort include:

1. The security of NTS’ global transport operations depends on the existence of a robust and effective nuclear security regime wherever it operates;
2. Helping to drive and influence continuous improvement in nuclear security around the world is the right and responsible thing to do, and within NTS’ capability;
3. NTS’ business ambition is to be recognised as a world leader in nuclear materials transport, and a “go-to” partner for governments, international organisations, and NGOs; and
4. International engagement provides interesting work and professional development opportunities for NTS personnel and enhances organisational security capability.

²⁰ IAEA, *Action at Sea: Transport Security Exercise Conducted Off the Coast of Sweden*, IAEA News Center (May 2015), <https://www.iaea.org/newscenter/news/action-sea-transport-security-exercise-conducted-coast-sweden>.

²¹ To find out more, see <https://nucleartransportsolutions.com/about-us/>.

NTS' engagement strategy has followed a three-pronged approach, seeking to develop partnerships with U.K., U.S., and other actively engaged governments, the IAEA, and the NGO community, in support of their respective international nuclear security roles and initiatives.

Government

Recognising the potential value of industry security expertise to inform the U.K. government's international nuclear security policy and programmes, in 2021 NTS formed the Nuclear Security Partnership with the U.K.'s National Nuclear Laboratory.²² This partnership was developed to offer a central hub for accessing technical and strategic advice on issues related to nuclear security to government, industry, and other partners.

To date, the Partnership has supported the U.K.'s Department for Energy Security and Net Zero (formerly Department for Business, Energy and Industrial Strategy (BEIS)) through providing policy and technical advice. This has helped shape the U.K.'s policy approach to the ACPPNM Review Conference and the IAEA Safe and Secure Transport of Nuclear and Radioactive Materials Conference, based on operational experience of the existence and impact of gaps in existing conventions, and has supported the U.K.'s contributions to the IAEA Nuclear Security Fund.

Based on the early success of this initiative, NTS was asked by BEIS to provide the U.K. contributions to a trilateral U.K.-U.S.-India technical exchange on radioactive material transport security, held in 2022 at the Indian Global Centre for Nuclear Energy Partnership.²³ NTS offered expert insights, good practice, and learning from experience, and leveraged its partnership with the U.K.'s Civil Nuclear Constabulary to include a senior officer in charge of the Strategic Escort Group, which provides armed police protection to some transport operations.

Noting the centrality of transport security to the ACPPNM, NTS was asked to speak on behalf of the U.K during the 2022 ACPPNM Review Conference topical session on physical protection. In doing so, NTS was able to highlight how ACPPNM provisions are implemented through its transport planning process, and in the physical security arrangements for its international shipments, providing to the plenary a real-world case study of international legal obligations in action.

NTS also enjoys a longstanding partnership with the U.S. National Nuclear Security Administration (NNSA), dating back to its involvement in global HEU and plutonium material minimisation initiatives spurred by the NSS process. In addition to supporting NNSA-led transport activities, NTS has, since 2022, supported NNSA's Office for International Nuclear Security in shaping and delivering its capacity-building programme on transport security. This has included providing subject matter experts for capacity-building workshops around the world, identifying weaknesses and gaps in the existing global transport security architecture, and facilitating a series

²² NTS, *Partnership with UK's National Nuclear Laboratory to Support International Nuclear Security*, Nuclear Transport Solution, 2021, <https://nucleartransportsolutions.com/2021/10/partnership-with-uks-national-nuclear-laboratory-to-influence-global-security-measures/>.

²³ NTS, *NTS Supports UK-USA-India Exchange on Radioactive Material Transport Security*, Nuclear Transport Solutions, 2022, <https://nucleartransportsolutions.com/2022/08/nts-supports-uk-usa-india-exchange-on-radioactive-material-transport-security/>.

of technical exchanges between U.S. and U.K. nuclear security regulators and practitioners on various topics in order to strengthen trans-Atlantic government-industry collaboration.

IAEA

NTS' engagement with the IAEA, while still in early stages, has enabled it to begin to influence and support the Agency's nuclear security promotion and capacity-building efforts.

Beyond its proactive effort to engage in the technical programme of key conferences such as ICONS, the ACPPNM Review Conference, and transport conferences by encouraging staff to submit papers and chair technical sessions, NTS has also arranged side-events in support of both U.K. policy priorities and its own strategic aims. For example, NTS chaired two side-events at the ACPPNM Review Conference that focused, respectively, on the state of the global nuclear transport security architecture and promoting the next generation of nuclear security professionals. The latter event involved early-career nuclear security professionals from the U.K. discussing their career paths to date and offering views on how to enhance diversity in the sector based on their experiences.

NTS has also directly supported the IAEA's Division of Nuclear Security, releasing its former Head of Security on a career break to undertake a U.K.-funded Cost-Free Expert position, and providing security personnel as subject matter experts to support international transport security workshops. These contributions provide benefits both to the IAEA and recipients of its assistance and advisory services, and to NTS in increasing organisational understanding of, and exposure to, the international role and functions of the Agency.

NGO Community

NTS has proactively pursued greater involvement and partnerships with the nuclear security NGO and academic community, recognising its importance as a hub for thought leadership on emergent issues and implementation support for government capacity-building programmes.

NTS has a longstanding partnership with King's College London (KCL), and until late 2022 supported them in delivering the U.K.-funded Nuclear Security Culture Programme (NSCP). Over several years, the NSCP delivered a wide range of capacity-building activities in more than a dozen countries, including international workshops on the fundamentals of physical protection of facilities and materials, nuclear security culture, and nuclear security during decommissioning, a webinar series on key nuclear security topics,²⁴ nuclear security self-assessment assistance, conference side-events, and a library of publications for policymakers and site security implementers. In addition to providing subject matter experts to support all of these activities, NTS provided case studies informed by its operational experience for publications on the U.K.'s delivery of nuclear security during the COVID-19 pandemic, and a handbook on nuclear security culture in practice.²⁵

NTS also continues to support other members of the NGO community in their capacity-building and promotional activities, bringing its operational experience and expertise to bear in

²⁴ A playlist of NSCP webinar and side-event recordings is freely available on YouTube at <https://www.youtube.com/playlist?list=PL13JSoSeHjcb0R-lDtKsLQsW2RNUJIO>.

²⁵ For more information and a library of resources, see <https://nscprogramme.org/>.

developing and delivering training and education products. This includes CRDF Global and KCL-led initiatives under the U.S. Department of State Cooperative Threat Reduction programme, and support to WINS in developing transport security good practice guides and a recent virtual tabletop exercise on transport security as part of its gender diversity programme.

Recommendations: “Push” and “Pull”

As noted above, and indicated by some aspects of the NTS case study, a coherent and effective effort to increase the role of industry in supporting international nuclear security initiatives requires both “push” and “pull” elements—“push” by industry to demonstrate its potential contributions across policymaking and capacity building and generate demand for its input, and “pull” from the government, IAEA, and wider international community to encourage further industry involvement.

The recommendations below are intended to provide some practical suggestions along these lines, for policymakers, the IAEA, and industry representatives to consider and build upon.

Push Factors: Recommendations for Industry Entities

- Proactively reach out to national government agencies with responsibility for domestic and international nuclear security policy, to **offer officials access to industry security experts and formulate structured fora for collaboration** and information sharing.
- **Utilise national missions in Vienna and IAEA conference events to identify key stakeholders in the Agency and seek opportunities to support their policymaking and capacity-building activities.** Such opportunities could range from proposing a small number of experts to join the Agency’s pool of available subject matter experts, to training security personnel as International Physical Protection Advisory Service (IPPAS) or other peer review mission members, to establishing a more structured collaboration agreement.
- Where capacity and resources allow, seek to enable the IAEA to leverage specific industry expertise by **establishing formal Practical Arrangements or Collaborating Centres on nuclear security.** These are highly beneficial in raising the profile of industry-IAEA engagement and enabling formal industry contributions to the Agency’s work in key areas, while ensuring the parties can delineate the scope of collaboration and thus manage potential costs.
- **Use indirect channels to influence and support international nuclear security efforts via the NGO and academic communities,** such as joining NGO-led discussion fora and providing subject matter experts to support international capacity building initiatives. As well as bringing industry closer into the existing non-governmental nuclear security community, where funding is available these activities can generate revenue to offset bottom-line operational costs.
- **Encourage security personnel to engage in the multilateral process and shape the thinking of the community on emergent issues by making this part of their formal professional development,** for example by attending relevant conferences and

submitting papers and articles to technical sessions and nuclear security-relevant publications.

Pull Factors: Recommendations for IAEA, Governments, and the Wider International Community

- Supportive Member States should seek to **strengthen language in the Nuclear Security Resolution and triennial Nuclear Security Plan, which encourages greater industry-IAEA collaboration**, and thus enables proactive efforts by the Agency to develop appropriate fora.
- Member State governments should, ideally with encouragement from the IAEA, seek to **diversify the nomination of national experts** to attend influential decision-making bodies, advisory committees, working groups, and consultancy meetings, relying less on traditional government and regulator representatives in favour of industry security managers and others with operational security experience.
- Seek the **inclusion of industry summits or forum sessions as part of the agenda at major IAEA conferences** such as ICONS, similar to the Scientific Forum, which takes place on the margins of the General Conference. Importantly for industry buy-in, the outputs of such sessions should form a part of the official outcome document for the conference, and governments should solicit the views of industry entities in developing language proposals for Resolutions and Ministerial Statements. This is particularly pertinent as the planning process for ICONS 2024 is now underway.
- **Include industry entities in the planning and delivery of conference side-events and routine nuclear security capacity-building and promotion initiatives**, to bring in operational perspectives that can help elucidate the real-world impact of new technologies, gaps in the existing legal and regulatory regime, and emergent security issues “on the ground.”

About the Author

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