



## PROJECT ON MANAGING THE ATOM

# Beyond Zero Enrichment: Suggestions for an Iranian Nuclear Deal

### BOTTOM LINES

- **Ultimately, we have three options on Iran: (1) Acquiesce to its nuclear program and try to contain it, (2) Negotiate a deal, or (3) Launch military strikes.**
- **Both acquiescence and military strikes would pose major risks to U.S. and international security.**
- **Zero centrifuges in Iran would be the best outcome for the U.S. and international security. But there is virtually no chance that Iran will agree to zero enrichment in response to any set of sanctions and inducements the United States can plausibly put together. Insisting on zero will mean no agreement, leaving the world with the risks of acquiescence or military strikes.**
- **It is time to begin thinking about what the least bad options might look like. Allowing some enrichment on Iranian soil may offer the lowest risks to U.S. security of the many bad options now available.**

*By Matthew Bunn*

The United States and the other members of the P5+1 are struggling to launch the first in-depth negotiations with Iran over its nuclear program in which the United States has participated. The United States comes to the table with few good options. Sanctions have failed to change Iran's decisions about its nuclear program, and no feasible set of sanctions (given the limits of what China, Russia, and others will agree to) is likely to convince Iran to give up its enrichment program. Military strikes against Iran would probably not set back Iran's program for longer than a brief period and would greatly increase Iran's incentive to go straight to the bomb at covert sites (as Iraq did after Israel destroyed its facilities at Osiraq).

At the same time, Iran is extremely unlikely to agree to the outcome the United States prefers: zero enrichment of uranium. It already has more than 8,000 centrifuges

in place, and Tehran has succeeded in framing the issue domestically as "colonial powers are trying to take away our god-given right to technology." There is no faction in Iran that supports giving up its right to enrichment. Indeed, zero enrichment is so unlikely it should not be the basis of policy.

A continued stalemate does not serve U.S. interests. With no agreement, Iran's capabilities will continue to grow, and the uncertainty is already provoking others in the region to hedge their options. Pressure for U.S. military action, and the likelihood of Israeli military action, will grow. The hostile atmosphere will also undermine reformers in Iran and strengthen its anti-American factions.

Some form of negotiated agreement, if it can be achieved, is the "least bad" option for U.S. interests – but is likely to have to include some continuing enrichment in Iran. There are real security risks in

agreeing to permit some ongoing enrichment in Iran, but if appropriately managed, these security risks are less than those created by a military strike or allowing Iran to continue unfettered enrichment with no agreement.

## AN AGREEMENT MIGHT CHANGE IRANIAN THINKING FOR THE BETTER

If Iran is determined to get a nuclear bomb and there is a government consensus behind that objective, no negotiated solution will work – Iran will either reject or violate any agreement that would stand in the way. But it appears that while some factions support building nuclear weapons, others believe Iran can get most of what it seeks by putting a weapons option in place, without actually building a bomb. If this is the case, a negotiated agreement might actually change Iranian thinking about nuclear weapons. Once Iran began receiving the benefits of an agreement, the arguments of those who wanted to maintain the agreement would be strengthened, and the political threshold that would have to be crossed to build a bomb would be raised. A U.S.-Iran agreement would reduce Iran's perceived security threats – thus undermining opponents of the agreement. And by providing non-nuclear benefits to Iran, an agreement would bring other voices into Iranian decision-making (e.g., the finance minister or the oil minister), who may be less enthusiastic about Iran's nuclear ambitions and more sensitive to costs.

## RISKS OF AN AGREEMENT

There are three key risks of an agreement that permits continued uranium enrichment in Iran.

- **Breakout at declared facilities:** Iran could use its known, monitored facilities to produce weapons material and, ultimately, nuclear weapons.
- **Use of covert facilities:** Iran could establish covert enrichment or plutonium production facilities – and use that material for weapons.
- **Global precedents:** Any agreement that allowed continuing enrichment in Iran would have an effect on global nonproliferation efforts, and

particularly efforts to convince other states not to pursue enrichment of their own. It also would impact security balances in the region and the credibility of the UN Security Council. There may be a perception that Iran “got away with” defying the major powers and the Security Council.

Of these three, a breakout at Iran's known facilities is the least likely. Using declared facilities would advertise the violation and provoke a response; the facilities also might be destroyed before sufficient weapons material was produced. Though Iran today has approximately enough low enriched uranium (LEU) to produce about two bombs, should it be enriched further, it would take weeks to months to modify Natanz and produce highly enriched uranium – and Natanz might well be destroyed during that period.

## LIMITING THE RISK OF BREAKOUT AT DECLARED FACILITIES

It may be possible to negotiate measures that would reduce the risk of a breakout at Iran's declared facilities. These might include:

- Verification measures that would rapidly detect modification and HEU production.
- International ownership and 24/7 international staff, which would improve verification and increase the barriers to using the facilities for weapons purposes. (An international staff would also be more likely to notice if significant numbers of the Iranian staff were disappearing to work on covert facilities.) The potential risk is that an international staff would inevitably bring some additional centrifuge know-how. This approach also adds “legitimacy” to Iran's ongoing activity.
- Limiting the number of centrifuges to a low level. However, it is unclear how much rollback is possible. Another option is to put some centrifuges on a “cold standby” – to not dismantle them, but to not keep them spinning. It could take weeks to get them going again.
- Shipping LEU out of the country for fabrication. This approach, now the focus of discussions,

would be significant because making HEU from natural uranium takes roughly four times as much work as making HEU from LEU.

- Broad transparency measures, such as access to records, interviews with key experts, and the like.

## LIMITING THE RISK OF USE OF COVERT FACILITIES

Covert facilities are the most likely Iranian path to a bomb, and the most difficult to address – a risk that was highlighted by the revelation of a covert facility near Qom. Military strikes would not, however, resolve the problem of covert facilities (if the facilities are hidden, the military would not know where to strike), and neither would an agreement on zero Iranian enrichment (since inspectors might not find a hidden facility either). The best that can be done is to reduce Iranian incentives to take this route by: (1) Increasing the costs to Iran of being caught violating the agreement. This could include increasing the ongoing benefits Iran would receive in a deal – so that stakeholders in Iran would not want to forego those benefits. (2) Increasing Iran's assessment of the probability it would be caught violating the agreement – through the Additional Protocol and other transparency measures. These could include expanded, private interviews with scientists and engineers, expanded verification at the conversion facility, and increasing requirements for reporting and access to all centrifuges, production and procurement. Although “zero” is easier to verify than any other number, the agreement can focus on zero centrifuges and zero procurement of key components outside of the agreed regime, so that any undeclared centrifuge or procurement detected would be a violation.

To build confidence in the absence of covert procurement and manufacturing, P5+1 negotiators should propose:

- Declaration and monitoring of all centrifuge manufacture and testing,
- Declaration of all purchases (domestic and foreign) of key centrifuge components, key materials (e.g.,

managing steel), and

- Opportunities to interview key participants (designers, managers, procurement officers).

## MITIGATING THE GLOBAL PRECEDENT

Should Iran be allowed to continue to enrich uranium on its soil, it could set a precedent that would ripple through the region and also impact other global nonproliferation efforts. This is the most difficult of the risks of an agreement with Iran to manage. Israel and the Gulf states will be concerned over the lingering potential for Iran to violate a pact and produce a bomb. Moreover, states in the region and elsewhere may be less likely to accept deals in which they commit not to enrich or reprocess (similar to the recent deal struck with the United Arab Emirates). However, it is also possible that the credibility of the UN Security Council could be increased by finding an appropriate resolution to the conflict, and that global nonproliferation regime could be strengthened by an Iran without nuclear weapons.

Plausible steps to mitigate these risks include:

- Emphasize the opprobrium and sanctions Iran endured as a result of noncompliance, until it was willing to reach, and comply with, a reasonable agreement with the international community.
- Emphasize that enrichment in Iran is only acceptable on a limited basis under unprecedented controls.
- Emphasize this agreement as a new model of a more stringent approach to sensitive fuel cycle activities.
- Negotiate Iranian steps to come into full compliance with IAEA safeguards. This need not require full Iranian “confession” on its past weaponization activities.
- If possible, negotiating a short-term suspension of enrichment and reprocessing work would have value, as, in combination with safeguards compliance and broad transparency, it would mean Iran had complied with the Security

Council resolutions. The security benefit of short-term suspension, however, is not worth sacrificing other major elements of an agreement.

## OUTLINE OF A LIMITED COMPROMISE

Here is one example of what a compromise with Iran could look like:

- The P5+1 agrees to allow some operational centrifuges in Iran.
- Iran agrees to limit enrichment to 2-8 centrifuge cascades (other centrifuges in place, but not operating).
- All centrifuge operations, R&D, manufacture (also other sensitive nuclear operations) are shifted to international ownership with a 24/7 international staff.
- Iran agrees to the Additional Protocol and broad transparency measures.
- The P5+1 implements an incentives package (trade, nuclear assistance, etc.).
- Bilateral and multilateral dialogues are established to address other issues over time – including recognition and an end to sanctions if these other issues are successfully addressed.
- The United States pledges not to attack Iran and not to attempt to overthrow the regime as long as (a) Iran complies with its nuclear obligations, (b) Iran does not commit or sponsor aggression or terrorist attacks against others.

## THE COMPLIANCE PROBLEM

One of the key realities negotiators must face is that Iran has violated past agreements and may violate a new one. The United States should work with the rest of the P5+1 to ensure that there is real agreement that if Iran agrees to a pact with all of the P5+1, and then violates it, they will jointly support severe sanctions in response. Such an agreement should be as specific as practicable to minimize the chances of a dispute over whether Iran is complying. In the event of noncompliance, the U.S. and others should be prepared for rapid action.

## TIME AND FLEXIBILITY NEEDED

Time and flexibility are likely to be needed in order to overcome 30 years of mistrust between the United States and Iran. Many on each side are convinced the other side is not negotiating seriously. Setting tight deadlines (such as six months) is likely to be a recipe for failure. Ultimately, to get Iran to address the P5+1 concerns, the P5+1 must address Iran's concerns – a deal not seen as serving Iran's interests, as well as ours, will be rejected or will fail.

*This policy brief is based on a more detailed talk Bunn gave to the Managing the Atom Project at Harvard Kennedy School's Belfer Center in Sept. 2009. Download the slides here:*

<http://belfercenter.org/publication/19605/>

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## RELATED RESOURCES

Miller, Steven E. "Proliferation Gamesmanship: Iran and the Politics of Nuclear Confrontation." *Syracuse Law Review* 57, no. 3 (Spring 2007): 551-599.

<http://belfercenter.org/publication/870>

Allison, Graham. "A New Red Line For Iran." *Washington Post*, June 1, 2009.

<http://belfercenter.org/publication/19075>

Maleki, Abbas and Matthew Bunn. "Finding a Way Out of the Iranian Nuclear Crisis." Paper, Science, Technology, and Public Policy Program, March 23, 2006.

<http://belfercenter.org/publication/3149>

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