

**Testimony on ‘The Iran Nuclear Deal and Its Impact on
Terrorism Financing’ before the Committee on Financial
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Olli Heinonen

Senior Fellow

Belfer Center for Science and International Affairs

Harvard Kennedy School of Government

Thank you Chairman Fitzpatrick, Ranking Member Lynch, and members of this Task Force for the opportunity to discuss a crucial issue before us – the Iran nuclear deal.

In my testimony, I will focus on the verification aspects of the Joint Comprehensive Plan of Action (JCPOA) concluded in Vienna on 14 July 2015 between P5+1 (China, France, Germany, the Russian Federation, the United Kingdom and the United States) with the Islamic Republic of Iran.¹ In my remarks, I am mindful that the JCPOA’s reference to the Road Map agreed between the International Atomic Energy Agency (IAEA) and Iran that is publicly available does not contain its confidential attachments².

Under the JCPOA, Iran will retain a sizable nuclear program with its supporting nuclear infrastructure. In technical terms, Iran has not changed its nuclear course. It will maintain substantial uranium enrichment capacity, and is permitted to expand it after 10 years without having technical or economical needs to do so. In addition, implementation of the Additional Protocol (AP) remains provisional until the time when the IAEA has reached a “broader conclusion” on the peaceful nature of Iran’s nuclear program. This contradicts current

¹ Joint Comprehensive Plan of Action, Vienna, 14 July 2015.

http://eeas.europa.eu/statements-eeas/docs/iran_agreement/iran_joint-comprehensive-plan-of-action_en.pdf

² Road-map for the Clarification of Past and Present Outstanding Issues regarding Iran’s Nuclear Program, IAEA, GOV/INF/2015/14, 14 July 2015.

safeguards practices. Such conclusions have only been drawn by the IAEA when an AP is in force and ratified. This is not a matter to easily dismiss as we need to be mindful of potential complications down the road should Iran seek to leverage, pull back, or dilute some of its obligations at some point in time under its 'provisional' status.

Verification in Iran involves concurrent implementation of: the NPT Safeguards Agreement, implementation of the Additional Protocol, additional transparency undertakings by Iran agreed in the JCPOA, and the IAEA-Iran Road Map - all of which have differing commitments that complement one another. The sum of these parts is to block all pathways for Iran to get a bomb. Our assessments should focus on whether the verification provisions measure up to this goal, and look at the JCPOA's strengths, limitations, and challenges that it could face. We also need to ask ourselves what measures are in place that will prevent slippage or account for changing circumstances.

In my previous testimonies to Congress^{3 4}, I have shared my views on the IAEA's verification capabilities and made suggestions for essential undertakings required by Iran⁵. I will therefore limit myself here to a few salient points.

We should acknowledge the JCPOA has, from a verification point of view, strong points but also faces vulnerabilities, depending on which areas are being addressed. With additional access to Iran's nuclear facilities, introduction of modern monitoring tools, and monitoring measures in place to track nuclear material from cradle to grave (mines to their end-use), the IAEA will be able to detect and report in a timely manner any substantial diversion of declared nuclear material at

³ Testimony of Olli Heinonen on 'Verifying Iran's Nuclear Compliance', before the United States House of Representatives Committee on Foreign Affairs, 10 June 2014.

⁴ Testimony of Olli Heinonen, "Iran: Status of P-5+1", before the United States Senate Committee on Foreign Relations on 29 July 2014.

⁵ Testimony of Olli Heinonen on the "Implementation of the Iran Nuclear Deal" before the United States House of Representatives The Subcommittee on the Middle East and North Africa and the Subcommittee on Terrorism, Nonproliferation and Trade on 28 January 2014.

declared facilities using the full repertoire of its interim and short notice inspections, and design information verification visits combined with complementary access rights. These measures will also provide a high level of confidence that larger declared facilities such as enrichment installations in Natanz and Fordow and uranium conversion facilities are not used to process undeclared materials.

At the same time, we know that nuclear proliferation cases of the past have opted not to divert declared nuclear material, but used undeclared material mainly at undeclared facilities. To this end the JCPOA could have included stronger provisions, some of which I address below in more detail.

Expanded Declaration

It is unclear from the Vienna Agreement how extensive the demand is for Iran's submission of its full declaration of its nuclear program. The current Agreement's language before us essentially relies on information provided pursuant to the provisions of the safeguards agreement (or basic safeguards undertaking), but information to be provided by Iran through its transparency undertakings is worded in more vague terms. In 2003, as a part of the agreement between the EU3 and Iran⁶, Iran's undertaking was much more substantive: "the Islamic Republic of Iran ha[d] decided to provide a full picture of its nuclear activities, with a view to removing any ambiguities and doubts about the exclusively peaceful character of these activities and commencing a new phase of confidence and co-operation in this field at the international level." To reiterate a point I have made elsewhere, a complete declaration of all Iran's nuclear activities including past ones – e.g. status of equipment and materials from dismantled installations – would be important to set a credible baseline for monitoring and verification. This is particularly significant since Iran's nuclear program has been subject to several changes and has grown substantially since Iran stopped its provisional AP implementation at the end of 2005⁷, and reduced its cooperation with the IAEA.

⁶ Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran, IAEA, GOV/2003/75, 10 November 2003.

⁷ Iran signed the Additional Protocol in December 2003, and started then its provisional implementation.

Access to Undeclared and Suspected Sites

To enforce the IAEA's requests to have access to suspected sites, undeclared sites, or to remove ambiguities, the JCPOA provides for a dispute settlement mechanism, should Iran refuse to cooperate or challenges the IAEA's request. The fact that there is a process that allows for a majority-vote to force an Iranian compliance is not insignificant, but this does not mean it will be plain sailing. And considerable concerns arise. One example is the mechanism by which information and evidence is provided that would protect source intelligence and methods regarding Iran. Arguably, not all the fine print of intelligence is always shared even amongst the P5+1 themselves. Also, what happens when a situation arises when 'evidence' provided does not meet the standards of all of the P5+1 members? In other words, the bar will be set substantially high to begin with, that may not allow for 'grey' areas where intelligence may not be foolproof but sufficient suspicion remain nonetheless. There could well be answers to these questions. But these should be evaluated and a thorough understanding made on the various scenarios the Administration has envisaged and its path to ensure that access will be gained.

Timeliness of access has always been an important concept. The model comprehensive safeguards agreement in 1972 includes a provision that, "if the Board, upon report of the Director General, decides that an action by the State is essential and urgent in order to ensure verification that *nuclear material* subject to safeguards under the Agreement is not diverted to nuclear weapons or other nuclear explosive devices, the Board shall be able to call upon the State to take the required action without delay, irrespective of whether procedures for the settlement of a dispute have been invoked".⁸

In terms of settlement time, the JCPOA's 24 days do not cover credibly all plausible scenarios. It is clear that a facility of sizable scale cannot simply be erased in three weeks without leaving traces. But the likely scenarios involved here would be small scale, which could be critical in

⁸ The text of the Agreement between Iran and the Agency for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons, IAEA, INFCIRC/214, 13 December 1974.

the weapon manufacturing process such as the manufacturing of uranium components for a nuclear weapon. Are situations where access is provided but limitations imposed (e.g. limited environmental sampling) accounted for? How has the administration accounted for access if Iran agrees to some, but not all of the access requests? The point is to understand that as straightforward as it may sound to ensure entry to suspect sites, there are issues that can complicate the process.

Time for 'scrubbing' takes on special salience in nuclear-related developments without nuclear material present. Some of the past concealment events carried out by Iran in 2003 left no traces to be detected through environmental sampling. Working on the expectation of possible exposure, it is also prudent to assume that Iran will take all the precaution necessary to minimize its exposure or will otherwise find ways to complicate the IAEA getting answers, well within the 24 days. The psychological deterrence factor of 'snap inspections' provided for under the Additional Protocol is also certainly mitigated under circumstances of a longer timeline. A 24-day adjudicated timeline reduces detection probabilities exactly where the system is weakest: detecting undeclared facilities and materials.

Manufacturing of Centrifuges

In some cases, the IAEA will face greater challenges that come with associated risks. Although excess centrifuges together with dismantled supporting infrastructure at Natanz and Fordow are placed under continuous monitoring by the IAEA, the provisions of the JCPOA allow for an account of Iran's *declared* centrifuge inventory. We also know that with Iran's long nuclear history, there will be some past equipment and skills from older manufacturing workshops that would be harder to account for. The current JCPOA arrangements do not appear to deal with past sites and workshops, which could still be potentially used for the production of centrifuge rotors and bellows.

Procurement Channel

Under the JCPOA, its Joint Commission will create a Procurement Working Group to ensure that all of Iran's procurement will be legitimate. More clarification is needed here. For instance, though Iran is

required to submit dual use equipment under Additional Protocol requirements, the text suggests that the responsibility is for the State(s) seeking to engage with these transfers to submit a proposal to the Working Group. While potentially creating an additional barrier to control procurement, such arrangements will not work well with states that do not have well-enforced or lax export controls systems. With the onus placed on other states, Iran's role could be absolved in cases of disputes.

IAEA⁹ assurances on the overall absence of undeclared centrifuges and other sensitive uranium enrichment equipment will also not come easy. Many other elements will need to be factored in. For instance, key dual use manufacturing equipment such as flow forming and filament winding machines, and raw materials like maraging steel, high strength aluminum and carbon fiber are used elsewhere in Iran, particularly by the military industries. A dedicated procurement channel will follow new acquisition of those commodities. However, the original inventories and historical stock of such materials remain unknown, which reduces the probability of catching undeclared production of centrifuges.

Possible Military Dimensions

Under the "Roadmap for Clarification of Past and Present Outstanding Issues" agreed between the IAEA and the Islamic Republic, Iran will address issues of concern relating to its nuclear program raised in the Annex to the IAEA report of 8 November 2011 (GOV/2011/65). Iran is expected to provide its answers by 15 October 2015, and the Director General will provide an assessment by 15 December 2015. Then, "The E3+3 will submit a resolution to the IAEA Board of Governors for taking necessary action, with a view to closing the issue, without prejudice to the competence of the Board of Governors."

It is however unlikely that deliberation will end on the PMD issues. To begin with, the text refers to only the issues raised in the IAEA report of November 2011. Mr. Amano has stated on several occasions that there is information that some activities have continued in recent years that may not be identical to those in the 2011 report. Sample analysis,

⁹ The IAEA will also monitor declared centrifuges not yet installed and installations declared manufacturing them.

verifying information, and seeking additional clarification is a time-consuming process. The road map also does not specify the kind of inspection and verification activities the IAEA will conduct after receiving the first statements from Iran. This leaves room for flexibility and interpretation – for better or worse – for the IAEA’s next steps moving forward.

One of the biggest challenges facing PMD concerns are some of the items related to nuclear weapon design listed in Annex I of the JCPOA, which are extremely difficult to verify given their non-nuclear nature and lack of easy signature to spot. Items include, inter alia, designing, developing, acquiring, or using computer models to simulate nuclear explosive devices; and designing, developing, fabricating, acquiring, or using multi-point explosive detonation systems suitable for a nuclear explosive device.

IAEA Resources

As envisioned in the JCPOA, the IAEA will need to designate additional inspectors. Given the magnitude of the various tasks at hand, additional skills sets and expertise are required. These include, inter alia, expertise on centrifuge manufacturing and R&D, uranium and plutonium metallurgy and weaponization. While IAEA rules do not allow experts or consultants to be designated as safeguards inspectors, the JCPOA should expect that the IAEA exercise its ability to call in the required experts, particularly in dealing with proliferation sensitive areas.

IAEA Reporting

The JCPOA foresees regular reporting by the Director General to its Board of Governors and to the UN Security Council. The JCPOA also emphasizes the need to maintain the confidentiality of information. Over the years, Iran has repeatedly complained that IAEA reports include too much detailed information.¹⁰ It is essential that the IAEA report its findings in detail so that its member states can make their own independent judgment on the progress of the implementation of

¹⁰ Communication dated 16 June 2015 received from the Permanent Mission of the Islamic Republic of Iran to the Agency regarding the Report of the Director General on the Implementation of Safeguards in Iran, IAEA, INFCIRC/885, 25 June 2015.

the JCPOA and Iran's compliance with its undertakings. For instance, recent IAEA reports have not disclosed any information on Iran's uranium inventories or production numbers. Likewise, meaningful information was short on the Agency's reports on its inspection visit to Iran's uranium mines and milling facilities. Given the scrutiny that will be generated on Iran's implementation of the JCPOA, it is timely for the IAEA to give due consideration to reverting to its past practice of issuing more detailed Board reports.

Broader Conclusion

It will likely take many years before the IAEA can draw the so-called broader conclusion that *all* nuclear material and activities, not just declared ones in Iran, have been placed under IAEA safeguards.

Verifying Iran's large and complex nuclear infrastructure with a history of concealment is going to be long and hard. Challenges are likely to emerge especially over the medium to longer term of the lifetime of the deal as sanctions fall away or additional inconsistencies come to light. The IAEA stands ready to receive an increase in funds, equipment and personnel to fulfill its task. These are essential, but the most important asset is to have the right people to do the job. The durability of verifications work is also keeping up the vigilance in the medium to longer haul as Iran continues with a large nuclear infrastructure and continues to improve its skill sets on nuclear R&D.

I thank this committee for the privilege of testifying and look forward to your questions.

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