

Research Briefing

24 April 2024
Number 9870

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What is the status of the Iran nuclear deal?

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1

Summary

The Joint Comprehensive Plan of Action (JCPOA or Iran nuclear deal) is an agreement reached in 2015 between Iran, the UK, China, France, Germany, Russia, and the US (the P5+1), to limit the Iranian nuclear programme in exchange for sanctions relief. It was endorsed by UN Security Council Resolution 2231 (2015).

The JCPOA agreement does not expire until October 2025. However, a significant milestone was reached on 18 October 2023 (Transition Day) when all remaining nuclear-related sanctions against Iran under UN Security Council Resolution 2231, including restrictions on ballistic missile and sensitive technologies, expired.

The UK, France and Germany (referred to as the E3) said, however, that [Iran's "consistent and severe non-compliance with its JCPOA commitments" warranted the retention of sanctions](#) and, as such, the nuclear-related sanctions set out in UNSCR 2231 would instead be transferred into their domestic sanctions regimes and existing UK and EU nuclear-related sanctions would be maintained beyond the October deadline.

Status of Iran's nuclear programme

[Iran maintains that its nuclear programme is peaceful](#) and that it has no plans to develop nuclear weapons.

Since May 2019, however, Iran has continued to violate the terms of the JCPOA agreement. It has lifted the cap on its stockpile of uranium, which is now [27 times the level permitted; increased its enrichment activities to 60%](#), significantly beyond the 3.67% permitted under the JCPOA; expanded its enrichment capabilities and resumed activity at nuclear facilities that were previously prohibited under the terms of the deal. The International Atomic Energy Agency (IAEA) says it has been prevented from satisfactorily monitoring Iran's nuclear activities since February 2021.

In early 2023, the IAEA also reported [the discovery of particles of uranium enriched to 83.7%](#) (PDF), although subsequently accepted Iran's explanation for the material. Weapons grade uranium is enriched to 90%.

The Iranian Government has [linked its violations to the failure of JCPOA signatories to meet their commitments under the deal](#) and to deliver sanctions relief. It has also stated that [it would return to its obligations under the JCPOA if sanctions were lifted](#).

The UK, France and Germany and the US contend that [there is no credible civilian justification for Iran's nuclear programme](#).

How close is Iran to a nuclear weapon?

Under the terms of the JCPOA, Iran's breakout time – the time it could take Iran to produce enough fissile material for nuclear weapons – [had been estimated at one year](#). In June 2022 several analysts considered that [Iran's breakout time had reached zero](#) (PDF) and in March 2024 the IAEA and E3

estimated that [Iran had acquired enough highly enriched uranium](#) that, if enriched further to 90% (weapons grade), would theoretically be enough for three nuclear explosive devices.

Estimates of breakout time do not account, however, for the technological capability and time required to build a deliverable nuclear warhead ([which has been estimated by some at 1-2 years](#)). In its 2024 Annual Threat Assessment, the US Office of the Director of National Intelligence concluded that while Iran does not appear to be currently pursuing development of a nuclear device, the nuclear activities undertaken since 2020 ["better position it to produce a nuclear device, if it chooses to do so"](#) (PDF).

Status of talks and sanctions

While the Biden Administration has sought to restore the agreement, and a deal was reportedly near to being concluded in summer 2022, formal talks have stalled, although neither side has said they have failed.

Efforts to de-escalate US-Iranian tensions in mid-2023, including the holding of [indirect talks in Oman](#) and the [exchange of detainees](#), had raised hopes of continued diplomacy on Iran's nuclear programme. Events in the Middle East since October 2023 have, however, overtaken those efforts.

Snapback remains an option

Under the terms of the JCPOA all previous UN sanctions related to Iran's nuclear programme can be re-imposed in the event of "significant non-performance by Iran of JCPOA commitments" (the snapback provisions).

The E3 have confirmed that they are ["committed to preventing Iran from developing nuclear weapons, including through the snapback process if necessary"](#). This is [a position that has been echoed in the aftermath of Iran's attacks on Israel on 13 April 2024](#).

2

Iran's nuclear programme

2.1

The Joint Comprehensive Plan of Action (JCPOA)

In 2015, Iran [agreed a deal](#) with China, France, Germany, Russia, the UK and the US (the P5+1) to limit the Iranian nuclear programme in exchange for sanctions relief. In July 2015, that Joint Comprehensive Plan of Action (JCPOA) was endorsed by [UN Security Council resolution 2231 \(2015\)](#) (PDF).

Adoption of the JCPOA was declared on 18 October 2015 (Adoption Day), after which the provisions of the JCPOA came into effect. The lifting of sanctions occurred on 16 January 2016 (Implementation Day).¹ Despite Iran's verified compliance with the agreement by the IAEA, [the US withdrew from the deal](#) in 2018 and reimposed all US sanctions. The remaining signatories to the JCPOA did not follow suit.

1 JCPOA commitments

Under the deal:

- Iran agreed to reduce its stockpile of [low-enriched uranium](#) by 98% to 300kg, for a period of 15 years.
- Iran's [centrifuges](#) would only enrich to 3.67%, which was considered enough for civilian nuclear power and research, but well below weapons grade enrichment (90%).² That limit on enrichment would be maintained for 15 years.
- The number of centrifuges in operation would be reduced by two thirds.³ Iran's Fordow enrichment facility would be prohibited from enriching uranium for 15 years and the facility repurposed into a research facility, with Russian assistance. Only limited enrichment would take place at the facility at Natanz. Iran would not build any new enrichment facilities for 15 years. The heavy water reactor at Arak, which was capable of

¹ For a timeline, see EU External Action Service, [Nuclear agreement – JCPOA](#) (accessed 23 April 2024)

² Uranium enriched to 20% can be used in research reactors. Further enrichment to 90% produces weapons grade uranium. The enrichment process to get from 0.7% to 20% takes much more technological effort than the process to get from 20% to 90%.

³ From 19,000 to 6,104. Only 5,060 of the remaining centrifuges would be allowed to enrich uranium over the next ten years. Excess centrifuges would be dismantled and stored under IAEA monitoring.

producing weapons grade plutonium, would be redesigned so that it could not produce spent fuel.

- Iran agreed to provisionally implement the Additional Protocol to its Safeguard Agreement with the International Atomic Energy Agency (IAEA).⁴

In exchange, all nuclear-related sanctions would be lifted at various points over a ten-year period. Under the agreement, however, non-compliance could see sanctions automatically reintroduced (the snapback provisions).

The deal is overseen by a Joint Commission comprising the signatories of the agreement and the EU. The Commission is chaired by EU High Representative Josep Borrell. Iran's compliance with the JCPOA is monitored and verified by the [International Atomic Energy Agency](#) (IAEA).

Timeline for lifting nuclear-related sanctions

A timeline for the lifting of all nuclear-related sanctions against Iran was an integral part of the JCPOA agreement, as set out in [Annex V](#) (PDF).

Most EU, US and UN sanctions related to Iran's nuclear programme were lifted in January 2016, once [the IAEA verified that Iran had made the necessary preparations for implementation of its JCPOA commitments](#).⁵

Under Annex V of the JCPOA and Annex B of UNSCR 2231, however, certain UN, EU and US sanctions remained in place related to proliferation-sensitive goods, ballistic missile technologies and those listed persons and entities linked to Iran's nuclear and missile programmes.⁶

As stated above, in May 2018 [the United States withdrew from the agreement and unilaterally re-imposed sanctions](#). The remaining signatories to the JCPOA did not follow suit.

Transition Day – 18 October 2023

Eight years after the adoption of the JCPOA (18 October 2023), or sooner if the IAEA concluded that Iran's nuclear activities are entirely peaceful, all remaining nuclear-related sanctions were set to expire.

⁴ All non-nuclear weapon states party to the Nuclear Non-Proliferation Treaty are required to conclude [a Comprehensive Safeguards Agreement with the IAEA](#), which allows the agency to verify that all nuclear material related to peaceful nuclear activities within a country is not diverted into a nuclear weapons programme. The Additional Protocol gives the IAEA the right to make short notice inspections to sites not previously declared as nuclear, including military sites.

⁵ Referred to in the JCPOA as Implementation Day.

⁶ [UN Security Council Resolution 2231 \(2015\), Annex B \(PDF\)](#).

Under its JCPOA commitments, Iran was also required to have ratified the Additional Protocol to its Safeguards Agreement with the IAEA by this date (referred to as Transition Day).⁷

On 18 October 2023, all UN and EU restrictions related to the following were subsequently lifted:

- the proliferation of sensitive technologies, including the requirement that countries obtain Security Council permission before transferring such technologies to or from Iran.
- Any activities related to Iranian ballistic missiles capable of delivering nuclear weapons.

Transition Day also resulted in the removal from the sanctions list those designated individuals and entities linked to Iran's nuclear and ballistic missile programmes.

The provisions related to Transition Day mean that all UN member states are no longer bound by the restrictions in UNSCR 2231, unless they adopt similar domestic sanctions.

However, ahead of Transition Day, the E3 states (UK, France and Germany) announced that the nuclear-related sanctions that were due to expire, would instead be transferred into their domestic sanctions regimes and that existing UK and EU sanctions would be maintained beyond October 2023.

The US unilaterally re-imposed sanctions against "all possible entities and individuals contained within Security Council Resolution 2231" when it withdrew from the JCPOA in 2018.⁸

When does the JCPOA expire?

Although Transition Day saw various provisions of the JCPOA and UNSCR 2231 expire, the JCPOA itself does not expire until 18 October 2025 (ten years after Adoption Day), "provided that the provisions of previous resolutions have not been reinstated".⁹ This refers to the ability to re-impose sanctions under the "snapback mechanism" (see [Section 3.2](#)).

⁷ [UN Security Council Resolution 2231 \(2015\), JCPOA Annex V \(PDF\)](#). As outlined above Iran suspended its implementation of the Additional protocol in 2021.

⁸ US Department of State, [Press release](#), 18 October 2023

⁹ JCPOA, [Annex V](#) (PDF), para. 23

2.2

Incremental non-compliance by Iran

“Since 2019 Iran has expanded its activities to levels unprecedented for a state without a nuclear weapons programme”.

[E3 statement to the IAEA Board of Governors, 23 November 2023](#)

Iran maintains that its nuclear programme is peaceful and that it has no plans to develop nuclear weapons. That position was reiterated by Iranian President, Ebrahim Raisi, during an interview with CNN at the end of September 2023 and more recently during a meeting with foreign ambassadors at the beginning of February 2024.¹⁰

However, since May 2019 Iran has incrementally violated the terms of the JCPOA agreement. It has lifted the cap on its stockpile of uranium, increased its enrichment activities beyond the 3.67% permitted under the JCPOA and resumed activity at nuclear facilities that were previously prohibited from uranium enrichment under the terms of the deal.¹¹

At the beginning of January 2020, the Iranian Government went one step further and announced that it would no longer abide by any of its commitments under the JCPOA. As a result, there would be no restrictions on Iran’s uranium stockpile or enrichment programme going forward and its nuclear programme would “be developed solely based on its technical needs”.¹² The announcement fell short of a total withdrawal from the deal, however, as Iran confirmed, at the time, that it would continue its co-operation with the IAEA and allow IAEA inspectors access to its sites.

The Iranian Government has linked its violations to the failure of JCPOA signatories to meet their commitments under the deal and to deliver sanctions relief.¹³ It has also stated that it would return to its obligations under the JCPOA if sanctions were lifted.¹⁴

On 14 January 2020 the E3 (UK, France, and Germany) referred the matter to the dispute resolution mechanism (DRM) of the JCPOA Joint Commission. The DRM process allows for 30 days to resolve any outstanding compliance issues. To date, however those issues of non-compliance remain unresolved (see below).

Iran’s new nuclear laws

In December 2020 the Iranian Parliament and Guardian Council [passed legislation](#) requiring the Government to speed up its resumption of nuclear

¹⁰ [“Iran does not need nuclear weapons: Raisi”](#), Mehr News Agency, 25 September 2023 and [“Iranian President Raisi reaffirms country’s right to peaceful nuclear program”](#), TASS Russian news Agency, 7 February 2024

¹¹ These are examined in greater detail in Library research briefing, [Status of the Iran nuclear deal](#), October 2021

¹² [Statement of the Atomic Energy Organisation of Iran](#), Mehr News Agency, 5 January 2020

¹³ [“Iran does not need nuclear weapons: Raisi”](#), Mehr News Agency, 25 September 2023

¹⁴ [Statement of the Atomic Energy Organisation of Iran](#), Mehr News Agency, 5 January 2020

activities if sanctions relief was not forthcoming by early 2021. Specifically, it mandated:

- Enrichment to 20%.
- An increase in the monthly rate of production of enriched uranium (at varying levels of enrichment).
- The installation of at least 1,000 advanced centrifuges by the end of March 2021.
- The operation of a metallic uranium factory at Isfahan by May 2021.
- Renewal of the heavy water reactor at Arak.

The law also provided for Iran to suspend implementation of the IAEA Additional Protocol and to reduce monitoring and verification cooperation with the IAEA beyond what is in Iran's Comprehensive Safeguards Agreement. That suspension was subsequently applied on 23 February 2021 and the IAEA has not been able to satisfactorily monitor Iran's nuclear programme since then.¹⁵

Concerns over enrichment to 83.7%

Under the JCPOA enrichment is capped at 3.67%

Since January 2020 Iran has incrementally increased the level to which it is enriching uranium and has continued to install ever greater numbers of advanced centrifuges, allowing it to expand its enriched uranium production capabilities.¹⁶

In line with its nuclear laws [Iran started enriching uranium to 20% in early 2021 and then moved to 60% enrichment in April 2021 \(PDF\)](#), far beyond what is considered necessary for civilian purposes.¹⁷ As an article in Foreign Policy in July 2021 also observed: "20 percent enrichment represents nine-tenths of the effort to achieve weapons-grade purity".¹⁸ In July 2021 the IAEA also verified that Iran had begun producing uranium metal, which has little civilian purpose and is applicable to nuclear weapons development.¹⁹

In November 2022 the IAEA confirmed that Iran had begun enriching uranium to 60% at its enrichment facilities at Fordow²⁰ and in early 2023 reported that

¹⁵ Foreign, Commonwealth and Development Office, [Iran's suspension of the JCPOA Additional Protocol: F3 Foreign Minister's statement](#), 23 February 2021

¹⁶ IAEA Report of the Director General, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(PDF\)](#), GOV/2023/39, 4 September 2023

¹⁷ Foreign, Commonwealth and Development Office, [Press release](#), 19 August 2021. Nuclear power reactors require uranium enriched to around 3-5%, while research reactors operate with 20% enriched uranium (World Nuclear Association, [Uranium enrichment](#))

¹⁸ ["Is Iran bluffing about its enriched uranium stockpile?"](#), Foreign Policy, 28 July 2021

¹⁹ Foreign, Commonwealth and Development office, [IAEA report on Iran producing enriched uranium metal: F3 statement](#), 6 July 2021

²⁰ Iran had already been enriching to 60% at its facilities at Natanz since April 2021.

Weapons grade uranium is enriched to 90%

uranium particles enriched to 83.7% had been found at that nuclear facility.²¹ In response, Iran suggested that “unintended fluctuations in enrichment levels may have occurred” during a transition period in centrifuge operation.²²

The E3, and the US, called the development “extremely grave” and one that “further strengthened the view that there is no credible civilian justification for Iran’s nuclear programme”.²³

In his quarterly report for September 2023, the IAEA Director General said that the IAEA had accepted Iran’s explanation for the origin of the 83.7% highly enriched uranium (HEU) particles and “found no indication of the accumulation and collection of nuclear material enriched above 60% U-235 at FFEP [Fordow]”. The report also said that there was no indication of the diversion of nuclear material.²⁴

Uranium stockpiles

Since February 2021, the IAEA has been unable to verify Iran’s total enriched uranium stockpile. Estimates by the IAEA are therefore based on information provided by the Iranian government.²⁵

In the latest quarterly report to the IAEA Board of Governors (February 2024), Iran’s total enriched uranium stockpile (in its various forms) was estimated to be 5,525.5kg, an increase of 1,038.7kg since [the previous quarterly report in November 2023](#) (PDF).²⁶ Of that stockpile:

- 1,934kg is enriched to 2% (+716.8kg from the previous report)
- 2,396.8kg enriched to 5% (+ 178.7kg)
- 712.2kg enriched to 20% (+145.1kg)
- 121.5kg enriched to 60% (- 6.8kg).²⁷

²¹ IAEA Board of Governors, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(2015\): Report by the Director General, GOV/2023/8](#) (PDF), 28 February 2023

²² IAEA Board of Governors, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(2015\): Report by the Director General, GOV/2023/8](#) (PDF), 28 February 2023

²³ Foreign, Commonwealth and Development Office, [Safeguards agreement with Iran: Quad statement at IAEA Board of Governors](#), 14 September 2023

²⁴ IAEA Report of the Director General, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(PDF\)](#), GOV/2023/39, 4 September 2023, para. 28

²⁵ IAEA Report of the Director General, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(PDF\)](#), GOV/2024/7, 26 February 2024, para.21

²⁶ As above. Copies of the IAEA Quarterly reports dating back to 2003 are available via the IAEA website: [IAEA and Iran – IAEA Board Reports](#)

²⁷ The IAEA noted during the reporting period that Iran has continued to produce 60% HEU but that a quantity of uranium enriched to 60% had subsequently been mixed with 2% enriched uranium to

In March 2024 the E3 noted that Iran’s current enriched uranium stockpile is more than 27 times the level permitted under the JCPOA (see above) and that “overall, Iran’s stockpile of enriched uranium has increased by 30% in just three and a half months”.²⁸

Production of 60% HEU

Since June 2023 the level of 60% HEU production has fluctuated, although retains an overall upward trajectory. In its September 2023 Quarterly Report the IAEA noted that Iran had reduced the production rate of 60% enriched uranium by approximately two thirds since early June 2023.²⁹ Several commentators linked the move to efforts at the time to de-escalate tensions between Iran, the US and the E3 (see [Status of talks and sanctions](#)).

However, that initial slowdown has since been reversed. The IAEA’s November 2023 quarterly report noted that production of 60% HEU had once again increased³⁰ and in December 2023 the E3 issued a statement in which they expressed concern over the return of 60% HEU production levels to those seen in the first half of 2023. They said that the findings “represent a backwards step by Iran and will result in Iran tripling its monthly production rate of uranium enriched up to 60%”, for which there was “no credible civilian justification”.³¹

In its 2024 annual threat assessment, the US Office of the Director of National Intelligence concluded that “Tehran has the infrastructure and experience to quickly produce weapons-grade uranium, if it chooses to do so”.³²

produce 20% enriched uranium, resulting in an apparent decrease in 60% HEU production. IAEA Report of the Director General, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(PDF\)](#), GOV/2024/7, 26 February 2024, para. 22 and footnote 31.

²⁸ Foreign, Commonwealth and Development Office, [E3 statement to the IAEA Board of Governors](#), 6 March 2024

²⁹ IAEA Report of the Director General, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(PDF\)](#), GOV/2023/39, 4 September 2023, footnote 48

³⁰ IAEA Report of the Director General, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(PDF\)](#), GOV/2023/57, 15 November 2023, para.19

³¹ Foreign, Commonwealth and Development Office, [Statement on Iranian nuclear steps reported by the IAEA](#), 28 December 2023

³² US Office of the Director of National Intelligence, [Annual Threat Assessment \(PDF\)](#), February 2024, p.19

2.3

Outstanding safeguards issues

Verification and monitoring

Concerns over the IAEA's inability to monitor and verify Iran's nuclear activities have raised concerns over the IAEA's "continuity of knowledge" should Iran return to its JCPOA commitments.³³

The IAEA has also expressed concern over the refusal of Iran to issue visas to IAEA officials and to withdraw the designation of several experienced IAEA inspectors in September 2023. It said the decisions ran "counter to the co-operative relationship that should prevail between the Agency and Iran" and specifically "the renewed positive approach" set out in the Joint Statement of March 2023.³⁴

The E3 said they were "alarmed by Iran's obstructive attitude towards inspections" and that:

the de-designation of experienced inspectors and the denial of visas for IAEA officials signal Iran's unwillingness to cooperate fully with the Agency and to demonstrate the transparency required for the resumption of trust between Iran and the international community regarding the nature of Iran's nuclear programme.³⁵

In response, President Raisi suggested that "Iran has no problem with the principle of inspection unless the performance of some inspectors causes Iran to lose confidence in them".³⁶ In October 2023 President Raisi said that Iran was exploring "possibilities to address" the IAEA's request to reconsider the withdrawal of designations. In its February 2024 quarterly report on safeguards, however, the IAEA confirmed that Iran had not yet reconsidered its position.³⁷

Undeclared nuclear material and locations

In addition to concerns over verification and monitoring, there are also outstanding safeguards issues relating to undeclared nuclear material and

³³ IAEA Report of the Director General, [Verification and Monitoring in the Islamic Republic of Iran in light of UN Security Council Resolution 2231 \(PDF\)](#), GOV/2024/7, 26 February 2024, para.6. Section C also provides a list of the verification and monitoring activities that the IAEA has been unable to fulfil since February 2021.

³⁴ IAEA Report of the Director General, [NPT Safeguards Agreement with the Islamic Republic of Iran, GOV/2023/43 \(PDF\)](#), 4 September 2023, para.19

³⁵ Foreign, Commonwealth and Development Office, [Iran's implementation of JCPOA commitments: E3 statement at IAEA Board of Governors](#), 13 September 2023

³⁶ ["Iran awaits practical steps by US, Europe on nuclear deal"](#), Mehr News Agency, 21 September 2023

³⁷ IAEA Report of the Director General, [NPT Safeguards Agreement with the Islamic Republic of Iran, GOV/2024/8 \(PDF\)](#), 26 February 2024, para. 33

locations, first identified in 2019 and 2020, for which the IAEA says it is yet to receive a “technically credible explanation”.³⁸

In March 2023 the IAEA and the Atomic Energy Organisation of Iran issued a joint statement in which both sides pledged full cooperation based on Iran’s comprehensive safeguards agreement. It also said that Iran “expressed its readiness to continue its cooperation and provide further information and access to address the outstanding safeguards issues”.³⁹

However, in its February 2024 quarterly report on safeguards, the IAEA confirmed that no progress had been made on implementation of the March 2023 Joint Statement. It specifically noted comments by Iranian Vice-President Eslami that there would be “no significant progress towards implementing the Joint Statement, particularly with regard to JCPOA nuclear-related commitments, while sanctions remained in place”.⁴⁰

The report concluded:

the outstanding safeguards issues stem from Iran’s obligations under its NPT Safeguards Agreement and need to be resolved for the Agency to be in a position to provide assurance that Iran’s nuclear programme is exclusively peaceful.⁴¹

In a statement to the IAEA Board of Governors on 4 March 2024, IAEA Director General Rafael Grossi said:

I am seriously concerned that Iran has unilaterally stopped implementing the Joint Statement, which raises doubts that Iran remains committed to what we have agreed. I also deeply regret that Iran has yet to reverse its decision to withdraw the designations for several experienced Agency inspectors.

I reiterate that only through constructive and meaningful engagement can all of these concerns be addressed and once again I call upon Iran to cooperate fully and unambiguously with the Agency.⁴²

2.4

How close is Iran to getting a nuclear weapon?

Iran is no longer observing any restrictions on either its production and stockpile of enriched uranium, or the level to which it will enrich uranium. Both these limits were designed to lengthen the time it would take Iran to produce enough fissile material (weapons grade uranium) for a nuclear

³⁸ IAEA Report of the Director General, [NPT Safeguards Agreement with the Islamic Republic of Iran. GOV/2024/8 \(PDF\)](#), 26 February 2024, Section C and para.37

³⁹ IAEA Report of the Director General, [NPT Safeguards Agreement with the Islamic Republic of Iran. GOV/2023/9 \(PDF\)](#), Annex, 4 March 2023

⁴⁰ IAEA Report of the Director General, [NPT Safeguards Agreement with the Islamic Republic of Iran. GOV/2024/8 \(PDF\)](#), 26 February 2024, para.27 and para. 31

⁴¹ As above, para. 36

⁴² [IAEA Director Generals’ Introductory Statement to the Board of Governors](#), 4 March 2024

warhead.⁴³ Disregarding those limits significantly reduces Iran’s “breakout” time – the time it could take Iran to produce enough fissile material for a nuclear weapon.

Under the terms of the JCPOA, in 2015, Iran’s breakout time had been estimated at one year.⁴⁴ In 2022, however, several analysts considered Iran’s breakout time to have reached zero.⁴⁵ In March 2024 the E3 estimated that Iran had acquired enough highly enriched uranium that, if enriched further to 90% (weapons grade), would theoretically be enough for three nuclear explosive devices.⁴⁶ It has been estimated that necessary further enrichment could be achieved in a matter of days.⁴⁷

Estimates of breakout time do not account, however, for the technological capability and time required to build a deliverable nuclear warhead ([which has been estimated by some at 1-2 years](#)), whether there is the political will to proceed toward weaponisation, and the impact of potential pre-emptive action by external actors, such as Israel, should Iran progress to this point.⁴⁸

In February 2024, the US Office of the Director of National Intelligence concluded that, at present “Iran is not currently undertaking the key nuclear weapons-development activities necessary to produce a testable nuclear device”. However, the report also goes on to note that since 2020, Iran has undertaken activities in relation to its nuclear programme “that better position it to produce a nuclear device, if it chooses to do so”.⁴⁹

It also highlights Iran’s work on its Space Launch Vehicle programme, which potentially shortens the time required to develop an intercontinental ballistic missile (ICBM), should Iran choose to do so, given the similarities in technology.⁵⁰

Iran continues to maintain that its nuclear programme is for peaceful purposes and that all activities initiated in the last few years are reversible if sanctions are lifted.⁵¹

⁴³ Estimates vary, but a first-generation warhead is generally thought to require approximately 15kg of highly enriched uranium (HEU) or 5-6kg of plutonium ([International Panel on Fissile Materials](#)).

⁴⁴ White House archives, [The Iran nuclear deal: what you need to know about the JCPOA](#) (PDF), 2015

⁴⁵ See [“Iranian breakout timeline now at zero”](#) (PDF), Institute for Science and International Security, 1 June 2022

⁴⁶ [E3 Statement to the IAEA Board of Governors](#), 6 March 2024. The IAEA’s definition of a “significant quantity” is the approximate amount of nuclear material for which the possibility of manufacturing a nuclear explosive device cannot be excluded” ([IAEA Safeguards Glossary](#) (PDF), 2001 edition)

⁴⁷ [“What to know about Iran’s nuclear program: Breakout time”](#), Foundation for Defense of Democracies, 7 March 2024

⁴⁸ Israel has, in the past been accused of pre-emptive attacks on Iranian nuclear facilities in order to disrupt their alleged nuclear weapons programme. [Jane’s Intelligence Briefing: Iran’s Nuclear Programme](#), 11 February 2021

⁴⁹ Office of the Director of National Intelligence, [Annual threat assessment](#) (PDF), February 2024, p.19

⁵⁰ As above

⁵¹ [Inauguration speech of President Raisi](#), 3 August 2021

The majority of Iran’s JCPOA violations can be reversed, with centrifuges disassembled and facilities closed or repurposed. Uranium stocks could also be shipped out or blended down.⁵² However, it is widely acknowledged that the technical knowledge Iran has acquired, particularly with respect to advanced centrifuge operation and the production of uranium metal, cannot be undone and that elements of Iran’s nuclear programme are now in fact irreversible.⁵³

3

Status of talks and sanctions

Formal talks on restoring the JCPOA have stalled.

While the Biden Administration has sought to restore the agreement, and a deal was reportedly near to being concluded in summer 2022, formal talks have stalled, although neither side has said they have failed.

In 2022, the US accused Iran of making demands “extraneous” to the JCPOA, including the removal of the Islamic Revolutionary Guard Corps (IRGC) from the US foreign terrorist list and the closure of ongoing IAEA investigations into undeclared Iranian nuclear activity (see above).⁵⁴

There was also concern that the political appetite for reaching an agreement had waned following Iran’s response to the [protests following the death of Mahsa Amini](#), and its tacit support for Russia’s invasion of Ukraine, including the transfer of drones to Russia in contravention of UN Security Council Resolution 2231.

In June 2023, US Secretary of State Antony Blinken said that Iran “either couldn’t or wouldn’t do what was necessary to get back into compliance with the JCPOA” and therefore “the JCPOA is not our focus”. He did, however, support continued diplomacy as “the best way more generally to sustainably, verifiably, and effectively ensure that Iran doesn’t acquire a nuclear weapon”.⁵⁵

The US, EU and UK have all imposed sanctions on the Iranian regime in response to the crackdown on protesters and the transfer of military drones to Russia.⁵⁶

In contrast, Iran called for “realism from the American side”,⁵⁷ and at the UN General Assembly in September 2023 President Raisi suggested that Iran had

⁵² This approach was taken with the former Soviet countries which inherited some of the Soviet Union’s nuclear arsenal after 1991. See Carnegie Endowment for International Peace, [Nuclear Successor States of the Soviet Union](#) (PDF), March 1998

⁵³ See for example, [“Iran’s recent, irreversible, nuclear advances”](#). Institute for Science and International Security, September 2021 and Foreign, Commonwealth and Development Office, [E3 statement after UN Security Council meeting on Iran](#), 19 December 2022

⁵⁴ US Department of State, [Press statement](#), 9 June 2022

⁵⁵ US Department of State, [Secretary Antony J. Blinken with Hiba Nasr of Asharq News](#), 8 June 2023

⁵⁶ This is examined in greater detail in Library research briefing [Sanctions against Russia](#)

⁵⁷ [“EU top diplomat bids to reverse tensions on surprise Iran visit”](#). France 24, 24 June 2022

“never left the negotiating table”,⁵⁸ and called on the US to meet its commitments under the JCPOA and “choose the right path”, presumably referring to reinstatement of the agreement.⁵⁹

Efforts were made to de-escalate tensions in mid-2023, highlighted by [indirect talks held in Oman](#) and [the release of several US detainees in Iran](#) in exchange for a number of Iranians in the US and the release of US\$6bn in frozen Iranian funds, albeit with strict limits on how that money could be accessed.⁶⁰ Such efforts had raised hopes of continued diplomacy on Iran’s nuclear programme.⁶¹

3.1 Maintaining nuclear-related sanctions beyond Transition Day

In September 2023 the E3 states (UK, France and Germany) announced that the nuclear-related sanctions on Iran set out in UNSCR 2231, and due to expire on 18 October 2023 (Transition Day), would be transferred into their domestic sanction’s regimes and that existing UK and EU nuclear-related sanctions would be maintained beyond the October deadline.

The E3 said that the decision was fully compliant with the JCPOA⁶² and a “direct response to Iran’s consistent and severe non-compliance with its JCPOA commitments since 2019... without any credible civilian justification”.⁶³

They also said that the decision did not amount to the imposition of additional sanctions, nor did it reflect the triggering of the snapback mechanism of the JCPOA.⁶⁴ The E3 has also reiterated that “these steps are reversible should Iran fully comply with its JCPoA commitments”.⁶⁵

The individuals and entities sanctioned under the UK’s [Iran \(nuclear\) sanctions regime](#) are set out in a consolidated list available from the Office of

⁵⁸ [“Iran awaits practical steps by US, Europe on nuclear deal”](#), Mehr News Agency, 21 September 2023

⁵⁹ UN General Assembly, [Statement by His Excellency Seyyed Ebrahim Raisi \(PDF\)](#), 19 September 2023

⁶⁰ US Department of State, [Secretary Antony J. Blinken with David Muir of World News Tonight](#), 12 October 2023

⁶¹ [“New momentum for nuclear talks?”](#), Arms Control Today, 20 September 2023

⁶² Paragraph 36 of the JCPOA permits the suspension of specific commitments if issues of non-compliance referred to the agreement’s Dispute Resolution Mechanism remain unresolved.

⁶³ Foreign, Commonwealth and Development Office, [E3 statement ahead of Joint Comprehensive Plan of Action Transition Day](#), 14 September 2023. See also Council of the European Union, [Press release](#), 17 October 2023 and Foreign, Commonwealth and Development Office, [Press release](#), 18 October 2023

⁶⁴ Foreign, Commonwealth and Development Office, [E3 statement ahead of Joint Comprehensive Plan of Action Transition Day](#), 14 September 2023

⁶⁵ Foreign, Commonwealth and Development Office, [E3 statement to the IAEA Board of Governors on the JCPOA](#), 23 November 2023

Financial Sanctions Implementation: [Financial sanctions, Iran relating to nuclear weapons](#).

[EU and UK sanctions related to human rights](#) (which are now part of [the UK's new Iran sanctions regime](#) introduced in December 2023) are not part of the JCPOA or UNSCR 2231 and were not affected by the Transition Day provisions.⁶⁶

Several Iranian entities and individuals linked to Iran's missile and UAV programmes have also been designated by the US, EU and UK under Russia-related sanctions and as part of international efforts to counter proliferation, largely through the [Proliferation Security Initiative](#) (PSI).⁶⁷

In response, the Iranian Foreign Ministry called the E3 decision "illegal" and "contrary to their obligations under the JCPOA and Resolution 2231, and a measure that creates tension and is accompanied by malicious intentions".⁶⁸

Russia also criticised the decision to retain JCPOA-related sanctions accusing the US and EU of retaining sanctions "to settle its political scores with Tehran" and in doing so, demonstrating "its disdain towards international law, the UN Charter and the UN Security Council's authority".⁶⁹

Russia and Iran have already been accused by many countries in the West of contravening the restrictions in UNSCR 2231 following the transfer of Iranian-manufactured drones to Russia without the approval of the Security Council.⁷⁰ Those drones have been used by Russia to target civilians and critical infrastructure in Ukraine.⁷¹ There have been concerns that the lifting of restrictions related to Iran's ballistic missile programme could allow Iran to "legally" increase its support for Russia in Ukraine.⁷²

⁶⁶ In July 2023 the Government announced plans for a new Iran sanctions regime which will provide a framework for holding Iran to account for its "hostile and destabilising behaviour around the world" (Foreign, Commonwealth and Development Office, [Press release](#), 4 July 2023)

⁶⁷ For Russian related sanctions see Library research briefing, [Sanctions against Russia](#). See also US Department of State, [Joint Statement on UN Security Resolution 2231 Transition Day](#), 18 October 2023 and US Department of State, [Press release](#), 18 October 2023

⁶⁸ Islamic Republic of Iran, Ministry of Foreign Affairs, [Statement](#), 15 September 2023

⁶⁹ Ministry of Foreign Affairs of the Russian Federation, [Statement on the expiry of certain restrictions as per UN Security Council Resolution 2231](#), 17 October 2023

⁷⁰ There is also evidence to suggest that Iranian missile systems have been transferred to the Houthis in Yemen. See "[UN missile sanctions on Iran expire](#)", Arms Control Today, November 2023

⁷¹ US Department of State, [Press briefing](#), 18 October 2022

⁷² "[Avoiding an October sanctions surprise that would empower Tehran](#)" (PDF), Foundation for Defense of Democracies, 5 September 2023

3.2

The ‘snapback’ of all sanctions remains an option

Under the terms of the JCPOA, all previous UN sanctions related to Iran’s nuclear programme, including the embargo on conventional arms transfers which expired in October 2020 and the restrictions on Iran’s missile and sensitive technologies which expired in October 2023, can be re-imposed in the event of “significant non-performance by Iran of JCPOA commitments” (the ‘snapback’ provisions).⁷³

The JCPOA and UN Security Council Resolution 2231 are due to expire ten years after Adoption Day (18 October 2025). The option therefore remains for the re-instatement of all sanctions via the snapback mechanism, if necessary until that point.

In September 2023, the E3 confirmed that they are “committed to preventing Iran from developing nuclear weapons, including through the snapback process if necessary”.⁷⁴ In July 2023 the EU was reported to have ruled out use of the snapback mechanism “unless Iran increases its enriched uranium production to 90%”.⁷⁵

The US is no longer a party to the JCPOA and therefore does not have the option to invoke the snapback mechanism, despite the Trump administration attempting, and failing, to do so in 2020.⁷⁶

2 How does snapback work?

UNSCR 2231, endorsing the JCPOA, terminated [six previous UN Security Council resolutions](#), dating from 2006 to 2015, that imposed sanctions on Iran’s nuclear programme.

Any JCPOA participant state can notify the UN Security Council of an issue they believe constitutes “significant” non-compliance with the JCPOA.

[Within 30 days the Security Council must vote on a draft resolution](#) that supports the continued suspension of those previous security council resolutions.

⁷³ [UN Security Council Resolution 2231 \(2015\), JCPOA Annex V, para 18.1 \(PDF\)](#)

⁷⁴ Foreign, Commonwealth and Development Office, [Press release](#), 14 September 2023

⁷⁵ [“US, West turn up heat on Iran over Ukraine”](#), AL-Monitor, 14 July 2023

⁷⁶ [“Snapback sanctions on Iran: More bark than bite?”](#), The Washington Institute for Near East Policy, October 2022

If a draft resolution to continue the termination of previous resolutions is not adopted then, after the 30-day period, the provision of those resolutions, including their prohibitions and restrictions, are brought back into force in the same manner as they applied before the adoption of UNSCR 2231.

The process is unusual in that it operates in reverse to the general adoption of UN Security Council resolutions. It means that Russia and China will not be able to prevent the snapback of sanctions.

Israeli calls for the snapback mechanism to be invoked

Following the Iranian attack on Israel on 13 April 2024,⁷⁷ an emergency session of the UN Security Council was held. During that debate Israel said that Iran was “on the verge” of becoming a nuclear power and called on the signatories of the JCPOA to initiate the snapback mechanism and “impose all possible sanctions on Iran before it’s too late”.⁷⁸

The UK Government has said that it is “considering next steps on the nuclear file with our international partners, and we are committed to using all diplomatic tools available to ensure that Iran never develops a nuclear weapon, including using the snapback mechanism if necessary”.⁷⁹

A US State Department official also said on 17 April that snapback remains “an available option”.⁸⁰ However, as outlined above, invoking the snapback mechanism would require action by a remaining party to the JCPOA and is not action, therefore, that the US could take unilaterally.

The US intelligence community cautioned in its February 2024 annual threat assessment, however, that in response to additional sanctions, attacks or censure of its nuclear programme, Iran would probably consider increasing its nuclear development including the possibility of enriching uranium up to weapons grade (90%).⁸¹ This is a view shared by analysts at the Arms Control Association who have argued that any attack against Iran’s nuclear capabilities or infrastructure would be counterproductive and “could push Tehran to make the political decision that nuclear weapons are necessary to deter future attacks on its territory”.⁸²

⁷⁷ This is examined in greater detail in Library research briefing [Israel and Iran April 2024: UK and international response](#)

⁷⁸ United Nations, [Meetings coverage, 9602nd Meeting, SC/15660](#), 14 April 2024

⁷⁹ [HC Deb 15 April 2024](#), c27

⁸⁰ US Department of State, [Department press briefing](#), 17 April 2024

⁸¹ Office of the Director of National Intelligence, [Annual threat assessment](#) (PDF), February 2024, p.19

⁸² [“Retaliation against Iranian nuclear sites would be counterproductive”](#), Arms Control Now Blog, Arms Control Association, 15 April 2024

The UK and the US have imposed non-nuclear-related sanctions against Iran in response to the events of 13 April 2024, including in relation to their missile and UAV development programmes.⁸³

⁸³ Foreign, Commonwealth and Development Office, [Press release](#), 18 April 2024

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