By Greg Thielmann
Washington pundits spend too much time warning about the immediate danger of an Iranian nuclear weapon, instead of focusing on the ways we can dissuade Iran from building one in the first place. But alarmist estimates provided earlier this month require a response regarding timelines, for we have every reason to believe that an Iranian bomb is neither imminent nor inevitable.

A Washington Post editorial on September 6 predicted, on the basis of a Bipartisan Policy Center study, that Iran could produce sufficient highly enriched uranium for a weapon in as little as 62 days, "a timeline that could fall to 12 days by the end of 2012." Greg Jones of the Nonproliferation Policy Education Center even contended in a September 9 New Republic article that "the international community has no choice but to already treat the Islamic Republic as a de facto nuclear state."

The public is fortunate to have received this week two alternative contributions to the discussion, which offer more sober and judicious assessments on Iran's timeline.

The first was provided by Mark Fitzpatrick, Director of Nonproliferation and Disarmament at the International Institute for Strategic Studies in London. Speaking on a panel hosted by the Arms Control Association on September 19, Fitzpatrick expressed high confidence that Iran "...won't have [a nuclear weapon] tomorrow or next week or next month or a year from now." To predict otherwise, he added, "borders on the irresponsible."

Fitzpatrick criticized five "worst case assumptions" used in recent reports about Iran's nuclear timeline:
(1) That Iran would use an unproven method to produce highly enriched uranium

Most countries have gone about producing highly enriched uranium, the way that Pakistan also used and that the Pakistani nuclear engineer A.Q. Khan sold to Libya and that the South African courts made public in their prosecution of two of the assistants to Khan. It's a four-stage process and it requires some configuration of piping and so forth. But the people who think that Iran could take a different process, one that has been explored in the literature by some very intelligent people, it's called batch processing. It assumes that you don't have to reconfigure any piping. You just put the low enriched uranium back through the same centrifuges and out would come bomb-usable highly enriched uranium. And it's all theoretical. ... They make sense, but why would Iran use a process that nobody has ever been known to use before in practice? I think if they're going to go for a bomb they'd use something that was tried and true and that they have the blueprints for.

(2) That Iran would be able to produce enough highly enriched uranium before the IAEA inspectors
would catch onto it. Now, that window of time on average is about one month between IAEA inspections. But it's not exactly one month. Iran wouldn't know when the next inspection would come, because it's a bit random. So there's a built-in assumption that somehow Iran would be able to game the IAEA. It would be a big gamble.

(3) That the amount of low enriched uranium...necessary...to produce a bomb's worth of highly enriched uranium is static. And...physicists can tell you how much it is. But when I've talked to people who have actually produced weapons using highly enriched uranium, they say, you know, it's a great difference between how much is necessary the first time for the first bomb and then for the subsequent bombs. So doing analysis you have to take into account what is sometimes called a wastage factor. There's a certain amount of the gasified form that gets caught up in the cold traps. And you can recapture it later but if you're trying to produce as much highly enriched uranium as quickly as possible, you've got to take into account this wastage factor. And then when you process the gasified uranium to uranium metal, then form it, there's another wastage factor there. Most analyses leave that out.

(4) That once Iran produces enough highly enriched uranium for a weapon, [it] would quickly be able to form it into a bomb, ... to carry out all of the steps for weaponization concurrently with producing the highly enriched uranium and then it would only be a matter of a couple of days before they'd have a bomb. In theory, I guess that's right. But in practice, for a country that's never done it before, to be able to go through the conversion, the shaping, the assembly, all the steps needed to produce a nuclear weapon with the limited number of experts, some of whom are not here today because they've been decapitated – ...I don't think Iran would be able to do it so quickly. Based on the unclassified literature, we estimate six months to weaponize. And that has to be added to the timeframe.

(5) That Iran would be so foolish as to go for broke to produce just one weapon. So all the assessments are made of how long [it takes to] get one weapon. But what country in [its] right mind would just go for one weapon, take all of the risks of being bombed and breaking out of the NPT to get just one? Maybe it wouldn't work. Maybe they'd want to test it. Maybe they'd want one for second strike capability. So you know, pretty soon you're up to four weapons. They'd need a handful, I think the way North Korea did.

A second contribution came from David Albright, Paul Brannan, and Christina Walrond of the Institute for Science and International Security. ISIS published a technical rebuttal on September 20 of Greg Jones's estimative assumptions, which concluded that Jones's method of calculation was "unreliable in predicting the production of weapon-grade uranium in a breakout at the FEP, even as a worst case." Instead, ISIS found no reason to change its earlier breakout estimate of six months at the Natanz Fuel Enrichment Plant. The ISIS analysis included a reminder that the U.S. Government's breakout projection is even longer (as is Fitzpatrick's), principally because it assumes that Iran would conduct the more reliable but time-consuming "repiping" process rather than "batch enrichment" in producing weapons-grade material.
As recently as February of this year, Director of National Intelligence James Clapper assessed that Iran is keeping open the option to develop nuclear weapons and that it would be guided by a cost-benefit approach. The ultimate outcome is a question of Iranian political will, not technical capacity.

The international community has imposed sanctions on Iran in response to Tehran's flagrant violations of its IAEA obligations and its flaunting of UN Security Council resolutions. The country's economic, diplomatic, and military power is declining as a consequence. Yet Tehran still apparently interprets progress toward a nuclear weapons option as serving its existential security objective of deterring attack. So there is still a need to adjust the inputs into Iran's cost-benefit equation.

With continued enforcement of targeted sanctions, a willingness to forgo making military threats, and increased readiness to exploit opportunities for opening up a diplomatic pathway, there is ample time to solve the Iranian nuclear challenge.

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