

The Iranian Problem: is a Diplomatic Solution Still Possible?

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It is hard to be optimistic these days about a diplomatic solution to the Iranian nuclear problem. But in recent years, diplomatic efforts to dissuade Iran from developing a nuclear weapons capability have not been entirely unsuccessful. Throughout the 1980s and 1990s, many countries were dissuaded from selling sensitive nuclear technology to Iran. Russia and China were among the last to be persuaded; they each did so when Washington persuaded them it was worth their while. Beginning in 1985, the black market provided an alternative route that allowed Iran slowly to build up a uranium enrichment programme and the beginnings of a plutonium production capability. Since 2004, efforts led by the US and European partners have dried up much of that black market, making it difficult for Iran to rapidly expand the enrichment programme.

In 2003, European negotiators persuaded Iran to suspend the enrichment activity. Although the suspension was incomplete, fitful and temporary, it was a small victory for diplomacy. More recently, diplomatic efforts have led to the imposition of strict sanctions on Iran that have served to limit its access to illicit nuclear- and missile-related materials and the ability to finance overseas procurement.

Sanctions, however, have not achieved their primary purpose of bringing about a policy change in Tehran. Iran continues to produce enriched uranium for which it currently had no civilian purpose. The 3.5% low enriched uranium (LEU) stockpiled at Natanz is not necessary to fuel the Bushehr reactor, for which Iran has a guaranteed lifetime supply from Russia. Iran now

says the LEU is for fuel for some future reactor at Darkhovin that will never be built as long as Iran remains an outlaw nation. It cannot procure the heavy metal pieces necessary for the reactor pressure vessel, nor can Iran safely produce these components on its own.

Iran professes that its nuclear program is only for peaceful purposes. This stated policy is underscored by a religious ruling. Professions of innocence are belied, however, by the facts. As documented by the IAEA in 2003, Iran systematically violated IAEA safeguards in 14 kinds over the course of 18 years. Iran continues to obstruct IAEA investigations of alleged weapons development work. It also continues to violate the IAEA requirement for early notification of new nuclear facilities. Notwithstanding the civilian-energy purpose of projects such as the Bushehr power reactor, the evidence indicates beyond reasonable doubt that Iran also seeks a capability to produce nuclear weapons. The “purely peaceful” justification is not credible.

On the positive side, the enrichment program based at Natanz has been delayed by technical troubles stemming from the faulty design of the first-generation centrifuge employed and industrial sabotage, including targeting by the Stuxnet computer malware. Iran’s ability to operate many more than about 4-5,000 centrifuges at Natanz is limited by its access to key raw materials and equipment. Despite claims of self-sufficiency, the enrichment program is still dependent on foreign supplies of certain materials and components. Iran may be able to overcome these constraints over time, but strict application of export controls and intelligence scrutiny of global black markets will hamper its ability to rapidly expand uranium production.

Notwithstanding the technical troubles at Natanz and centrifuge-production limitations, Iran has already produced about 4,000kg of low-enriched uranium, which if further enriched to weapons grade – and it is a big “if” -- would probably be enough to produce two nuclear weapons. If Iran

were to use the Natanz facility for this purpose, it would take a little over 1.5 years to produce the first bomb's worth of HEU. In theory, a quicker path, called a batch enrichment process, could produce the first weapon's worth of HEU in six months. However, this method has never been done in practice. Whichever method were used, at least six more months would be required to convert the gasified HEU into metal and fashion it into a weapon. This timeline means there is still time for diplomacy.

Developing a means to deliver a nuclear weapon adds to the timeline. But Iran is also working hard on this element. Iran acquired the *Nodong* from North Korea, renamed it the *Shahab-3*, then made its own variation, the *Ghadr-1*. Interesting, this missile, with its distinctive "baby-bottle"-shaped nosecone, showed up at a Pyongyang military parade last October. This suggests that missile cooperation between the two countries has become reciprocal. Iran's most capable missile, the solid-fuel propelled *Sajjil-2*, is still 2-3 years away from becoming operational. Its range of 2,200-km or more would allow it to hit Israel and other targets even when fired from protected positions well away from the country's borders.

Use of the centrifuges at Natanz for HEU production would inevitably give the IAEA several weeks' warning, at the very least. Therefore, if Iran did decide to build a nuclear bomb, it would probably try to do so through a parallel secret set of facilities in order to bypass inspectors. To succeed, Iran would have to keep secret both the enrichment plant and the upstream feed-material chain: uranium mining, milling and conversion to gasified form. Iran's willingness to construct secret enrichment facilities, and not to report them to the IAEA until they are discovered, is thus extremely troubling. Notwithstanding Iran's lack of success so far in keeping facilities secret, detection of clandestine enrichment facilities is uncertain. Iran's 2006 suspension of its adherence to the Additional Protocol, which granted IAEA inspectors access to

more sites, increased the uncertainty about clandestine production. Iran's declaration in December 2009 that it intends to build a total of ten other enrichment plants, while surely an exaggeration given Iran's inability even to fully outfit Natanz, added to the international unease caused by the 2009 revelation of a previously secret enrichment plant at Fordow.

If Iran truly had nothing to hide, there would seem to be little purpose in insisting on positions that do nothing but hide its nuclear activities. Iran broke off implementation of the safeguards Additional Protocol, repeatedly bars experienced IAEA inspectors and is the only proponent of an obsolete version of a safeguards provision on early notification of new facilities. These actions seriously impede the IAEA's ability to detect nuclear-weapons indicators.

Nevertheless, the claim of peaceful intent, and the religious prohibition that underlies stated policy, could be a useful basis for a negotiated solution to the problem. Iranian policymakers surely recognize that nuclear weapons would make their nation a target of international hostility, spur further proliferation in the region and extend America's policy of nuclear deterrence to their neighbourhood. The temptation to eventually translate nuclear potential into reality could be difficult to resist once the option is available to them. Yet there is reason to expect that Iran will be content to have a nuclear-weapons option without actually producing nuclear weapons.

Whether or not Iran's adversaries will allow it to become a virtual nuclear-capable nation is uncertain, especially as it increases its stockpile of enriched uranium and installs more powerful centrifuges. If Iran is able to produce large numbers of more advanced centrifuges, the break-out options will become more alarming. At present, however, the likelihood that any dash by Iran for a bomb would be detected before it assembled a single weapon, much less the small arsenal that would be needed to make break-out worth the risk, allows time for a negotiated solution, should Iran's leaders decide to seek one.

Unfortunately, those leaders show no sign of wanting a negotiated solution, unless it were to mean acceptance of Iran's nuclear program with minimal constraints. Iran has stated a willingness to accept some further transparency, although not more than what is required of other countries. This is problematic because, given its record, Iran will have to undertake extra responsibilities if it is to climb out of what former IAEA Director General Mohamed ElBaradei called its "confidence deficit." Iranian acceptance of the additional inspector access provided for in the Additional Protocol would be a necessary condition, but this measure alone would not provide sufficient confidence that Iran's intentions are purely peaceful. Further transparency would be required – a kind of "go-anywhere, anytime" inspection authority sometimes called an "Additional Protocol plus". Concerned states would also want to see limits put on Iran's enrichment program and a foreswearing of reprocessing technologies that would allow Iran to separate weapons-usable plutonium from its reactor spent fuel. Negotiating such limits does not seem possible at a time when Iran, such as at the Istanbul meeting in January, does not even want to talk about a revised form of nuclear fuel swap that would require it to send the bulk of its enriched uranium out of the country.

Some analysts believe there is no foreseeable diplomatic solution to the Iran nuclear crisis, and that protectors of the non-proliferation regime should direct their efforts instead to seeking to prevent additional states from following in the footsteps of North Korea and now Iran. Yet whatever way the world addresses, or fails to address, the Iranian nuclear issue will have a knock-on impact on the next would-be proliferator. If Iran is granted an explicit right to enrichment notwithstanding its record of violations and the clear military purpose of its program, then it will be much more difficult to dissuade other states in the region from developing nuclear weapons capabilities of their own.

A combination of clear incentives and disincentives may yet persuade Iran to seriously consider means of limiting its nuclear programme to strictly peaceful purposes and to accept ballistic missile transparency measures such as through the Hague Code of Conduct. Ideally, the US-Russia ban on intermediate-range ballistic missiles should be extended to other states, including Iran. Other non-military means can help to limit Iran's nuclear and missile capabilities. Export controls should tighten, and compliance with NPT obligations enforced with stricter compliance measures. UN Security Council Resolution 1929 and the stricter sanctions imposed by the European Union and other countries in 2010 is already having an effect. Russia's denial of the S-300 air defence system was an additional shock to Tehran. The EU decision to add more than 100 Iranian companies to the assets freeze demonstrates that the pressure will only tighten if Iran continues its current path. Adding the Hamburg-based European-Iranian Bank to the blacklist is particularly important in order to impede Iran's ability to finance black-market trade.

Deterrence and containment policies will also be necessary to dissuade Iran from crossing the line between a nuclear capability, which it already has, and weapons production. These various diplomatic measures may not produce a solution to the problem. But if we are lucky they will serve to constrain weapons break-out until the day when Iran, perhaps ruled by leaders with a different mindset, decides that international engagement and cooperation is a better strategy than defiance and isolation.