



PERSPECTIVES

THE BEGIN-SADAT CENTER FOR STRATEGIC STUDIES

Tehran Might Be Preparing to Withdraw from the 2015 Nuclear Agreement

by Lt. Col. (res.) Dr. Raphael Ofek

BESA Center Perspectives Paper No. 1,363, December 4, 2019

EXECUTIVE SUMMARY: Iranian president Hassan Rouhani's recent announcement of the renewal of uranium enrichment at the Fordow fuel enrichment plant, as well as high-level Iranian gloating about recent progress in the development and operation of uranium enrichment centrifuges, may indicate that Tehran intends to withdraw from the 2015 nuclear agreement and effect a breakout toward nuclear weapons production in 2020.

No sooner had President Rouhani announced, on November 5, Iran's renewal of uranium enrichment than the IAEA reported that a cylinder containing some two tons of UF₆ gas (uranium hexa-fluoride compound) had been transferred to the Fordow fuel enrichment plant and connected to two centrifuge cascades (each containing 174 centrifuges) in preparation for enrichment. Four days later, the spokesman of the Atomic Energy Organization of Iran (AEOI) confirmed that uranium enrichment had begun at Fordow (though only to a level of 4.5%, the grade of nuclear fuel in nuclear power reactors) – in full view of IAEA inspectors present on site to monitor the implementation of the July 2015 nuclear agreement (JCPOA).

For his part, AEOI Director Ali Akbar Salehi used the unveiling of 30 new advanced IR6 centrifuges in the Natanz enrichment facility (in addition to the already installed 30 IR6 centrifuges) to laud Iran's (supposedly peaceful) nuclear program. Hailing the IR6's high enrichment capacity – 10 separative work units (SWU) compared to 1.2 SWU of the older IR1 comprising the lion's share of Iran's pre-2015 centrifuges – Salehi boasted that over the past two months, Tehran had increased its uranium enrichment capacity from 6,000 SWU and 450g uranium per day to 8,660 SWU and 5kg uranium per day.

While saying that Iran would momentarily limit the enrichment process to a 5% grade (way below the 90% grade required to produce nuclear weapons), Salehi revealed that Tehran was testing IR8 centrifuges (with some 20 SWU enrichment capacity) and experimenting with an IR9 prototype, "which is 50 times faster than the IR1." "While we now have a sufficient amount of 20% enriched uranium [enrichment grade for nuclear reactor fuel, which could serve as a springboard for 90% enrichment], we can enrich more if necessary," he said, adding that Tehran would need only four days to enrich uranium to a 20% level should it decide to do so. His assertion was amplified by the AEOI's spokesman: "We can produce 5%, 20%, 60% or any other percentage of enriched uranium" (60% enrichment level is the highest springboard before reaching the critical 90% threshold).

Given that enriching natural uranium for 20kg of nuclear weapons grade (of at least 90%) requires approximately 5,000 SWU, Iran seems to be about one year from having the fissile material for its first nuclear bomb.

The latest Iranian move constitutes the fourth violation of the JCPOA in so many months. The first of these occurred on July 1 when Tehran crossed the upper limit of 300kg of 3.67% enriched uranium allowed by the agreement, only to be followed a week later by raising the enrichment level to 4.5%, and yet again on September 7 by operating more advanced centrifuges of higher enrichment capacities. And while Tehran sought to misrepresent these violations as legitimate moves aimed at persuading other JCPOA signatories to oppose the US sanctions, few European leaders were impressed.

In a press conference on November 6 during a visit to Beijing, French president Emmanuel Macron warned that Rouhani's statement implied that "for the first time, Iran has decided in an explicit and blunt manner to leave the JCPOA agreement, which marks a profound shift." He was quickly followed by his British and German counterparts, who criticized the latest Iranian violation as "most worrying," while Federica Mogherini, the EU's "foreign minister" and one of the JCPOA's staunchest supporters, lamented that "it is becoming increasingly difficult to maintain the JCPOA."

To make matters worse, Tehran's relations with the IAEA have also soured. This is due in part to the prevention of an IAEA inspector from entering Natanz and the subsequent withdrawal of her accreditation, and in part to a change of leadership at the UN agency whereby the incoming acting director, Cornel Feruta, seems to be more critical of Iranian misconduct than was his deceased predecessor, Yukiya Amano.

On November 7, two days after Rouhani's announcement, the IAEA's board of governors met for a special session to discuss not only Tehran's latest violation but also its prolonged failure to come clean on PM Benjamin Netanyahu's revelation in his September 27, 2018 UN address that Iran had removed 15kg of radioactive material from a warehouse in Tehran's Turkuzabad suburb and "spread it around Tehran in an effort to hide the evidence."

Indication of the veracity of this claim was afforded by the last IAEA report (November 11, 2019), which noted that its inspectors had "detected natural (not enriched) uranium particles of anthropogenic (man-made) origin at a location in Iran not declared to the agency." Assuming this included the 15kg noted by Netanyahu, which, according to IAEA's findings, comprised man-made natural uranium, it is possible that it was a dummy core of a nuclear weapon for the purpose of conducting a "cold test" to simulate a nuclear explosion. In this scenario, the casting of the natural uranium core was carried out at one of the Parchin site facilities, where Iran's nuclear weapons development tests had previously been conducted.

Responding to Rouhani's announcement, US Secretary of State Pompeo estimated that Tehran may be preparing to break out in 2020 toward nuclear weapons. A joint report by the Washington-based Federation for Defense of Democracies and the Institute for Science and International Security (issued on November 13) was similarly grim, setting the possible breakout time between 8 and 10 months.

Lt. Col. (res.) Dr. Raphael Ofek, a BESA Center Research Associate, is an expert in the field of nuclear physics and technology who served as a senior analyst in the Israeli intelligence community.