

# Will a Likely Future JCPOA be already worthless Because of Iran's Nuclear Stockpiles?

LTC Arjen Wassink, NLD Army, CSAG/CCJ5

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## **Key Points**

- Attacking Iran's nuclear infrastructure will not remove Iran's scientific knowledge of the process to build a nuclear bomb.
- Sabotage, direct strikes, or assassinations will only strengthen Iran's perseverance to further progress towards manufacturing a bomb, especially with a new hardline government.
- Targeting Iran's nuclear program will only lead to higher tensions and greater future risks. The US should prevent any such international action.
- As survival is preeminent for the clergy regime, and using a nuclear weapon would likely prove selfdestructive, the regime would rather avoid such a scenario and, therefore, likely concludes having a nuclear bomb is not at all to Iran's advantage.
- Reviving the JCPOA does not necessarily have to be held back by Iran's current nuclear material stocks - Russia would likely take possession of those materials.
- The US should revive the JCPOA for it provides the best outcome for Middle East nuclear security and the most desired effects for the US position in Great Power Competition (GPC).

## **Introduction**

The common perception of Iran's threat is through its regional deployment and use of proxies, its tactical ballistic missiles, and the progressive enrichment of uranium to build a nuclear weapon. While it is possible that the US will return to the Joint Comprehensive Plan of Action (JCPOA), and the Iranians will call for new discussions in the near future, this discussion reviews Iran's uranium enrichment program and its possible consequences on the revival of JCPOA.

## **General**

The International Atomic Energy Agency (IAEA) reported on September 7<sup>th</sup>, 2021, that Iran has been enriching more uranium and increasing its stockpile in violation of existing agreements. The major fear of the international community resides in the military use of enriched uranium. Another fear is that current stockpiles of enriched uranium will prevent Iran from returning to the commitments of the JCPOA.

According to the IAEA, Iran would have 2441.3 KG of uranium in stock by the end of August 2021, while a maximum of 202.8 KG had been agreed upon. At the end of August, Tehran also had 10 KG of uranium with a purity of up to

60%. That was 2.4 KG in May. The stock of uranium enriched to 20% has increased in the same period from 62.8 to 84.3 KG whereas the agreement limits enrichment to 3.67%, far below the 90% purity required to produce nuclear weapons.<sup>1</sup> In compliance with the agreement, Iran is permitted to hold 300 KG, or about 660 LBS, of lowenriched uranium which is not enough to produce a single nuclear weapon.

The fact Iran did not honor its JCPOA commitments should not prevent the US and others from reviving the agreement. Revival is necessary because the former US administration, with limited international support, combined the JCPOA's nuclear restrictions with other issues such as Iran's ballistic missiles and malign proxies operating in the Middle East (ME). The US withdrawal from JCPOA in 2018, combined with the implementation of unilateral sanctions, is still only an issue between the US and Iran and has nothing to do with Iran and the other agreement signatories. But by stepping back from the agreement, Iran sought to progressively leverage the other signatories to pressure the US to stop the sanction regime.

Since 2019, a year after the US Maximum Pressure Campaign started, Tehran has not adhered to the nuclear agreement ratified by the United Nations General Assembly (UNGA) in 2015. Further, out of discontent, Iran curtailed the IAEA's inspections last year. Since that time, oversight of Iran's nuclear activities has been seriously undermined.

In a statement to the IAEA in January 2021, Iran pointed to a decision by its parliament to enrich more uranium with new installations more quickly. That decision came in response to the deadly attack on prominent Iranian nuclear scientist Mohsen Fakhrizadeh, who was believed to be the mastermind behind Tehran's attempts to create a nuclear weapon. However, Iran has always denied developing its own atomic bomb.<sup>2</sup> The IAEA signed a preliminary agreement with Iran in February 2021 on continuing "necessary" control of nuclear activities in the country. The inspectors were only given more limited access than before.

Iran and the JCPOA signatories have held multiple talks this year after US President Biden's inauguration about restoring the deal. The IAEA report comes at a time when negotiations have stalled after Iran's presidential election. Iranian authorities have initially warned that it could be months before they resume. Distrust and lack of openness from the Iranian side are causing increasing uncertainty. Meanwhile, fears are mounting that Israel could take independent action to once again sabotage Iran's nuclear program through CYBER warfare or destroy it with an airstrike as it did before in Iraq. Military plans dealing with Iran's nuclear program have been "greatly accelerated," Israel's CHOD General Aviv Kohavi warned in September.<sup>3</sup>

Nevertheless, Iran's decision to double down on its nuclear program after the last sabotage illustrates the risk and limits of kinetic action intended to disrupt the country's nuclear program. Targeted acts of sabotage or direct strikes may set back Iran's program, but cannot suppress the accumulated knowledge regarding uranium enrichment or the production of ballistic missiles. US intelligence agencies concluded in 2007<sup>4</sup> Iran possessed

<sup>1</sup> NU.nl, "Atoomagenschap: Iran verrijkt steeds meer uranium," NU.nl, September 07, 2021, <https://www.nu.nl/buitenland/6155820/atoomagentschap-iran-verrijkt-steeds-meer-uranium.html> (accessed September 7, 2021).

<sup>2</sup> BBC News, "Iran resumes enriching uranium to 20% purity at Fordo facility," BBC, January 4, 2021, <https://www.bbc.com/news/worldmiddle-east-55530366> (accessed September 7, 2021).

<sup>3</sup> Al Jazeera, "Israel's military chief says 'accelerating' Iran strike plans", Al Jazeera, September 7, 2021, <https://www.aljazeera.com/news/2021/9/7/israels-military-chief-says-accelerating-iran-strike-plans> (accessed September 7, 2021).

<sup>4</sup> Kelsey Davenport, "Iran's expansion of uranium stockpile is troubling but manageable," Atlantic Council, September 14, 2020, <https://www.atlanticcouncil.org/blogs/iransource/irans-expansion-of-uranium-stockpile-is-troubling-but-manageable/> (Accessed August 12, 2021).

these capabilities necessary to build and deliver nuclear weapons, though US officials doubt the country can produce a weapon soon.<sup>5</sup> The Natanz case showed that the destruction of the country's nuclear facilities is unlikely to push Tehran to abandon its nuclear program and will instead spur Iran to rebuild in more and dispersed locations harder to target. If Iran feels its nuclear program is less vulnerable, and if it's concerned about deterring further strikes or sabotage, that could influence any future discussion about the costs versus the benefits of pursuing nuclear weapons. Nevertheless, in their annual threat assessment report in April 2021, the US Intelligence Community assessed that Iran is not currently undertaking the key nuclear weapons development activities that would be necessary to produce a nuclear device. It would take years to do so.<sup>6</sup>

### **Is a Future JCPOA Already Worthless?**

Some analysts suggest Iran cannot go back to the JCPOA because it already possesses a significant amount of highly enriched uranium. If this is true, the risks will only further increase, and negotiation will be pointless. So, will a future JCPOA be already worthless due to the current Iranian uranium enrichment program?

At the end of 2015, Russia's civilian nuclear company, Rosatom, shipped almost all of Iran's stockpile of lowenriched uranium to Russia; 25,000 LBS of nuclear material including the fuel that was close to bomb-grade quality enriched to 20% purity. This shipment fulfilled a major step in the nuclear deal, apparently leaving Iran with too little fuel to manufacture a nuclear weapon. For face-saving purposes, the uranium shipment was called part of a "fuel swap." But the fuel received, partly from Kazakhstan, was natural uranium, which would have required substantial processing to be used for either a nuclear reactor or a weapon.<sup>7</sup>

The peaceful removal of the fuel from Iran was one of the biggest achievements in President Obama's foreign policy record, the culmination of a seven-year effort that at various times involved sanctions, cyber sabotage of Iran's main nuclear facility, and repeated Israeli threats to bomb the country's facilities.

History now seems to repeat itself. The whole playbook, including threats and cyber-attacks, is played again like a ritual dance. This could give hope to the region and the world who see the Iranian nuclear threat emerging again. Fortunately, Russia is again willing to take Iran's surplus of enriched material. In January 2021, the Russian Foreign Ministry announced it is ready to export Iran's enriched uranium produced above the limit set by the 2015 nuclear deal, should the US return to the historic accord.<sup>8</sup> Now talks have started in Switzerland. Regardless of the current delay, the current status of Iran's enrichment program need not be a hindrance to reviving the JCPOA.

### **Risk Assessment**

According to the IAEA, Iran has adhered to the accord's guidelines since the 2015 start of the JCPOA, despite some unanswered questions about unexplained radioactive materials. Iran's spin on these issues has not increased

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<sup>5</sup> Farnaz Fassihi, David E. Sanger, William J. Broad, "Iran Vows to Increase Uranium Enrichment After Attack on Nuclear Site," The New York Times, April 12, 2021, <https://www.nytimes.com/2021/04/13/world/middleeast/iran-nuclear-natanz.html> (accessed August 15, 2021).

<sup>6</sup> "2021 Annual Threat Assessment of the U.S. Intelligence Community," Office of the Director of National Intelligence, April 13, 2021, <https://www.dni.gov/index.php/newsroom/reports-publications/reports-publications-2021/item/2204-2021-annual-threat-assessment-of-the-u-s-intelligence-community> (accessed September 2, 2021).

<sup>7</sup> David E. Sanger, Andrew E. Kramer, "Iran-hands-over-stockpile-of-enriched-uranium-to-Russia," The New York Times, December 28, 2015, <https://www.nytimes.com/2015/12/29/world/middleeast/iran-hands-over-stockpile-of-enriched-uranium-to-russia.html> (accessed September 7, 2021).

<sup>8</sup> "Russia Ready to Export Iran's Surplus Enriched Uranium," Financial Tribune, January 29, 2021, <https://financialtribune.com/articles/national/107252/russia-ready-to-export-iran-s-surplus-enriched-uranium> (accessed August 15, 2021).

confidence in Iranian actions, especially among Israel and the ME countries. Despite Iran's continuous reiteration of not wanting a nuclear weapon, it still enriches uranium to levels that are only useful for that purpose.

Opponents of the JCPOA, therefore, continue to insist on the risks of a nuclear Iran whether for peaceful or military purposes. A nuclear-armed Iran would dramatically change the balance of power in the Middle East, weakening US influence because it could also encourage other Middle Eastern nations to develop nuclear weapons of their own. Therefore, the clergy regime seems to think it needs the threat of the ability to build a nuclear weapon for regime survival.<sup>9</sup>

Iran achieving full nuclear status could in theory give Iran a significant deterrence against attack, but it is likely to trigger undesired consequences. Iran's acquisition of nuclear weapons could have the consequence of reducing the restraints on the side of its adversaries, in particular Israel and the US. Also, it could set up a spiral of escalation of weaponization if regional players such as Egypt and Saudi Arabia no longer believe they can rely on an extended deterrence from the US and decide to develop their own nuclear arsenals. Also, Iran having the weapon could prompt domestic hardliners to use it. For decades, Iranian leaders have released the same message towards their population, and internationally to the Shia community, that they want to wipe Israel off the map. Once they would admit that they have a nuclear weapon, the regime could be pushed to use it against Israel otherwise the regime could lose face. Although using the weapon as such will also result in a devastating reaction on Iran what would lead to the fall of the regime. As regime survival is preeminent for the clergy regime, the regime does not want to be maneuvered into such a scenario. This supports the assumption that having a nuclear bomb is not at all to Iran's advantage and therefore not likely to happen.

So far, a status of nuclear ambiguity based on a latent capability gives Iran strategic advantages by both establishing coercive power while limiting the response. At the same time, it can be used to obtain economic and political concessions – which is what Iran seeks in the nuclear negotiations. Iranian leaders have seen Japan as a model and have argued that if Japan is allowed to have fuel-cycle technologies and stay in the Treaty on the NonProliferation of nuclear weapons, then Iran should also have that option.<sup>10</sup> Nevertheless, the countries in the region believe they do not have the luxury to believe the promise Iran will never build a nuclear weapon because their existence is at risk. Oddly enough, the region has not reacted that way to Israel's nuclear capabilities. Still, regardless of what Raisi's approach will be, the most likely outcome for the next months or year is that a new revived JCPOA will emerge because this gives Iran the best outcome for survival. For the US, there is no other solution possible to keep a grip on Iran and to stabilize its position in regional GPC.

### **But What's Next?**

The US' JCPOA withdrawal has given the conservatives in Iran ammunition to refuse to negotiate on the terms of the JCPOA. However, while any future negotiations will be very difficult, negotiations must take place. Trust between Iran and the US was never strong but now has been deeply damaged. Therefore, the US must surpass itself to make any achievement possible. Rouhani's frustration showed that the Supreme Leader has the final word

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<sup>9</sup> Kasraa Aarabi, Saied Kolkar, "The IRGC in the Age of Ebrahim Raisi," Tony Blair Institute for Global Change, August 2, 2021, <https://institute.global/policy/irgc-age-ebrahim-raisi> (accessed August 15, 2021).

<sup>10</sup> Mayumi Fukushima, "No-Go Negotiations: Iran May Not Be in a Rush to Get Nuclear Weapons," The National Interest, June 27, 2021, <https://nationalinterest.org/feature/no-go-negotiations-iran-may-not-be-rush-get-nuclear-weapons-188540> (accessed September 8, 2021).

on any agreement. Rouhani implicitly criticized Iran's top decision-makers for "not allowing" his government to reinstate the nuclear deal during its term in office.

Thus, while Iran initially indicated willingness to cooperate with the US, provided President Biden reverses Trump's approach, Iran's newly elected hardline President Raisi appears less amenable. Therefore, restoring the nuclear deal under Raisi will not be easy. The new president has said he will consider the nuclear deal as state policy but will do everything he can to make the negotiations in Vienna work in Iran's favor.<sup>11</sup> Raisi planned to show "less flexibility and demand more concessions" from Washington such as, keeping a chain of advanced uranium enrichment centrifuges in place, and insisting on the removal of human rights and terrorism-related US sanctions.<sup>12</sup>

Initially, Iran wants all sanctions imposed by the US since 2018 to be lifted. Raisi said, he wants to end US "tyrannical sanctions." Further, Raisi faces major economic challenges where his success will determine his credibility and abilities as a statesman and possible successor to Khamenei. Another important demand from Iran is that the US guarantee it will not withdraw from the nuclear deal again. However, the US is unlikely to comply with this demand. If the US does not comply with these demands, it will be grist to the mill for the Islamic revolution in which the US is the great Satan.

While confidence in the US continues to decline, and Iran is highly unlikely to succumb to sanctions, Raisi wants to further strengthen ties with China and Russia. He expects this to improve Iran's economic situation. Given China's interest in Iran, this may well be Iran's best chance of success. Iranian leaders view China as the only major world power that can challenge US economic dominance and, therefore, provide their country with economic and political protection against mounting US pressure. The supreme leader has long been a proponent of forming more strategic alliances with non-Western powers, which he has viewed as more trustworthy than the US or Europe; a sentiment that only became stronger after the US withdrawal from the nuclear deal.<sup>13</sup>

If Raisi succeeds, he will pass his first test to show he can be a worthy successor to Khamenei, fulfilling the needs of the people and the Supreme Leader. Immediately following the 2015 nuclear deal, Iran seemed fixated on attracting European and US companies rather than their Chinese counterparts. Iran experts indicate that Iranians generally prefer the American or Western market. Lifting US sanctions and reviving the JCPOA brings success not only to Raisi, but also to the US, and limits geopolitical gains for China. Since Russia is willing to again take Iran's surplus of enriched material, there seems to be no technical restriction to revive the JCPOA.

### **Recommendations for US / USCENTCOM**

- The US should deter any international intent to conventionally militarily target Iran's nuclear program.
- Support Russia's efforts to receive Iran's surplus of enriched nuclear material to enable JCPOA negotiations.
- Support JCPOA implementation to enhance nuclear security in the Middle East and strengthen GPC position.

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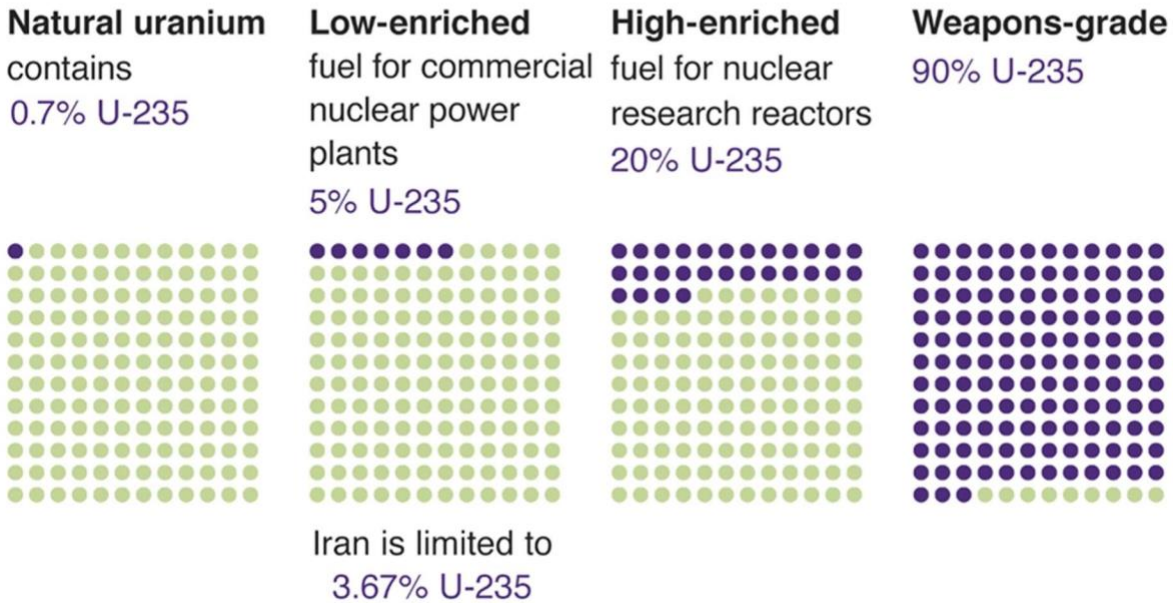
<sup>11</sup> Peyman Jafari, "Iran heeft een nieuwe president, wat betekent dat voor het atoomakkoord?," NU.nl, August 5, 2021, <https://www.nu.nl/buitenland/6149853/iran-heeft-een-nieuwe-president-wat-betekent-dat-voor-het-atoomakkoord.html> (accessed August 5, 2021).

<sup>12</sup> Parisa Hafezi, "Iran insists it can enrich uranium to 90% purity – weapons-grade - if needed," July 14, 2021, <https://www.reuters.com/world/middle-east/rouhani-says-iran-can-enrich-uranium-90-purity-if-needed-mehr-2021-07-14/> (accessed August 25, 2021).

<sup>13</sup> Ellie Geranmayeh, "A pragmatic partnership: Why China and Iran try to collaborate," European Council on Foreign Relations, [https://ecfr.eu/article/commentary\\_a\\_pragmatic\\_partnership\\_why\\_china\\_and\\_iran\\_try\\_to\\_collaborate/](https://ecfr.eu/article/commentary_a_pragmatic_partnership_why_china_and_iran_try_to_collaborate/) (accessed September 1, 2021).

## Uranium enrichment process

Increasing the concentration of **U-235** atoms, by removing **U-238**, means it can be used for nuclear fuel or bombs



### How much effort is required to get to weapons-grade uranium?

Very little extra effort is needed to get from 20% enriched uranium to bomb material

**83.5% effort** needed to reach 4% U-235 > **+8.5% effort** needed to reach 20% U-235 > **+8% more effort** to reach 90% U-235

