The Nuclear Question: what should we demand from Iran?

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The release of the National Intelligence Estimate (the NIE) on Iran by the US intelligence community last autumn—the main point of which being that Iran has with a high degree of probability suspended its military nuclear program in 2003—has further diminished the already weak resolve of the international community to exert additional pressure on Tehran. In such circumstances the question about what the international community should demand from Tehran may seem inappropriate to many. 'Why should we demand anything at all?' one may ask. Perhaps from now on suspicions should be erased and Iran should enjoy its "inalienable rights" to conduct unlimited enrichment on its soil.

And yet this is simply not the case. The fact that Iran allegedly suspended its military program in 2003 (most probably for fear of US military action[i]) does not mean that it will not restart it in the future. Moreover, according to the majority of commentators, what Iran needs to 'go nuclear' is a sufficient amount of weapons-grade fissile material[ii] (highly-enriched uranium or HEU), which is relatively easy to produce if Iranian uranium-enrichment activities are not limited.[iii]

At the same time, Iran has a track record of cheating and defying the international community regarding its nuclear activities. Iran has ignored four successive virtually unanimously adopted binding UN Security Council resolutions and has (until very recently) exhibited a poor level of cooperation with the IAEA on resolving the outstanding issues related to its past undeclared nuclear activities. These activities include Iranian contacts with the infamous A.Q. Khan network, operations with P-2 centrifuges, the so called "green salt project" and experiments with plutonium, to name only a few.[iv] Iranian economic justifications for the need to have a robust industrial-level enrichment program have been as unconvincing as the anti-Israeli rhetoric of its president and the alleged support by Iran of Hezbollah and Hamas (widely regarded as terrorist organizations) has been alarming.[v]

Finally, given the proven inaccuracy of the US intelligence on Iraq and allegations of many commentators that it is at least as bad on Iran[vi] it does not seem viable to blindly rely on the NIE findings (though, even taken as they are, they do not present a rosy picture). It should be noted that such findings do not provide a clue to the Iranian attitude regarding the potential acquisition of a nuclear weapon, a fact which is confirmed by the authors of the NIE.[vii]

In light of the above, it seems that Iran cannot be allowed to conduct an unlimited nuclear program on its soil if the international community does not want to face a nuclear-armed Iran. Not only is the acquisition of a nuclear weapon by Iran a grim scenario *per se,* it is foreseeable that it would prove to be the point of no return for the existing non-proliferation regime as it may trigger a nuclear-arms race in the volatile Middle-East region and beyond. There is also a high degree of likelihood that before Iran managed to 'go nuclear' it would be attacked by the US and/or Israel, which would have devastating implications for the region as well as for global energy security. The history of the Israeli air strikes against the Iraqi reactor in Osirak in 1981 and an unknown Syrian site last year[viii] make such a

scenario look increasingly likely to unfold.

Flawed “zero-enrichment option” and the Evans’s “new redline” proposal

Then what should the international community demand from Iran? So far the core demand of the international community has been suspension of enrichment. This “zero-enrichment” option in the words of Gareth Evans[ix] has been enshrined in several consecutive UN Security Council resolutions. For instance, UNSC Resolution 1737 demands that Iran suspend “all enrichment related and reprocessing activities, including research and development to be verified by IAEA”.[x]

However, this zero-enrichment demand seems unrealistic. First of all, it does not enjoy sufficient international legitimacy. None of the IAEA reports on Iran stipulates that Iran actually conducted a military program in violation of Article II of the NPT. Instead, they basically stipulate that IAEA is still unable to confirm the truly peaceful nature of the Iranian nuclear program.[xi] The allegations contained in the NIE that Iran has abandoned its military program in 2003 only strengthen Iran’s position and give appeal to Iranian rhetoric about its “inalienable rights”, nuclear apartheid waged against Iran and the like.

Another reason why Iran will not agree to fulfill the zero-enrichment demand is that there is no formal criteria it could satisfy which would allow it to restart enrichment-related activities and no fixed term for the suspension of such activities. Nor is it easy to elaborate such criteria or a fixed term which would be satisfactory to Iran. Is it possible for the IAEA inspectors to determine, for example, that Iran has abandoned its alleged intention to pursue a military program and eventually acquire the bomb? The answer is probably no.

Taking into account the apparent lack of political will on the part of the international community, in particular Russia and China, to put meaningful sticks (i.e. painful UNSC economic sanctions) on the table to enforce the said zero-enrichment demand on Tehran, the parties to the dispute seem to have reached a stalemate. In these circumstances the sextet (the permanent five members of the UNSC plus Germany) has agreed on a set of additional symbolic sanctions[xii], the value of which will probably be even less than the relatively toothless sanctions previously in place.

As such, it seems that the flawed core demand from Iran should be changed without allowing Iran to conduct unlimited enrichment. In this respect the president of the International Crisis Group, Gareth Evans, and the International Crisis Group in its 2005 report[xiii] have been consistently advocating his proposal of the so-called “new red line” for Iran.[xiv] Apart from the new redline concept, his proposal contains a detailed phased timeline for the handling of the Iranian nuclear program.

According to Gareth Evans, the “new red line” concept essentially means that the international community should shift the existing red line for Tehran to a demand not to conduct a military program/develop nuclear weapons.[xv] Evans maintains that if Iran is allowed to eventually conduct unlimited enrichment under a robust monitoring regime by IAEA it will be possible to spot the military dimension of the nuclear program if it goes far enough.[xvi] However, the fact that the cheating by Iran was revealed not by IAEA inspectors working under the safeguards regime but by Iranian dissidents[xvii] makes the ability of IAEA to promptly discover military conversion by Iran doubtful. The North Korean experience whereby DPRK had secretly developed a military program with IAEA inspectors on the ground before expelling them at an appropriate time, withdrawing from the NPT and conducting a nuclear test[xviii], adds to this concern.

The aforementioned phased timeline contained in the International Crisis Group report and Evans’s proposal is also

not without flaws. The first phase actually provides for a temporary (for 2-3 years) suspension of all enrichment-related activities by Iran. During the course of the second phase (3-4years) Iran would only be allowed to conduct enrichment at R&D level.[xix] These requirements, however, are not conceptually different from the zero-enrichment option observed above and criticized by Evans himself.

Limited industrial enrichment option may be the answer

There is, however, another option which may serve to avoid the shortcomings of both the zero-enrichment option and Evans' proposal. The essence of this option is that the international community should demand that Iran limit the conduct of its enrichment program to a specific amount of P-1 centrifuges and to the physical location of Natanz Fuel Enrichment Plant (Natanz FEP).

The main question is how to determine the amount. Conceding that it is the job of nuclear scientists and IAEA officials to set the exact figure, it is nevertheless possible to establish the principles and reference points for its determination.

To start with, such the amount should be insufficient for Iran to produce enough HEU for a nuclear bomb in a period of time too short for the international community to identify the breakout and adequately respond. If Iran acquires a nuclear deterrent it will be very difficult to disarm it (as demonstrated by the experience with the DPRK).

At the same time, the maximum amount of P-1 centrifuges should allow Iran to produce a sufficient amount of LEU (low-enriched uranium) to satisfy their current reasonable needs for nuclear energy. This should be determined on a joint basis by Iran and the IAEA.

Of course, neither of the above principles is easy to apply and they may well seem mutually exclusive at first sight. In order to determine the maximum amount in accordance with the first principle we should determine the minimum period sufficient for the international community to identify and adequately respond to potential Iranian breakout.

So far Iran has allegedly set up approximately 3000 P-1 centrifuges in Natanz[xx] and is planning to increase this amount up to 54000.[xxi] Though at present it is impossible to say exactly how many centrifuges Iran needs to produce enough HEU for a bomb in a given period of time, some conclusions may be drawn from the fact that the majority of analysts agree that with 3000 P-1 centrifuges Iran may, in principle, produce enough HEU for one bomb within approximately a year.[xxii] In contrast, with 54000 centrifuges in place Iran will probably be able to produce the amount of HEU needed for a bomb in a few weeks in case of a breakout scenario[xxiii] (the foregoing further referred to as the "HEU Breakout Scenario"). Another breakout scenario envisaged by analysts, is Iran producing a large stockpile of LEU and then rapidly converting it into HEU for a bomb (the "LEU Breakout Scenario").[xxiv] In each of the said breakout scenarios the minimum time frame needed for the international community's response is determined by the ability of the IAEA and (or) any national intelligence to spot the breakout and of the US and/or Israel to bomb the Iranian nuclear sites, particularly Natanz.

If we look at 10 air strikes conducted by the US and Israel between the 1981 bombing of the Osiraq reactor and 2006 War with Hezbollah, it is possible to say with a high degree of probability that none of them took more than 2-3 months to launch following the triggering event (or principle decision). The majority of the strikes were launched within a month following the triggering event. Therefore, if history is any guide, it is possible to assume that 3 months can be regarded as a maximum time period needed for the US and/or Israel to bomb the Iranian nuclear facilities in case of a breakout. Thus, if Iran may produce the amount of HEU necessary for 1 bomb per year with 3000

centrifuges, within the range between 5000 and 10000 P-1 centrifuges Iran will probably be unable to produce a sufficient amount of HEU within 3 months in case of the HEU Breakout Scenario.

Skeptics may contend at this point that the proposed approach will not serve to prevent the LEU Breakout Scenario. Acknowledging the risk, it is important to note that the suggested approach will not be confined to a limited amount of P-1 centrifuges only. For example, Iran may be required to submit the produced (but not put into the reactor) LEU to special sites controlled by the IAEA. Iran may also be subjected to a robust monitoring regime beyond the requirements of the Additional Protocol (signed but not ratified by Iran) if Iran wants to enrich on its soil.

As far as the Iran's current energy needs are concerned, their official nuclear energy plans envisage installing 6000-7000 megawatt capacity over the following decade.[xxv] However, so far, Iran has only two industrial-level nuclear reactors under construction (the 1000 MW light-water reactor in Bushehr and the 40 MW heavy-water reactor in Arak).[xxvi] None of them will actually require nuclear fuel in the foreseeable future since under the terms of the construction of the Bushehr reactor all the fuel will be supplied by Russia[xxvii] and the Arak reactor does not require LEU for fuel.[xxviii] Moreover, at present Iran reportedly possesses components for only 5000 additional P-1 centrifuges.[xxix] Therefore, the figure of 5000-10000 P-1 centrifuges as a reference point for determining the maximum amount of P-1 centrifuges permitted to be assembled by Iran in Natanz FEP does not appear incompatible with the Iranian nuclear energy needs.

In light of the above, it seems that it is, in principle, possible to determine the amount of P-1 centrifuges Iran may be allowed to assemble for limited industrial enrichment of uranium in Natanz FEP.

It can be argued that it would be a highly complex task to monitor Iranian compliance. However, if Iran is subjected to a robust monitoring regime, as the International Crisis Group advocates[xxx], it will probably be easier to identify a sharp transgression over a set amount than it would be to identify a potential military dimension of the nuclear program, since the latter does not require industrial scope for its conduct and can be conducted in secrecy.

Skeptics might also claim that the method of determination of the maximum amount of P-1 centrifuges rests on a flawed premise of the need to allow for a time period for the US and or Israel to respond by air strikes if Iran breaks out. However, as the North Korean experience demonstrates, if Iran indeed starts producing HEU, nothing short of the military option—or a credible threat thereof—would have the potential to curb such a breakout (unless all major consumers ceased importing oil and gas from Iran – an unlikely scenario).

Another critique may focus on the absence of the concrete time frame for the suggested limitation of the number of Iranian centrifuges. However, such a time frame is difficult to establish. The bitter truth is that the current non-proliferation regime does grant states such as Iran access to fissile material. Therefore unless the rules of the game change as a result of the NPT Review Conference scheduled for 2010[xxxi], or the dispute over the Iranian nuclear program is otherwise settled, the limitation proposed in this article should remain in force.

Finally, it may be argued that the limited industrial enrichment option advocated in this article is not viable since Iran will probably reject it out of hand. This may indeed be the case but it is not an inevitable scenario. In fact, the endorsement of this approach by the international community would mean that the right of Iran to enrich uranium on its soil is acknowledged. This would lower the appeal of aggressive Iranian rhetoric at home and abroad and would make it more costly for Iran to reject the proposal out of hand.

Conclusion

It is important to acknowledge that the proposal of handling the Iranian nuclear impasse outlined here is not a panacea and requires greater elaboration and perhaps a technical (and scientific) feasibility study. Nevertheless, it is becoming increasingly evident that the current approach of the international community to settling the Iranian issue—based on the zero-enrichment option—is critically flawed in its perhaps most important element: the core demand from Tehran. The approach suggested in this article may be an important step forward in finding a way out of the current stalemate.

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[iii]Ibid.

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[xvi]Ibid.

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