WG1: Nonproliferation and Nuclear Security: C. Sustainable Nuclear Security after the 2016 Summit

Adopting a Forum for Stakeholder-Driven Voluntary Consensus Standards

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What: After the final Nuclear Security Summit, a framework will be needed to sustain global interest in improving nuclear security. Although the Summits have focused on engaging State leaders in high-level discussions, industry has held parallel Nuclear Industry Summits. Indeed, industry actors may hold the key to ensuring long-term safety and security in the global nuclear complex by developing voluntary consensus standards that serve their interests as well as States'.

While the IAEA, INPO, WANO, WINS, international conferences, individual government regulators, and others have developed commendable guidelines and recommendations for the advancement of nuclear safety and security, the current oversight and incentives regimes are at times inefficient and also insufficient for ensuring integration of security and safety and consistency in application, especially cross-culturally. Insurers and lenders/financiers have not been active in the Summit process and are particularly well placed to play an important role in nuclear security. By identifying critical risk-reduction factors that overlap with security, these actors can facilitate the strengthening of good operational processes, which would provide a mutually beneficial return on investment to nuclear facility developers, owners, and operators. As follow-on to the Nuclear Summit Series, the nuclear industry should work with the financial and insurance industries in an international forum to identify essential risk-reduction elements and jointly develop related voluntary consensus standards for improving nuclear safety and security. Such a cross-industry model of engagement would make the private sector more clearly interested in and responsible for good nuclear security practices and, if framed well, could foster continued development and application of good practices.

Why: Standards develop as needs for them become obvious – due to catastrophes or champions.[1] In the nuclear field, the catastrophic events of 9/11 and Fukushima led to more reflection, review and regulation – a coercive approach. NGOs have championed good export practices and encouraged industry buy-in[2] – a persuasive approach. But industry itself has exhibited initiative to self-regulate and has championed standards in areas it found useful – a self-interest model. Industry, with standards development organizations such as ASME and IEEE gathering stakeholders, has developed agreed good practices and processes for certification in selected areas[3] that some regulators recognize and/or embody in State codes. Further, industry nudged by NGOs or others can also develop enlightened self interest; in nuclear, WINS formed and is demonstrating the benefits of security to industry and a cost-effective way to achieve a higher level of professional performance. This enlightened self-interest model can be institutionalized as part of the follow-on process.

[1] http://www.stimson.org/images/uploads/research-pdfs/PIP_Staff_Report_FINAL.pdf, p. 106+
[2] For example, see http://carnegieendowment.org/publications/special/misc/nppe/.
[3] For example, see https://www.asme.org/shop/certification-accreditation/nuclear-component-certification

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Although security is considered the purview of the State, which must define and regulate design-basis threats, States have noted the potential contribution from industry.[4] Nuclear industry stakeholders identified to us areas of concern. In these areas,industry-led and multi-stakeholder-coordinated standards development might prove useful for risk reduction – for various reasons:

- Cyber Security – new evolving threats with risks not well understood[5]
- Human-Reliability Assurance: Integrated Safety and Security Culture – guidance that overlaps
- Human-Reliability Assurance: Insider Threat Mitigation – vulnerabilities and legal concerns

Guidelines and training exist to some extent in these areas. What is missing is international agreement on these specifics and an independent, third-party certification of compliance.[6]

How: Industry development of voluntary consensus standards for dealing with these important areas for risk reduction could build off existing guidelines. This could be undertaken under the auspices of one or several stakeholders who are already interested in coordination and international standardization: IFNEC; WNA's CORDEL; OECD/NEA's MDEP; or other issue-specific working groups. Standards development organizations may be engaged to facilitate the process.

Furthermore, insurers, lenders, and/or investors could require owners and operators to adopt the developed standards as pre-conditions for insurance coverage or funding. Regulators in established nuclear power countries would be able to acknowledge operators' performance systems in dispositioning violations. Newcomer States would have an additional way to verify good performance, especially in States following the increasingly common foreign build-own-operate model for nuclear development. Third-party inspections by an independent organization can be used to verify conformity. Success in a few areas for standards development and certification would then become an iterative, self-perpetuating process of standards generation, capacity building, implementation, and compliance monitoring on the part of the nuclear power industry and ancillary stakeholders. The concept could then be replicated in other nuclear areas, such as for transport.

Strengthening industry self-control is a sustainable, normative way to proactively prevent security/safety incidents, preempt reactive regulation, and build overall public confidence in the nuclear industry into the future – and presents a way to move the nuclear security and safety agenda forward in a post-Nuclear Security Summit framework.

[4] http://www-pub.iaea.org/MTCD/Meetings/PDFplus/2013/cn203/cn203MinisterialDeclaration.pdf
[5] The Nuclear Industry Summit continues to have a working group in this area.
[6] The IAEA only does assessments when a government invites it; the results are not necessarily made public. Insurers/ reinsurers do their surveys. Financiers do theirs. Regulators, WANO, INPO also do assessments, with interconnected but often duplicative approaches and sometimes, limited references.