Rouhani and Iran's Nuclear Progress

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Brief Analysis

Iran's new president will soon be tested on his ability and willingness to address international concerns about his country's nuclear program.

The latest International Atomic Energy Agency report on Iran, which the organization's board of governors will discuss in Vienna next week, shows that Tehran has continued to build its nuclear capabilities, particularly its capacity to suddenly break out from its treaty commitments and build a nuclear weapon if it so desired. Although Iran denies having a nuclear weapons program, this growing potential to dash toward a bomb will likely complicate diplomatic discussions in the next few weeks, especially after President Hassan Rouhani's expected September 23 arrival in New York for a UN General Assembly meeting. Iranian officials are also scheduled to meet with the IAEA in Vienna on September 27.

MAIN REASONS FOR CONCERN

Interpreting the significance of the IAEA's August 28 report has proven difficult for non-experts: for example, compare the recent New York Times headline ("Iran Slows Its Gathering of Uranium, Report Says") with one from the Financial Times ("Iran Boosts Advanced Uranium Enrichment Capacity, UN Report Shows"). The core of the report -- which covers developments across the whole range of Iran's known, declared nuclear activities since the previous report in May -- is the series of sections assessing Tehran's progress on uranium enrichment, its construction of a reactor that could produce plutonium, and its degree of cooperation (or lack thereof) in explaining the program's "possible military dimensions."

Uranium enrichment. Iran continues to enrich uranium and increase the number of centrifuges installed, including

around 18,000 of the IR-1 type centrifuge and 1,000 of the more efficient IR-2m type. Yet it will not need more than a small fraction of the enriched uranium it has already produced in the foreseeable future, let alone new uranium. Its sole nuclear power reactor uses low-enriched fuel supplied by Russia. Tehran persists in claiming that it needs some of the new enriched uranium it is producing to fuel a research reactor in the capital, despite refusing a past international offer to supply such fuel.

Worryingly, this research reactor requires 19.75 percent enriched uranium; Iran is currently producing 20 percent enriched fuel for it. In 20 percent fuel, the ratio of ordinary uranium-238 to its fissile isotope uranium-235 has already been processed from the 993:7 figure seen in natural uranium to 28:7, just short of the 1:7 needed for weapons-grade uranium. Iran continues to convert some of its 20 percent uranium into an oxide form, but most of this oxide (apart from a small amount that has been further processed into fuel plates) should be considered part of the enriched stockpile because it is comparatively easy to reconvert into centrifuge feedstock.

The increase in Iran's centrifuges and enriched uranium stockpile has opened the door for multiple breakout scenarios at the Natanz and Fordow enrichment plants, especially if there are other undeclared plants available. For the past three years, discussions of Iran's breakout potential centered on its steadily growing stockpile of 20 percent uranium, but the number of centrifuges is now so great that the arithmetic has changed: the government's huge stockpile of 3.5 percent enriched uranium is now a crucial part of the calculation. As a result, a previous diplomatic proposal -- asking Iran to cap enrichment at 20 percent and ship most of that material abroad -- is now much less relevant in terms of curbing the risk of breakout.

The Arak heavy-water reactor. This research reactor will use natural-uranium (i.e., non-enriched) fuel rods, and it will be "moderated" using heavy water. Yet such reactors also produce plutonium, which could serve as an alternative nuclear explosive if separated from the spent fuel. Although Iranian officials told the IAEA that construction delays had pushed the reactor's start-up date to after the "first quarter of 2014," they subsequently indicated that "start-up" means "commissioning using nuclear material," according to a footnote in the latest report. This ambiguous phrasing could complicate any attempt to take military action against the facility if it became necessary, though another footnote indicates that Iranian officials told the IAEA three days before the report was published that they would give the agency notice "at least six months prior to the first introduction of nuclear material into the facility."

As soon as nuclear fuel is brought to a reactor site, the whole facility becomes politically "unbombable" because of IAEA resolutions regarding attacks on safeguarded nuclear plants. And once the fuel is inserted and the reactor has gone critical, any military strikes could cause huge radiation emissions. (Israel's 1981 raid on Iraq's nuclear reactor and its reported 2007 raid on Syria's reactor both took place before nuclear material was inserted.)

Possible military dimensions. The IAEA remains frustrated at Iran's lack of cooperation regarding "undisclosed nuclear-related activities involving military-related organizations, including the development of a nuclear payload for a missile." Tehran has dismissed these concerns, which focus on the Parchin facility on the outskirts of the capital. Unidentified "member states" have told the agency that Iran conducted "hydrodynamic experiments" at Parchin, an indication that it may be trying to perfect the type of implosion device needed to make an atomic bomb using highly enriched uranium or plutonium. The government continues to block IAEA requests to visit the site and has bulldozed and asphalted the areas of concern, preventing the agency from taking potentially revealing samples even if it were allowed there.

IMPACT OF SYRIA DEBATE

Since the IAEA released its Iran report, Washington and other capitals have been absorbed in the debate over allegations that Syrian used chemical weapons on its own people. President Obama decided to delay a U.S. response until Congress has had time to debate the evidence; intentionally or not, this approach may well affect the Iranian nuclear issue.

Washington's current policy toward Iran is based on the belief that U.S. intelligence will provide timely warning if Tehran decides to make a nuclear bomb. The assumption is that Iran cannot break out and produce sufficient nuclear explosive for a weapon without the international community having time to spot what is going on, debate it, and counter it. Yet President Obama's delay on Syria creates doubt that he would behave in a sufficiently timely fashion to counter Iran.

Meanwhile, Israel has long indicated that it will make its own assessment of Iran's nuclear progress. Last September, Prime Minister Binyamin Netanyahu presented his redline during a speech before the UN General Assembly: namely, Israel did not want Iran to acquire enough 20 percent enriched uranium to make a nuclear bomb if the material was further processed. Yet when one factors in gaseous centrifuge feedstock and oxide that could be reconverted to feedstock, Iran is now past this line.

ROUHANI'S POSITION

Despite being inaugurated only weeks ago, President Rouhani should hit the ground running on the nuclear issue. He served as Iran's top nuclear negotiator from 2003 to 2005 and was also involved in crafting nuclear policies as secretary of the Supreme National Security Council from 1989 to 2005. His election was widely attributed to his campaign promises of bringing relief from international nuclear sanctions.

Since winning office, Rouhani has been assessing his strengths within Iran's power structure, which is dominated by Supreme Leader Ali Khamenei. He has also been crafting a new nuclear negotiating team. Although he has already publicly indicated that suspending the nuclear program is not an option, his administration's actual negotiating strategy has not yet crystallized. This strategy will be at least partly shaped by Tehran's assessment of President Obama's determination to act in Syria, a close ally of Iran. In other words, events in Damascus could be an important indicator of the direction and progress of nuclear negotiations with Iran.

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