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Iran Nuclear Agreement and U.S. Exit

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Summary

On July 14, 2015, Iran and the six powers that had negotiated with Tehran about its nuclear program since 2006 (the United States, the United Kingdom, France, Russia, China, and Germany—collectively known as the P5+1) finalized a Joint Comprehensive Plan of Action (JCPOA). The JCPOA required constraints that seek to ensure that Iran's nuclear program can be used for purely peaceful purposes in exchange for a broad lifting of U.S., European Union (EU), and United Nations (U.N.) sanctions on Iran. The agreement replaced the Joint Plan of Action (JPA), an interim nuclear accord in effect from 2014 to 2016. Congress did not enact a resolution of disapproval of the JCPOA by the deadline of September 17, 2015, which was set by the Iran Nuclear Agreement Review Act (P.L. 114-17); the JCPOA formally took effect on "Adoption Day" (October 18, 2015). "Implementation Day" was declared by the P5+1 on January 16, 2016, representing the completion of Iran's nuclear requirements; entry into effect of U.N. Security Council Resolution 2231, which endorsed the JCPOA; and the start of sanctions relief stipulated in the agreement. Officials from both the Barack Obama and Donald Trump Administrations have certified that Iran has abided by its JCPOA commitments.

The Obama Administration and other P5+1 leaders asserted that the JCPOA is the most effective means to ensure that Iran cannot obtain a nuclear weapon and that all U.S. options to prevent Iran from developing a nuclear weapon are available indefinitely. The agreement contains provisions for U.N. sanctions to be reimposed if Iran violates its commitments.

Top Trump Administration officials have argued that the JCPOA does not adequately serve U.S. interests because the extensive sanctions relief provided under the accord gives Iran additional resources to conduct "malign activities" in the region, and does not restrict Iran's development of ballistic missiles. Resolution 2231, which was adopted in July 2015, prohibits arms transfers to or from Iran, but only for five years, and contains a voluntary restriction on Iran's development of nuclear-capable ballistic missiles for only up to eight years.

On May 8, President Trump announced that the United States would no longer participate in the JCPOA and would reimpose sanctions that had been suspended pursuant to the agreement. The other powers that negotiated the accord with Iran—Russia, China, France, Britain, and Germany—opposed the U.S. decision and have been meeting with Iranian officials to continue implementing the JCPOA. Iran's President Hassan Rouhani has pledged to continue implementing the accord, provided Iran continues to receive the economic benefits of the agreement.

In the 114th and 115th Congresses, legislation has been introduced with the stated purpose of redressing asserted weaknesses of the deal or preventing any U.S. sanctions relief beyond that explicitly promised in the JCPOA. The Countering America's Adversaries through Sanctions Act (P.L. 115-44) mandates sanctions on Iranian proliferation, human rights abuses, and support for terrorist activities. For details on the sanctions relief aspects of the JCPOA, see CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman.

Contents

Introduction 1
Background on Iran's Nuclear Program 2
IAEA Safeguards 3
Declared Iranian Nuclear Facilities 4
The "Joint Plan of Action" (JPA) 5
Nuclear Program Provisions under the JPA 5
"Right to Enrichment" 7
Sanctions Easing Under the JPA 7
The Joint Comprehensive Plan of Action (JCPOA) 7
Timeline for Implementing the JCPOA 8
Major Nuclear Provisions of the JCPOA 9
Enrichment Program 9
Arak Reactor 11
Other Provisions 12
Iranian Compliance with the JCPOA Nuclear Requirements 19
Sanctions Relief under the JCPOA and Reimposition 20
Formal Congressional Review and Oversight 21
Ongoing Oversight under INARA 21
U.S. Implementation of and Exit from the JCPOA 22
The JCPOA in the Trump Administration 22
U.S. Exit from the JCPOA 24
Reaction to the U.S. Exit 25
Efforts to Preserve the Accord 27

Tables

Table A-1. Summary of Timeline 29
Table A-2. JCPOA Commitments 30

Appendixes

Appendix A. Chart on the JCPOA 29
Appendix B. Nuclear Weapons Development 34

Contacts

Author Information 35

Introduction

Multilateral negotiations regarding Iran's nuclear program date back to 2003 after the International Atomic Energy Agency (IAEA) reported on the existence of clandestine nuclear facilities at Natanz. In October of that year, Iran concluded an agreement with France, Germany, and the United Kingdom under which Iran temporarily suspended aspects of its nuclear program, including enrichment of uranium, and signed an Additional Protocol to its IAEA safeguards agreement, but also asserted its right to develop nuclear technology. In January 2006, Tehran announced that it would resume research and development on its centrifuges at Natanz. After that time, Iran held multiple rounds of talks with China, France, Germany, Russia, the United Kingdom, and the United States (collectively known as the P5+1).

The U.N. Security Council meanwhile adopted several resolutions, the most recent and sweeping of which (Resolution 1929) was adopted in June 2010. These resolutions required Iran to cooperate fully with an ongoing IAEA investigation of its nuclear activities, suspend its uranium enrichment program, suspend its construction of a heavy water reactor and related projects, and ratify the Additional Protocol to its IAEA safeguards agreement. Resolution 1929 also required Tehran to refrain from "any activity related to ballistic missiles capable of delivering nuclear weapons" and to comply with a modified provision (called code 3.1) of Iran's subsidiary arrangement to its IAEA safeguards agreement.[1] The resolutions also imposed sanctions on Iran.

Diplomacy bore fruit after the June 2013 election of Iranian President Hassan Rouhani with the achievement, on November 24, 2013, of an interim nuclear accord—the Joint Plan of Action (JPA; referred to in international documents as JPOA). The JPA set out an approach toward reaching a long-term comprehensive solution to international concerns regarding Iran's nuclear program. The two sides began implementing the JPA on January 20, 2014. The P5+1 and Iran reached a framework of a Joint Comprehensive Plan of Action (JCPOA) on April 2, 2015, and the JCPOA was finalized on July 14, 2015. With the JPA remaining in effect until the JCPOA entered into implementation, the IAEA certified on January 16, 2016, that Iran had completed its required JCPOA nuclear-related tasks for Implementation Day. The United States, the U.N., and the EU ceased application of most sanctions that day. Since Implementation Day, the agency has "verified and monitored Iran's implementation of its [JCPOA] nuclear-related commitments."[2]

On November 11, 2013, coinciding with concluding the JPA, Iran and the IAEA signed a joint statement that included a "Framework for Cooperation"[3] to "strengthen their cooperation and dialogue aimed at ensuring the exclusively peaceful nature of Iran's nuclear programme through the resolution of all outstanding issues that have not already been resolved by the IAEA." The agency had long sought to resolve some outstanding questions regarding Tehran's nuclear program, some of which concern possible Iranian research on nuclear weapons development.

[1] Iran is a party to the nuclear Non Proliferation Treaty (NPT) and has concluded a comprehensive safeguards agreement with the IAEA. Such agreements are designed to enable the IAEA to detect the diversion of nuclear material from peaceful purposes to nuclear weapons uses, as well as to detect undeclared nuclear activities and material. For more information, see CRS Report R40094, *Iran's Nuclear Program: Tehran's Compliance with International Obligations*, by Paul K. Kerr.

[2] *Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015)*, Report by the Director General, International Atomic Energy Agency, GOV/2018/24, May 24, 2018.

[3] Available at http://www.iaea.org/press/?p=4018.

Amano issued the IAEA's "Final Assessment on Past and Present Outstanding Issues Regarding Iran's Nuclear Programme" on December 2, 2015.[4]

Background on Iran's Nuclear Program[5]

Iran has nuclear programs that could potentially provide Tehran with the capability to produce both weapons-grade highly enriched uranium (HEU) and plutonium—the two types of fissile material used in nuclear weapons. (In addition to the production of weapons-grade nuclear material, a nuclear weapons program requires other key elements, such as warhead design and reliable delivery systems [see **Appendix B**].) Statements from the U.S. intelligence community indicate that Iran has the technological and industrial capacity to produce nuclear weapons at some point, but the U.S. government assesses that Tehran has not mastered all of the necessary technologies for building a nuclear weapon.[6]

A November 2007 National Intelligence Estimate[7] assessed that Iran "halted its nuclear weapons program" in 2003,[8] but the estimate and subsequent statements by the intelligence community also assessed that Tehran was keeping open the "option" to develop nuclear weapons.[9] Then-Under Secretary of State for Political Affairs Wendy Sherman explained during an October 3, 2013, Senate Foreign Relations Committee hearing that Iran would need as much as one year to produce a nuclear weapon if the government made the decision to do so.[10] Tehran would have needed two to three months of this time to produce enough weapons-grade HEU for a nuclear weapon.[11] Iran's implementation of the JCPOA lengthened the latter timeline to one year, according to February 9, 2016, congressional testimony from then-Director of National Intelligence James Clapper.[12] (See "Major Nuclear Provisions of the JCPOA.")

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[4] *Final Assessment on Past and Present Outstanding Issues Regarding Iran's Nuclear Programme*, GOV/2015/68, December 2, 2015.

[5] For more information, see CRS Report RL34544, *Iran's Nuclear Program: Status*, by Paul K. Kerr.

[6] "Press Briefing by Senior Administration Officials on IAEA Report on Iran's Nuclear Activities," November 8, 2011. Ambassador Stephen D. Mull, Coordinator for Implementation of the JCPOA, told a Washington audience on January 21, 2016, that "there was a portion of the Iranian Government working in a very organized, systematic way to develop the capability to build a nuclear weapon. We don't know to the extent to which that knowledge has been tested or even survived." ("Implementation of the Joint Comprehensive Plan of Action," Washington Foreign Press Center, January 21, 2016.)

[7] "Iran: Nuclear Intentions and Capabilities," National Intelligence Estimate, November 2007.

[8] The estimate defined "nuclear weapons program" as "nuclear weapon design and weaponization work and covert uranium conversion-related and uranium enrichment related work."

[9] See, for example, Director of National Intelligence James Clapper's February 26, 2015, testimony before the Senate Armed Services Committee (Statement for the Record, *Worldwide Threat Assessment of the U.S. Intelligence Community*, February 26, 2015).

[10] This estimate assumes the necessary time to produce a sufficient amount of weapons-grade HEU and complete the remaining steps necessary for an implosion-style nuclear explosive device suitable for explosive testing. (Conversation with U.S. official, July 21, 2015.) "Reversing Iran's Nuclear Program," Senate Foreign Relations Committee, October 3, 2013.

[11] The White House. "Parameters for a Joint Comprehensive Plan of Action Regarding the Islamic Republic of Iran's Nuclear Program." April 2, 2015.

[12] *Statement for the Record Worldwide Threat Assessment of the US Intelligence Community*, Senate Armed Services Committee, February 9, 2016. Director of National Intelligence Daniel Coats reiterated this assessment in May 2017 (*Statement for the Record Worldwide Threat Assessment of the Intelligence Community*, Senate Select Committee on Intelligence, May 11, 2017) and February 2018 (*Statement for the Record Worldwide Threat Assessment of the Intelligence Community*, February 13, 2018). Then-UK Secretary of State for Foreign and Commonwealth Affairs Boris Johnson also reiterated this assessment in a May 9, 2018, statement to Parliament ("Iran Nuclear Deal," *Hansard*

U.S. officials argue that the IAEA and/or U.S. intelligence would likely detect an Iranian attempt to produce weapons-grade HEU with either its safeguarded facilities or clandestine facilities.[13] Regarding the former, Clapper testified that the JCPOA has

> enhanced the transparency of Iran's nuclear activities ... [a]s a result, the international community is well postured to quickly detect changes to Iran's declared nuclear facilities designed to shorten the time Iran would need to produce fissile material.[14]

The intelligence community assesses that Iran is more likely to use clandestine facilities to produce weapons-grade HEU, Director Clapper stated in a March 2015 interview.[15] U.S. officials have expressed confidence in the ability of U.S. intelligence to detect Iranian covert nuclear facilities[16] and have indicated that Iran currently does not appear to have any nuclear facilities of which the United States is unaware.

IAEA Safeguards

The IAEA's ability to inspect and monitor nuclear facilities in, as well as to obtain information from, a particular country pursuant to that government's comprehensive safeguards agreement has been limited to facilities and activities that have been declared by the government. Additional Protocols to IAEA comprehensive safeguards agreements increase the agency's ability to investigate undeclared nuclear facilities and activities by increasing the IAEA's authority to inspect certain nuclear-related facilities and demand information from member states. Iran signed such a protocol in December 2003 and agreed to implement the agreement pending ratification. However, following the 2005 breakdown of limited agreements with the European countries to suspend uranium enrichment, Tehran stopped adhering to its Additional Protocol in 2006.[17] Subsidiary arrangements to IAEA safeguards agreements describe the "technical and administrative procedures for specifying how the provisions laid down in a safeguards agreement are to be applied."[18] Code 3.1 of Iran's subsidiary arrangement to its IAEA safeguards agreement requires Tehran to provide design information for new nuclear facilities "as soon as the decision to construct, or to authorize construction, of such a facility has been taken, whichever is earlier."

Online, May 9, 2018, Volume 640. Available at https://hansard.parliament.uk/commons/2018-05-09/debates/A90A082B-BAB0-445E-BAB1-DBBCDA9BCCE9/IranNuclearDeal 1/17).

[13] "Hearing on Security Threats to the United States," Senate Select Committee on Intelligence, March 12, 2013. Then-IAEA Deputy Director General for Safeguards Herman Nackaerts stated in July 2013 that the IAEA "would know within a week" if Iran were to use its safeguarded facilities to produce weapons-grade HEU. (Barbara Slavin, "Tight IAEA Inspection Regime Hampers Iran's Nuclear Breakout," *Al-Monitor*, July 22, 2013.)

[14] *Statement for the Record Worldwide Threat Assessment of the US Intelligence Community*, February 9, 2016.

[15] PBS "Charlie Rose" Interview with James Clapper, Director of National Security, March 3, 2015.

[16] "Senior Administration Official Holds A Background Briefing Previewing Iran P5+1 Talks," November 6, 2013; Colin H. Kahl, "Not Time to Attack Iran: Why War Should Be a Last Resort," *Foreign Affairs*, January 17, 2012. However, Director of National Intelligence Clapper stated in a February 2015 hearing that, although the United States has "a reasonably capable intelligence capability," IAEA safeguards would be an "important aspect of any sort of agreement we might reach with the Iranians" (*Worldwide Threat Assessment of the U.S. Intelligence Community*, February 26, 2015).

[17] Iran announced that it would stop implementing the protocol two days after the IAEA Board of governors adopted a resolution in February 2006 which referred Iran's noncompliance with its IAEA safeguards agreement to the U.N. Security Council.

[18] *2001 IAEA Safeguards Glossary*. Available at http://www-pub.iaea.org/books/IAEABooks/6570/IAEA-Safeguards-Glossary-2001-Edition.

Declared Iranian Nuclear Facilities[19]

Iran did not build any new nuclear facilities or expand the existing facilities since the JPA went into effect in January 2014. Iran operates a Russian-built nuclear power reactor, for which Russia is providing fuel until 2021. The JCPOA focuses on Iran's enrichment program and its heavy water reactor due to their potential for nuclear weapons material production.

Iran has two gas centrifuge enrichment facilities: the Natanz Fuel Enrichment Plant and the Natanz Pilot Fuel Enrichment Plant. Gas centrifuges enrich uranium by spinning uranium hexafluoride gas at high speeds to increase the concentration of the uranium-235 isotope. Such centrifuges can produce low-enriched uranium (LEU), which can be used for fuel in nuclear power reactors or research reactors, and weapons-grade highly enriched uranium (HEU). LEU used in nuclear power reactors typically contains less than 5% uranium-235; research reactor fuel can be made using 20% uranium-235; HEU used in nuclear weapons typically contains about 90% uranium-235. Tehran argues that it is enriching uranium for use as fuel in nuclear power reactors and nuclear research reactors.

- **Natanz Commercial-Scale Fuel Enrichment Plant**. In this facility, Iran is using first-generation centrifuges, called IR-1 centrifuges, to produce LEU containing up to 5% uranium-235. As of November 2013, Iran had installed about 15,400 of these centrifuges, approximately 8,800 of which are enriching uranium. Iran had also installed about 1,000 centrifuges with a greater enrichment efficiency, called IR-2m centrifuges, in the facility, but they are not enriching uranium.
- **Natanz Pilot Fuel Enrichment Plant**. Iran had been using IR-1 centrifuges in this facility to produce LEU containing approximately 20% uranium-235 until halting this work pursuant to the JPA. Tehran's production of LEU enriched to the 20% level has caused concern because such production requires approximately 90% of the effort necessary to produce weapons-grade HEU, which, as noted, contains approximately 90% uranium-235.[20] Iran is testing other centrifuge models in this facility under IAEA supervision, but such work was monitored by the IAEA, even before the JPA (see below) limited this testing.

Iran has been constructing a nuclear reactor moderated by heavy water at Arak,[21] a type of reactor that produces spent fuel containing plutonium that is better suited for nuclear weapons than plutonium produced by light water-moderated reactors.[22] Tehran has asserted that the reactor is intended to produce radioisotopes for medical use and to replace the Tehran Research Reactor. Heavy water production requires a separate production plant, which Iran possesses. Prior to JCPOA implementation, the Arak reactor, if it had been completed, could have produced enough

[19] Unless otherwise noted, this section is based on CRS Report RL34544, *Iran's Nuclear Program: Status*, by Paul K. Kerr, and reports from IAEA Director-General Yukiya Amano to the IAEA Board of Governors: GOV/2013/27 (May 2013), GOV/2013/40 (August 2013), GOV/2013/56 (November 2013, and GOV/2015/34 (May 2015).

[20] Former IAEA Deputy Director General Olli Heinonen, "Dealing with a Nuclear Iran: Redlines and Deadlines," Center for Strategic and International Studies, February 6, 2013; U.S. Secretary of Energy Ernest Moniz, Senate Committee on Armed Services, "Impacts of the Joint Comprehensive Plan of Action (JPCOA) on U.S. Interests and the Military Balance in the Middle East," July 29, 2015.

[21] Iran informed the IAEA in April 2017 that Tehran was renaming the facility, which Iran had called the "Arak Heavy Water Research Reactor," the "Khondab Heavy Water Research Reactor." Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015), Report by the Director General, International Atomic Energy Agency, GOV/2017/24, June 2, 2017.

[22] Both the Tehran Research Reactor and the Bushehr reactor are light-water reactors.

plutonium for between one and two nuclear weapons per year.[23] However, plutonium must be separated from the used fuel—a procedure called "reprocessing." Iran has always maintained that it would not engage in reprocessing. Prior to the JPA, Tehran notified the IAEA that it had produced enough heavy water to commission the reactor.

The "Joint Plan of Action" (JPA)

The JPA, also widely known as the JPOA, essentially froze most aspects of Iran's nuclear program to allow time to negotiate the JCPOA. When the JPA went into effect in January 2014, Iran had enough uranium hexafluoride containing up to 5% uranium-235, which, if further enriched, would have yielded enough weapons-grade HEU for as many as eight nuclear weapons.[24] The total amount of Iranian LEU containing 20% uranium-235 would, if it had been further enriched, have been sufficient for a nuclear weapon. After the JPA went into effect, Iran either converted much of that material for use as fuel in a research reactor located in Tehran (called the Tehran Research Reactor), or prepared it for that purpose.[25] Iran diluted the rest of that stockpile so that it contained no more than 5% uranium-235. Tehran's uranium conversion facility is not set up to reconvert the reactor fuel to uranium hexafluoride.[26] According to a November 14, 2013, IAEA report, Iran had generally stopped expanding its enrichment and heavy water reactor programs during the negotiations leading up to the JPA.[27]

Nuclear Program Provisions under the JPA[28]

Under the JPA, Iran agreed to refrain from "any further advances of its activities" at the Natanz commercial-scale facility, Fordow facility, and Arak reactor. Tehran was also required to provide the IAEA with additional information about its nuclear program, as well as access to some nuclear-related facilities to which Iran's IAEA safeguards agreement does not require access. The JPA required Iran:

- **Centrifuge Limits.** To refrain from feeding uranium hexafluoride into its installed centrifuges that were not previously enriching uranium, to replace existing centrifuges only with "centrifuges of the same type," and to produce centrifuges only to replace damaged centrifuges. Tehran was also required to refrain from installing additional centrifuges at the Natanz facility. Iran was permitted to use its previously operating centrifuges in the Natanz commercial

[23] Kahl, May 14, 2015.

[24] Colin Kahl, Deputy Assistant to the President and National Security Adviser to the Vice President, "Arms Control Association Annual Meeting: Unprecedented Challenges for Nonproliferation and Disarmament," May 14, 2015.

[25] This process has generated scrap which contains LEU with 20% uranium-235. Iran also retains .6 kilograms of uranium hexafluoride containing 20% uranium-235, which "had been used as reference material for mass spectrometry" (*Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran*, Report of the Director General, International Atomic Energy Agency, GOV/2015/34, May 29, 2015).

[26] *Nuclear Industry in Iran: An Overview on Iran's Activities and Achievements in Nuclear Technology*, Atomic Energy Organization of Iran, 2012, p. 13. Also see GOV/2015/34.

[27] *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran*, GOV/2013/56, November 14, 2013.

[28] Unless otherwise noted, this section is based on the agreement text (available at http://eeas.europa.eu/statements/docs/2013/131124_03_en.pdf), "Background Briefing by Senior Administration Officials on First Step Agreement on Iran's Nuclear Program," November 24, 2013, and GOV/2013/56.

facility and the Fordow facility to produce enriched uranium containing as much as 5% uranium-235.

- **Level of Enrichment Limits.** To only enrich uranium up to 5% uranium-235. Tehran was also to dilute half of its stockpile of uranium hexafluoride containing 20% uranium-235 to no more than 5% uranium-235. The rest of the uranium hexafluoride containing 20% uranium-235 was to be converted to uranium oxide for use as fuel for the Tehran Research Reactor.[29] Iran also agreed to refrain from building a line in its uranium conversion facility for reconverting the uranium oxide back to uranium hexafluoride.
- **LEU Stockpile Limits.** To, in effect, freeze the amount of stocks of enriched uranium hexafluoride containing up to 5% uranium-235.[30]
- **Centrifuge R&D.** To continue its "current enrichment R&D Practices" under IAEA safeguards, "which are not designed for accumulation of the enriched uranium." This provision prohibited Tehran from producing enriched uranium hexafluoride containing more than 5% uranium-235.
- **Additional Monitoring.** The JPA provided for additional IAEA monitoring of the enrichment facilities by allowing IAEA inspectors to access video records from those facilities on a daily basis. Previously, inspectors did not access such records daily (and the video is not streamed in real time to the agency).[31]
- **Arak Reactor.** Iran pledged to refrain from commissioning the reactor, transferring fuel or heavy water to the reactor site, testing and producing additional reactor fuel, and installing remaining reactor components. Tehran was permitted to continue some construction at the reactor site and to produce some reactor components off-site. Iran also agreed to refrain from reprocessing spent nuclear material and building a reprocessing facility.[32]
- **Additional Pledges/Information.** The JPA reiterated previous Iranian statements "reaffirm[ing] that under no circumstances will Iran ever seek or develop any nuclear weapons." In addition, Iran was to provide the IAEA with other information, such as plans for future nuclear facilities, even though Iran was already required to provide some of this information by code 3.1 of Iran's subsidiary arrangement to its IAEA safeguards agreement. Iran also provided IAEA inspectors with "managed access" to its centrifuge assembly workshops, centrifuge rotor production workshops, centrifuge storage facilities, and uranium mines and mills.[33]

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[29] This material is unsuitable for further enrichment. Uranium hexafluoride is the form of uranium used as feedstock for centrifuge enrichment.

[30] Iran began operating a conversion plant for this purpose in July 2014.

[31] Then-deputy National Security Adviser Anthony Blinken stated in a November 25, 2013, television interview that such access would enable IAEA inspectors to detect Iranian efforts to produce weapons-grade HEU at its declared enrichment facilities "almost instantaneously." However, as noted, U.S. officials have previously expressed confidence in the IAEA's ability to detect such Iranian efforts; the extent to which the November 24, 2013, agreement improved this ability is unclear.

[32] There is no public official evidence that Iran has a reprocessing facility.

[33] According to the IAEA, "managed access" to nuclear-related facilities is "arranged in such a way as 'to prevent the dissemination of proliferation sensitive information, to meet safety or physical protection requirements, or to protect proprietary or commercially sensitive information. Such arrangements shall not preclude the Agency from conducting activities necessary to provide credible assurance of the absence of undeclared nuclear material and activities at the

"Right to Enrichment"

The JPA acknowledged that Iran's right to the peaceful use of nuclear energy under the nuclear Non-Proliferation Treaty (NPT) would be part of a comprehensive solution, but shied away from stating that uranium enrichment is part of this right. The JPA stipulated that an enrichment program in Iran would have defined limits and transparency measures.[34] The Obama Administration applied to Iran its interpretation that the NPT does not contain an explicit right to enrichment. A senior Administration official explained on November 24, 2013, that "the United States has not recognized a right to enrich for the Iranian government, nor do we intend to. The document does not say anything about recognizing a right to enrich uranium."[35]

Sanctions Easing Under the JPA

The JPA provided for some modest sanctions relief for Iran.[36] Its provisions, which remained in force until "Implementation Day" (January 16, 2016), included the following:

- **Access to Hard Currency.** Iran was able to repatriate $700 million per month in hard currency from oil sales, and to access an additional $65 million per month of its foreign exchange reserves for tuition for Iranian students abroad.
- **Oil Exports Capped.** Iran's oil exports were required to remain at their December 2013 level of about 1.1 million barrels per day (mbd).
- **Resumption of Trade in Selected Sectors.** International sanctions were suspended on Iran's sales of petrochemicals, trading in gold and other precious metals, and transactions involving Iran's auto production sector.

The Joint Comprehensive Plan of Action (JCPOA)

The JPA stated that a JCPOA would include a "mutually defined [Iranian] enrichment programme with practical limits and transparency measures to ensure the peaceful nature of the programme." Specifically, Iran and the P5+1 would, in a JCPOA, reach agreement on permanent, comprehensive sanctions relief in exchange for restrictions—"for a period to be agreed upon"—on the "scope and level" of Iran's enrichment activities, the capacity and location of Iranian enrichment facilities, and the size and composition of Tehran's enriched uranium stocks.

P5+1-Iran negotiations on a comprehensive settlement began in February 2014 but did not meet July 20 or November 24 deadlines in 2014. On November 24, 2014, Iran and the P5+1 announced their intent to finalize a detailed agreement by June 30, 2015, after first attempting to reach an overarching framework and roadmap for the agreement within four months. The framework

location in question." (*2001 IAEA Safeguards Glossary*.)

[34] Tehran has long argued that it has the right to enrich uranium pursuant to the NPT, Article IV of which states, in part, that nothing in the treaty "shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity" with the NPT's nonproliferation provisions. For example, Iran demanded in a 2012 proposal to the P5+1 that those countries recognize and announce "Iran's nuclear rights, particularly its enrichment activities, based on NPT Article IV." Available at http://www.armscontrol.org/factsheets/Iran_Nuclear_Proposals.

[35] "Background Briefing By Senior Administration Officials On First Step Agreement On Iran's Nuclear Program," November 24, 2013.

[36] White House Office of the Press Secretary. "Fact Sheet: First Step Understandings Regarding the Islamic Republic of Iran's Nuclear Program." November 23, 2013.

accord was agreed on April 2, 2015, in Lausanne, Switzerland.[37] The parties strived to meet the June 30 deadline because the Iran Nuclear Agreement Review Act (P.L. 114-17) mandated a 30-day congressional review period for an agreement completed by that date. However, the JCPOA was not finalized until July 14, 2015; the failure to meet the June 30 deadline triggered a 60-day review period under that act. The provisions of the JPA remained in effect until the JCPOA was formally "adopted," as discussed below.

Timeline for Implementing the JCPOA

The JCPOA outlines steps, as follows:

- **Finalization Day: July 14, 2015.** Iran and the P5+1 countries, along with the High Representative of the European Union for Foreign Affairs and Security Policy (Frederica Mogherini), endorsed the JCPOA. A U.N. Security Council Resolution to endorse the JCPOA was submitted for adoption.
- **Adoption Day/New U.N. Security Council Resolution.** The JCPOA formally came into effect 90 days after endorsement of JCPOA by U.N. Security Council, (or earlier by mutual consent). Resolution 2231 was adopted for that purpose on July 20, 2015, placing Adoption Day at October 18, 2015. The Administration asserted that the 90-day time frame allowed for review of the JCPOA by the U.S. Congress and by any legislature of any party to the JCPOA. On Adoption Day, the United States issued the provisional presidential waivers required to implement U.S. sanctions relief, with the waivers to take effect on Implementation Day.
- **Implementation Day.** This day was defined in the JCPOA as the day the IAEA verified that Iran has completed the several stipulated nuclear related measures (e.g., reducing centrifuges, removing the core of the Arak reactor) and the United States, the U.N., and the EU cease application of specific sanctions (see text below). The U.N. Security Council terminated the provisions of its resolutions on Iran: 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), 1929 (2010), and 2224 (2015); and Resolution 2231 became the sole operative U.N. Security Council resolution on Iran's nuclear program. Implementation Day was declared on January 16, 2016, after the IAEA made the required certification of Iran's completion of the stipulated tasks.[38]
- **Transition Day.** Represents initial stages of Iran's emergence from U.N. Security Council scrutiny. Transition Day is eight years from Adoption Day (October 18, 2023)—or upon "Broader Conclusion" report from the IAEA Director General to the IAEA Board of Governors and U.N. Security Council—whichever is earlier.[39] As of Transition Day, additional EU entities are to be removed from sanctions, the United States is required to remove from designation specified additional Iranian entities subjected to sanctions, and the Administration is required to seek legislative termination of sanctions that were suspended on Implementation Day.

[37] The text of the framework accord is at The White House. "Parameters for a Joint Comprehensive Plan of Action Regarding the Islamic Republic of Iran's Nuclear Program." April 2, 2015. U.S. Secretary of Energy Ernest Moniz described this timeline as "very, very conservative" in an April 2015 interview (Michael Crowley, "Ernest Moniz: Iran Deal Closes Enrichment Loophole," *Politico,* April 7, 2015).

[38] *Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015),* GOV/INF/2016/1, January 16, 2016.

[39] See "Broader Conclusion" below.

- **UNSCR Termination Day.** Ten years from Adoption Day (October 18, 2025). Provisions and measures imposed in U.N. Security Council Resolution endorsing JCPOA would terminate and the Security Council would not be involved in the Iran nuclear issue. However, the JCPOA itself and its remaining provisions do not terminate on this day: the accord states that, following successful implementation of the final steps of the JCPOA, Iran's nuclear program "will be treated in the same manner as that of any non-nuclear weapon state party to the NPT." Iran's IAEA safeguards obligations, as well as some JCPOA obligations, last for an indefinite duration. Potential nuclear-related exports to Iran remain subject to the Nuclear Suppliers Group's export guidelines.[40]

Resolution 2231 also ended the role of the U.N. panel of experts, which Resolution 1929 had created to work with a committee (established in Resolution 1737) that monitored states' compliance with the resolutions discussed above. The Security Council decided on January 16, 2016, to "select on an annual basis one member to serve as its facilitator" for implementing certain provisions of Resolution 2231, including Security Council approval of various Iranian exports and imports described in Annex B of the resolution.[41]

Major Nuclear Provisions of the JCPOA

The JCPOA places constraints on Iran's enrichment and heavy water reactor programs and includes monitoring provisions designed to detect Iranian efforts to produce nuclear weapons using either declared or covert facilities. The nuclear-related provisions of the agreement, according to U.S. officials, extend the amount of time that Iran would need to produce enough weapons-grade HEU for one nuclear weapon to a minimum of one year, for a duration of at least 10 years.[42] In addition to the restrictions on activities related to fissile material production, the JCPOA indefinitely prohibits Iranian "activities which could contribute to the design and development of a nuclear explosive device," including research and diagnostic activities. An IAEA report on January 16, 2016, certified that Iran had met the requirements for Implementation Day stipulated below.[43]

Enrichment Program

The JCPOA limits Iran's enrichment of uranium for fixed durations. The agreement required the IAEA to certify that Iran had completed most of the tasks described below in order for Tehran to qualify for Implementation Day sanctions relief. According to the JCPOA, expiration of the JCPOA enrichment restrictions will be "followed by gradual evolution, at a reasonable pace" of Iran's enrichment program. Iran has submitted an "enrichment R&D plan" to the IAEA as part of

[40] For information about the Nuclear Suppliers Group, see CRS Report RL33865, *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, by Amy F. Woolf, Paul K. Kerr, and Mary Beth D. Nikitin.

[41] *Note by the President of the Security Council, Security Council Tasks under Security Council Resolution 2231 (2015)*, S/2016/44, January 16, 2016.

[42] "Background Conference Call by Senior Administration Officials on Iran," July 14, 2015. U.S. Secretary of Energy Ernest Moniz described this timeline as "very, very conservative" in an April 2015 interview (Michael Crowley, "Ernest Moniz: Iran Deal Closes Enrichment Loophole," *Politico*, April 7, 2015). British Foreign and Commonwealth Office official Tobias Ellwood echoed this statement in a July 20, 2015, statement to Parliament, explaining that, under the JCPOA provisions, "Iran's breakout period will be over 12 months for 10 years, and is not expected to fall to zero afterwards." (Iran: Nuclear Power: Written question-6891. Answered by Mr. Tobias Ellwood on July 20, 2015.)

[43] GOV/INF/2016/1.

Tehran's initial declaration for its Additional Protocol. (See "Verification" section below.) Iranian adherence to that plan is a JCPOA requirement.

- **Centrifuge Limitation (10 years).** For 10 years, Tehran is to use no more than 5,060 IR-1 centrifuges to enrich uranium, and to install only IR-1 centrifuges in the facility. All excess centrifuges are to be used only as replacements for operating centrifuges and equipment.
- **Level of Enrichment Limitation (15 years).** For at least 15 years, Iran is to refrain from producing enriched uranium containing more than 3.67% uranium-235.
- **Facility Limitation (15 years).** For 15 years, Iran is to enrich uranium only at the Natanz commercial facility and is not to build any new enrichment facilities.[44]

  LEU Stockpile Limitation (15 years). For 15 years, Iran is to maintain its LEU stockpile at no more than 300 kilograms of LEU containing 3.67% uranium-235.[45] Tehran's three options for disposing of the remaining portion of its LEU stockpile were (1) diluting the material so that it contains the same levels of uranium-235 found in natural uranium; (2) selling the LEU to another country; or (3) selling it to an IAEA-established international LEU bank. Iran's LEU containing between 5% and 20% uranium-235 is to be "fabricated into fuel plates for the Tehran Research Reactor or transferred, based on a commercial transaction, outside of Iran or diluted" so that it contains a maximum of 3.67% uranium-235. Iran is to export LEU that cannot be fabricated into fuel for the Tehran Research Reactor or dilute that LEU to at most 3.67% uranium-235. On December 28, 2015, Iran shipped out LEU to Russia to reduce its stockpile to the required levels.[46] All fuel plates for the Tehran Research Reactor were irradiated, according to the January 2016 IAEA report.

  The JCPOA-established Joint Commission has deemed some enriched uranium in Iran as "unrecoverable"—and therefore not counted against the JCPOA limits on Iran's enriched uranium stockpiles. Such exempted material includes LEU contained in low-level solid waste and LEU containing as much as 3.67% uranium-235 in low-level liquid and sludge waste "provided that Iran does not build or operate any facility or part of a facility capable of recovering" this material for 15 years. Tehran will store this waste under IAEA safeguards. The commission has similarly deemed enriched uranium containing 20% uranium-235 described as "laboratory contamination."

  The commission announced on January 10, 2017, that it had approved an Iranian

[44] After 10 years, Iran may produce enriched uranium at the pilot centrifuge facility as part of R&D work.

[45] Secretary Moniz explained in September 2016 that this stockpile only includes nuclear material determined by a Technical Working Group set up by the JCPOA-established Joint Commission to be "usable" as potential fissile material for a nuclear weapon. (A Conversation With Ernest J. Moniz, Paul C. Warnke Lecture on International Security, September 19, 2016.)

[46] "Press Release on the Export of Enriched Uranium from Iran Assisted by Russia as Part of Preparation for JCPOA Implementation," Ministry of Foreign Affairs of the Russian Federation, December 29, 2015. Daily Press Briefing, Department of State, December 28, 2015." Ambassador Stephen Mull, Coordinator for Implementation of the JCPOA, told the Senate Foreign Relations Committee on December 17, 2015, that the exported material "will end up at a safeguarded facility" in Russia.

plan to flush enriched uranium from the process lines of an Iranian facility designed to produce uranium dioxide powder from LEU containing up to 5% uranium-235.[47] Iran had approximately 100 kilograms of this material when Tehran and the P5+1 agreed to the JCPOA.[48] Any LEU remaining after Iran completes the specified process, which the government started on January 31, 2017, will be deemed "unrecoverable" and will not count against the 300 kilogram limit described above.[49]

- **Fordow Conversion (15 years).** For 15 years, Iran is to maintain no more than 1,044 IR-1 centrifuges at the Fordow enrichment facility. Iran is not to conduct uranium enrichment or related research and development (R&D) there and the facility will not contain any nuclear material. Iran agreed to convert Fordow into "a nuclear, physics, and technology centre." 348 of the IR-1 centrifuges may be used to produce stable isotopes for medical and industrial uses.[50]
- **Centrifuge Production (8, 10 years).** With regard to centrifuge manufacturing, Iran for 10 years is to use the excess IR-1 centrifuges from the Natanz and Fordow facilities "for the replacement of failed or damaged machines." Tehran may resume producing IR-1 centrifuges if its stock of replacement centrifuges "falls to 500 or below." After 8 years, Iran will be permitted to begin to manufacture 2 types of advanced centrifuges; after 10 years, Iran will be permitted to produce complete versions of those centrifuges and store them under IAEA monitoring "until they are needed for final assembly."
- **Centrifuge R&D (10 years)**. For 10 years, Iran is to refrain from pursuing R&D on any technologies other than gas centrifuge enrichment.

Arak Reactor

The JCPOA commits Iran to redesign and rebuild the Arak reactor based on a design agreed to by the P5+1 so that it will not produce weapons-grade plutonium. Iran is to export the spent fuel from this reactor and all other nuclear reactors. The JCPOA also requires Tehran to render the Arak reactor's original core inoperable; the IAEA report of January 16, 2016, said that Iran had met this requirement. Tehran is managing an international project to redesign and construct the replacement reactor; P5+1 participants established a working group "to support and facilitate the redesigning and rebuilding of the reactor." The group was to "conclude an official document" before Implementation Day which would "define the responsibilities" assumed by the P5+1 participants. China's Atomic Energy Authority and the U.S. Department of Energy "affirmed their readiness to convene and co-chair" the working group, according to an October 18, 2015, joint statement from China, Iran, and the United States, which added that the three parties "intend to work together to conclude expeditiously" the document described above.[51] The parties issued the

[47] Decision of the Joint Commission Established by the Joint Comprehensive Plan of Action, January 10, 2017, https://eeas.europa.eu/sites/eeas/files/jc_paper_of_10_01_2017_-_eupp.pdf.

[48] *Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015)*, Report by the Director General, International Atomic Energy Agency, GOV/2017/10, February 24, 2017.

[49] Ibid. Decision of the Joint Commission, January 10, 2017.

[50] Iran and Russia have been discussing cooperation on the production of such isotopes (Russian statement to the IAEA General Conference, September 26, 2016; "Iran Launches Building of Two Power Units in Bushehr," *BBC Worldwide Monitoring*, September 10, 2016).

[51] "Joint Statement of Intent Concerning the Arak Heavy Water Reactor Research Reactor Modernization Project under the Joint Comprehensive Plan of Action," October 18, 2015.

document on November 22, 2015. The United States is no longer participating in the project and the United Kingdom has taken the U.S. role.[52]

Chinese and Iranian companies signed the first consultancy services contract" for this project on April 23, 2017,[53] and the "conceptual redesigning" of the reactor was completed thereafter, according to an April 2018 official Iranian news report.[54]

The JCPOA prohibits Iran from reprocessing spent reactor fuel, except to produce "radio-isotopes for medical and peaceful industrial purposes." The JCPOA text states that Iran "does not intend" to engage in reprocessing after the 15-year period expires. Furthermore, Tehran has also committed to refrain from accumulating heavy water "beyond Iran's needs"; Iran is to "sell any remaining heavy water on the international market for 15 years."[55] The JCPOA requires Iran to refrain from building heavy water-moderated reactors for 15 years, and Iran pledges to refrain from constructing any such reactors indefinitely.

Iran's stock of heavy water has exceeded 130 metric tons on 2 occasions since the JCPOA began implementation. On February 17, 2016, the IAEA verified that Tehran's heavy water stock had exceeded 130 metric tons; on November 8, 2016, the IAEA verified that Iran's stock of heavy water had again exceeded the JCPOA limit. Iran resolved the issue on both occasions by exporting the excess heavy water. Tehran has sent this material to Russia and the United States, shipping at least some of it via Oman.[56] Iran told the IAEA on June 18, 2017, letter that it had transferred 19.1 metric tons of heavy water to a destination outside the country.[57] According to an April 2018 report covering 2017, "[m]ost Iranian excess heavy water has been sold and delivered to international buyers; the remainder is awaiting sale and is stored in a location outside Iran, under IAEA seal, though it remains Iranian property."[58] The IAEA verified on May 6, 2018, that Iran had 120.3 metric tons of heavy water.[59]

Other Provisions

Verification

The IAEA monitors Iranian compliance with the JCPOA provisions concerning its enrichment program and the Arak program, as well as dual-use nuclear weapon-related activities. To do so, the agency has increased the number of its inspectors in Iran and begun using more-advanced modern verification technologies, such as the Online Enrichment Monitor. Iran pledged to allow a

[52] See "U.S. Exit from the JCPOA." "Statement from the Joint Commission on the Joint Comprehensive Plan of Action," European External Action Service. July 6, 2018.

[53] Chair's Statement Following the 25 April 2017 Meeting of the JCPOA Joint Commission, April 25, 2017.

[54] "Salehi: Designing of Arak Reactor Platform Ends," *Islamic Republic News Agency*, April 14, 2018.

[55] According to the agreement, these "needs" are 130 metric tons of "nuclear grade heavy water or its equivalent in different enrichments" prior to commissioning the redesigned Arak reactor and 90 metric tons after the reactor is commissioned.

[56] Iran has also shipped "a smaller amount to other countries" a spokesperson for Iran's Atomic Energy Organization said in March 2018 ("Iran to Unveil 'Heavy Water Achievements' on 9 April," *Fars News Agency*, March 26, 2018).

[57] *Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015),* Report by the Director General, International Atomic Energy Agency, GOV/2017/35, August 31, 2017. The report does not name the heavy water's destination.

[58] *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, Department of State, April 2018.

[59] GOV/2018/24.

"long-term IAEA presence in Iran" and "has agreed to implement" the Additional Protocol to its safeguards agreement.[60] Iran is also to implement the modified code 3.1 of the subsidiary arrangements to its IAEA safeguards agreement. According to IAEA reports, the government has taken these steps since it began implementing the JCPOA in January 2016. Iran submitted its declarations pursuant to its Additional Protocol in July 2016.[61] It is worth noting that Iran's IAEA safeguards obligations last for an indefinite duration. Potential nuclear-related exports to Iran would remain subject to the Nuclear Suppliers Group's (NSG) export guidelines.[62] The April 2018 State Department report noted that "Tehran's adherence" to its JCPOA commitments "will hinder its ability to produce a nuclear weapon even after the time-bound provisions of the deal expire, helping to ensure that its nuclear program remains exclusively peaceful in nature."[63]

The JCPOA also describes other monitoring and inspections. For 15 years, the IAEA will monitor the stored Iranian centrifuges and related infrastructure. During this time, Iran will also permit the IAEA "daily access" to "relevant buildings" at the Natanz facilities. For 20 years, Tehran will allow the agency to verify Iran's inventory of certain centrifuge components and the manufacturing facilities for such components. Additionally, Iran is to allow the IAEA to monitor the country's uranium mills for 25 years and to monitor Iran's plant for producing heavy water.[64] As noted, Amano also reported that, since Implementation Day, the IAEA "verified and monitored Iran's implementation of its nuclear-related commitments under the JCPOA."[65]

IAEA Director-General Yukiya Amano told reporters on July 14, 2015, that the agency's workload would increase under the JCPOA. On August 25, 2015, the IAEA Board of Governors authorized Amano "to undertake the verification and monitoring" of Iran's nuclear-related JCPOA commitments "subject to the availability of funds and consistent with our standard safeguards practices."[66] The IAEA has integrated these costs into its regular budget.[67]

The Obama Administration argued that these provisions will prevent Iran from developing a nuclear weapon covertly. Then-Secretary of State John Kerry explained in a September 2, 2015, speech that Iran "would have to come up with a complete ... and completely secret nuclear supply chain," adding that "our intelligence community and our Energy Department ... both agree Iran could never get away with such a deception."[68]

The JCPOA and U.N. Security Council Resolution 2231 contain a variety of reporting provisions for the IAEA. For example, the resolution requests the agency's Director General

[60] Article 17 of the Model Additional Protocol says that a state may, before the Protocol enters into force, "declare that it will apply this Protocol provisionally." In July 2016, as required by its Additional Protocol, Iran submitted its declarations of various nuclear activities to the IAEA. (For more information about declaration requirements, see Selected Provisions of the IAEA Model Additional Protocol in CRS Report R44142, *Iran Nuclear Agreement: Selected Issues for Congress*, coordinated by Kenneth Katzman and Paul K. Kerr.)

[61] GOV/2016/46.

[62] For information about the Nuclear Suppliers Group, see CRS Report RL33865, *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, by Amy F. Woolf, Paul K. Kerr, and Mary Beth D. Nikitin.

[63] Department of State, April 2018.

[64] This plant was not under IAEA safeguards prior to the JCPOA.

[65] GOV/2016/55.

[66] "IAEA Director General Yukiya Amano's Statement to the Board of Governors," September 7, 2015.

[67] Ambassador Henry S. Ensher, IAEA Board of Governors Meeting June 6-10, 2016. Conversation with U.S. officials, July 1, 2016.

[68] "Remarks on Nuclear Agreement With Iran," September 2, 2015. For a detailed explanation, see Richard Nephew, "How the Iran Deal Prevents a Covert Nuclear Weapons Program," *Arms Control Today*, September 2015.

> to provide regular updates to the IAEA Board of Governors and, as appropriate, in parallel to the Security Council on Iran's implementation of its commitments under the JCPOA and also to report to the IAEA Board of Governors and in parallel to the Security Council at any time if the Director General has reasonable grounds to believe there is an issue of concern directly affecting fulfillment of JCPOA commitments.

It is worth noting that, although the IAEA reports findings of its inspection and monitoring activities and the JCPOA-established Joint Commission monitors the parties' implementation of the agreement, compliance determinations are national decisions.

Access to Undeclared Sites. The JCPOA describes arrangements for the IAEA to gain access to Iranian sites other than those Tehran declares to the agency "if the IAEA has concerns regarding undeclared nuclear materials or activities, or activities inconsistent with" the JCPOA. If the IAEA has such concerns at one of these sites, the agency "will provide Iran the basis for such concerns and request clarification." The IAEA could request access to the site if Iran's explanation did not provide sufficient clarification, and Tehran may respond by proposing alternative means of resolving the IAEA's concerns. If such means did not resolve the IAEA's concerns or the two sides did not "reach satisfactory arrangements ... within 14 days of the IAEA's original request for access," Iran "would resolve the IAEA's concerns through necessary means agreed between Iran and the IAEA." Tehran would make such a decision "in consultation with the members of the Joint Commission" established by the JCPOA.[69] If the two sides cannot reach agreement, the commission "would advise on the necessary means to resolve the IAEA's concerns" if at least a majority of commission members agreed to do so. The Joint Commission would have seven days to reach a decision, and Iran is required to implement the necessary means within three additional days. (*The total time for the stipulated procedures would be 24 days.*)

The JCPOA contains several provisions that address Iranian concerns that IAEA inspectors may try to obtain information unrelated to the country's nuclear program. For example, the IAEA may only request access to the types of facilities described above "for the sole reason to verify the absence of undeclared nuclear materials and activities or activities inconsistent with the JCPOA." In addition, the agency would provide Iran with written reasons for access and "make available relevant information."

Procurement Channel. The JCPOA established a "procurement channel" for Iran's nuclear program.[70] The Joint Commission established by the JCPOA is to monitor and approve transfers made via the channel for 10 years. The agreement requires Iran to provide the IAEA with "access to the locations of intended use of all items, materials, equipment, goods and technology" listed in the NSG's "Guidelines for Nuclear Transfers."[71] Moreover, Tehran is to permit exporting governments to "verify the end-use of all items, materials, equipment, goods and technology" listed in the NSG's "Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Materials, Software, and Related Technology."[72]

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[69] Even in the absence of compliance issues, the commission is to meet every three months. (Ambassador Stephen D. Mull, "Implementation of the Joint Comprehensive Plan of Action," Washington Foreign Press Center, January 21, 2016.) According to the agreement, the work of the Joint Commission, which makes decisions by consensus, is "is confidential and may be shared only among JCPOA participants and observers as appropriate, unless the Joint Commission decides otherwise."

[70] Information about the channel is available at http://www.un.org/en/sc/2231/pdf/160113-Information-on-the-procurement-channel.pdf.

[71] INFCIRC/254/Rev.12/Part 1.

[72] INFCIRC/254/Rev.9/Part 2.

IAEA officials will have access to information about and may participate in meetings regarding such transfers when they are proposed. According to a June 2016 GAO report, IAEA officials asserted that "there is additional work to be done in informing exporting countries of their obligations and standardizing the data that the countries would report to IAEA so that they are usable to the agency."[73]

According to a December 8, 2017, report by U.N. Secretary-General António Guterres, the Security Council had received 37 nuclear-related export proposals since Implementation Day; the council approved 24 of those proposals and disapproved three. Five proposals were withdrawn by the submitting states and three were under review.[74]

Broader Conclusion. The JCPOA also indicates that the IAEA will pursue drawing a "Broader Conclusion that all nuclear material in Iran remains in peaceful activities." According to the IAEA, the agency can draw such a conclusion for states with comprehensive safeguards agreements and additional protocols in force. According to the IAEA,

> The conclusion of the absence of undeclared nuclear material and activities is drawn when the activities performed under an additional protocol have been completed, when relevant questions and inconsistencies have been addressed, and when no indications have been found by the IAEA that, in its judgement, would constitute a safeguards concern.[75]

The average time for the IAEA to draw the broader conclusion for states with complex nuclear programs has been five to seven years.[76] Former IAEA Deputy Director General Heinonen wrote that "it has taken up to five years for the IAEA to reach a 'broader conclusion' for other countries with large nuclear programs that are in good standing under the Non-Proliferation Treaty."[77] Amano explained on March 20, 2017, that "I cannot tell how many years it will take" to draw such a conclusion for Iran, adding that "it depends very much on the level of cooperation from Iran."[78] In October 2017, Amano stated that the process is "likely to take many years," and there are no recent public indications that the IAEA is close to issuing that conclusion.[79]

International Cooperation

The JCPOA discusses a variety of nuclear projects in Iran that would include other countries. These include the Arak reactor project; research at the Fordow facility; other nuclear reactor projects; nuclear medicine; nuclear safety; and the supply of nuclear fuel. This latter form of cooperation is presumably designed to obviate the need for Iran to produce its own nuclear fuel. Some, but not necessarily all, of the P5+1 countries, will participate in these projects. The JCPOA

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[73] *Iran Nuclear Agreement: The International Atomic Energy Agency's Authorities, Resources, and Challenges*, U.S. Government Accountability Office, GAO-16-565, June 2016.

[74] *Fifth Report of the Secretary-General on the Implementation of Security Council Resolution 2231 (2015)*, S/2018/602, June 12, 2018.

[75] *2001 IAEA Safeguards Glossary*.

[76] Conversation with U.S. official, July 31, 2015.

[77] Olli Heinonen, *Concerns about a Reduction of Transparency in IAEA Reporting on Iran's Nuclear Program*, Foundation for Defense of Olli Heinonen, *Concerns about a Reduction of Transparency in IAEA Reporting on Iran's Nuclear Program*, Foundation for Defense of Democracies, November 28, 2016.

[78] Yukiya Amano, "The Iran Deal: International Perspectives," Carnegie International Nuclear Policy Conference 2017, March 20, 2017.

[79] Yukiya Amano, "International Cooperation for Enhancing Nuclear Safety, Security, Safeguards and Non-Proliferation - 60 Years Atoms for Peace and Development," October 9, 2017.

also envisions forms of technical cooperation between Iran and the IAEA.[80] The Obama Administration argued that international nuclear cooperation would provide additional transparency into Iran's nuclear program.[81]

The United States does not have a civil nuclear cooperation agreement with Iran, and U.S. sanctions laws prohibit the United States from engaging in most forms of nuclear cooperation with Iran. Section 129b.(1) of the Atomic Energy Act (AEA) of 1954, as amended, forbids the export of "nuclear materials and equipment or sensitive nuclear technology" to any country designated as a state sponsor of terrorism.[82] Section 129b.(3) allows the President to waive this provision. Section 57b.(2) of the AEA allows for limited forms of nuclear cooperation related to the "development or production of any special nuclear material outside of the United States" without a nuclear cooperation agreement if that activity has been authorized by the Secretary of Energy following a determination that it "will not be inimical to the interest of the United States."

Nuclear Weapons Research and Development

In addition to addressing Iran's ability to produce fissile material, the JCPOA contains other provisions intended to render Iran unable to produce a nuclear weapon. For example, the agreement indefinitely prohibits specific activities "which could contribute to the design and development of a nuclear explosive device."[83] Neither Iran's comprehensive safeguards agreement nor its additional protocol explicitly prohibit these activities. As noted, the U.S. government assesses that Tehran has not mastered all of the necessary technologies for building a nuclear weapon. In addition, for 15 years Iran is to refrain from "producing or acquiring plutonium or uranium metals or their alloys" and "conducting R&D on plutonium or uranium (or their alloys) metallurgy, or casting, forming, or machining plutonium or uranium metal." Producing uranium or plutonium metals is a key step in producing nuclear weapons.

Resolving Questions of Past Nuclear Weapons-Related Research

The IAEA has concluded its investigation of the outstanding issues concerning Iran's nuclear program. According to IAEA reports, the agency has evidence that Iran may have conducted work relevant to nuclear weapons, such as research about a nuclear payload for missiles. U.N. Security Council resolutions required Iran to resolve these questions by providing full information to the

[80] Implementing a provision of U.N. Security Council Resolution 1737, the IAEA halted some technical cooperation with Iran in 2007. Tehran had seven technical cooperation projects with the agency in 2017.

[81] "Background Conference Call by Senior Administration Officials on Iran," July 14, 2015.

[82] Section 129b. (2) of the AEA states that the prohibitions described in the previous section "shall not apply to exports, reexports, transfers, or retransfers of radiation monitoring technologies, surveillance equipment, seals, cameras, tamper-indication devices, nuclear detectors, monitoring systems, or equipment necessary to safely store, transport, or remove hazardous materials ... except to the extent that such technologies, equipment, seals, cameras, devices, detectors, or systems are available for use in the design or construction of nuclear reactors or nuclear weapons." For more information, see CRS Report RS22937, *Nuclear Cooperation with Other Countries: A Primer*, by Paul K. Kerr and Mary Beth D. Nikitin.

[83] Listed in Annex I of the JCPOA, these activities are designing, developing, acquiring, or using computer models to simulate nuclear explosive devices; designing, developing, fabricating, acquiring, or using multi-point explosive detonation systems suitable for a nuclear explosive device; designing, developing, fabricating, acquiring, or using explosive diagnostic systems(streak cameras, framing cameras and flash x-ray cameras) suitable for the development of a nuclear explosive device; and designing, developing, fabricating, acquiring, or using explosively driven neutron sources or specialized materials for explosively driven neutron sources. Iran may conduct some of these activities for non-nuclear purposes if Tehran receives permission from the Joint Commission established by the JCPOA. Such permitted activities would be "subject to monitoring."

IAEA, and the agency has held regular talks with Iran to chart a path forward. But past reports from Amano to the agency's Board of Governors said that, although the IAEA could verify that there was no diversion of nuclear material from Iran's declared nuclear facilities, it could not conclude that no nuclear weapons-related activity was taking place in the country.

According to the JCPOA, Tehran would "complete" a series of steps set out in an Iran-IAEA "Roadmap for Clarification of Past and Present Outstanding Issues." According to Amano, this road map set out "a process, under the November 2013 Framework for Cooperation, to enable the Agency, with the cooperation of Iran, to make an assessment of issues relating to possible military dimensions to Iran's nuclear programme."[84] "All the activities contained in the road-map were implemented in accordance with the agreed schedule," according to a December 2, 2015, report from Amano.[85]

On December 2, 2015, in advance of the December 15 deadline in the road map, Amano presented the stipulated report, as a final assessment on all past and present outstanding [Iranian nuclear] issues described in a November 2011 report.[86] It indicated that the information provided by Iran did not allow the IAEA to resolve some outstanding issues and also casts doubt on some of the information's accuracy. Nevertheless, the report assesses that "before the end of 2003, an organizational structure was in place in Iran suitable for the coordination of a range of activities relevant to the development of a nuclear explosive device." Iran conducted "a range of activities relevant to the development of a nuclear explosive device ... prior to the end of 2003 as a coordinated effort," the report says, adding that "some [nuclear weapons-related] activities took place after 2003," but "were not part of a coordinated effort." The report concludes that "these activities did not advance beyond feasibility and scientific studies, and the acquisition of certain relevant technical competencies and capabilities" and notes that the IAEA "has no credible indications of activities in Iran relevant to the development of a nuclear explosive device after 2009." Amano told the IAEA board on December 15 that, although "it was not possible for the Agency to reconstruct all the details of activities conducted by Iran in the past, we were able to clarify enough elements to provide an assessment of the whole picture."[87] The IAEA reiterated this conclusion on May 1, 2018, following Israeli Prime Minister Benjamin Netanyahu's disclosure of documents concerning Iran's past nuclear weapons program, though the agency did not comment on the documents specifically.[88] On June 5, 2018, Nicole Shampaine, the Chargé d'Affaires at the U.S. Mission to International Organizations in Vienna, stated that Israeli Prime Minister Benjamin Netanyahu's April 2018 disclosure of documents concerning Iran's past nuclear weapons program "further reaffirms" the IAEA's December 2015 conclusion that Iran had conducted such research in the past.[89] In accordance with the road map, Iran presented, in writing, its "comprehensive assessment to the IAEA" on Amano's report, on January 7, 2016. The document apparently acknowledges Iranian "scientific studies of dual-use technologies" for "peaceful civilian or conventional military uses."[90] But the statement reiterated previous Iranian

[84] "IAEA Director General Amano's Remarks to the Press on Agreements with Iran," July 14, 2015.

[85] *Final Assessment on Past and Present Outstanding Issues Regarding Iran's Nuclear Programme*, GOV/2015/68, December 2, 2015.

[86] GOV/2015/68; *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran*, Report by the Director General, GOV/2011/65, November 8, 2011.

[87] IAEA Director General Amano's Introductory Statement to the Board of Governors, December 15, 2015.

[88] "Statement on Iran by the IAEA Spokesperson," 22/2018, May 1, 2018.

[89] U.S. Statement as Delivered by U.S. Chargé d'Affaires Nicole Shampaine, IAEA Board of Governors Meeting: Agenda Item 5: Verification and Monitoring in Iran, June 5, 2018.

[90] *Communication Dated 7 January 2016 Received from the Permanent Mission of the Islamic Republic of Iran to the*

claims that the country has done no work on nuclear weapons and that some of the evidence underlying the agency's concerns is inauthentic.

Virtual Closure of the Issue. The JCPOA states that, following Amano's report, the P5+1 "in their capacity as members of the [IAEA] Board of Governors, will submit a resolution to the Board of Governors for taking necessary action, with a view to closing the issue." The board adopted a resolution on December 15 which closed "the Board's consideration" of the "outstanding issues regarding Iran's nuclear programme."[91]

The Board is no longer focused on Iran's compliance with past Security Council resolutions and past issues concerning Iran's safeguards agreement, but is instead focused on JCPOA implementation and verification and monitoring in Iran in light of Security Council Resolution 2231. The resolution requests the Director General to issue quarterly reports to the board regarding Iran's "implementation of its relevant commitments under the JCPOA for the full duration of those commitments." The Director General is also to report to the Board of Governors and the Security Council "at any time if the Director General has reasonable grounds to believe there is an issue of concern" regarding Tehran's compliance with its JCPOA or safeguards obligations. It is worth noting that the IAEA will not be able to draw the "Broader Conclusion that all nuclear material in Iran remains in peaceful activities" without addressing these issues. The April 2018 State Department report notes that closing the agenda item concerning Iran's past military-related nuclear activities "does not preclude the IAEA from investigating if there is reason to believe Iran is pursuing any covert nuclear activities, including nuclear weapons work."[92]

Issue Significance. The significance of resolving these issues for ensuring that Iran's current program is for purely peaceful purposes is unclear. Former IAEA Deputy Director General Olli Heinonen argued during a July 2014 Senate hearing that gaining full understanding of Iran's past suspected nuclear weapons program is important for determining that Iran is not reconstituting that program and also for determining the probability that Iran will use a future centrifuge program to produce nuclear weapons.[93] However, in April 2015, Jofi Joseph, a former Obama Administration official whose portfolio included the Iran nuclear issue, commented

> Some argue that it will be very difficult to identify future covert Iranian nuclear weapons efforts without a detailed understanding of what happened before. I'm not so sure. It is not clear if the individuals involved with the previous [nuclear weapons program] would be the ones tapped again for a future covert program or whether a clear understanding of their previous actions would help identify future efforts.[94]

Former State Department official Robert Einhorn argued that

> It is sometimes argued that full Iranian disclosure is essential to designing an effective JCPOA monitoring system. But the provisions of an agreement that could be most effective in monitoring small-scale weaponization activities would be more intrusive than any sovereign state would be willing to accept (e.g., keeping close track of all scientists with the necessary expertise, on-site verification of all equipment in the country that could be

Agency Regarding the Report of the Director General on the Final Assessment on Past and Present Outstanding Issues Regarding Iran's Nuclear Programme, INFCIRC/893, January 8, 2016.

[91] GOV/2015/72.

[92] Department of State, April 2018.

[93] *Iran: Status of the P-5+1, Panel 2*, Senate Committee on Foreign Relations Hearing, July 29, 2014.

[94] "Jofi Joseph on the Iran Deal," Arms Control Wonk, April 7, 2015. Available at http://lewis.armscontrolwonk.com/archive/7623/jofi-joseph-on-the-iran-deal.

> used in nuclear weapons design and diagnostics). With or without full knowledge of past Iranian activities, it would have been nearly impossible to reach agreement on such intrusive arrangements.[95]

Einhorn also explained that

> the United States already has considerable knowledge of past Iranian nuclear weapons work. And in any event, in calculating how much time it would have to thwart an Iranian breakout, the United States would have to make the conservative assumption that Iran had made substantial headway in weaponization and would not require much time to proceed from the production of fissile material to the fabrication of a weapon. It is unlikely that anything the Iranians might say about past weaponization efforts would affect U.S. planning to stop an Iranian breakout, especially because whatever they said would hardly be taken at face value.[96]

Iranian Compliance with the JCPOA Nuclear Requirements

Regarding Iranian compliance with the JCPOA, the Iran Nuclear Agreement Review Act of 2015 (INARA, P.L. 114-17)[97] requires the President[98] to "determine whether the President is able to certify" that Iran

- "is transparently, verifiably, and fully implementing the agreement, including all related technical or additional agreements";
- "has not committed a material breach" of the agreement or cured any material breaches that Iran has committed; and
- "has not taken any action, including covert activities, that could significantly advance its nuclear weapons program."[99]

Then-Secretary of State Rex Tillerson issued this certification on July 17, 2017. , All official reports and statements from the United Nations, European Union, the IAEA, and the P5+1 indicate that Iran has complied with the JCPOA. The most recent report from IAEA Director General Amano states that the IAEA has continued verification and monitoring of the restrictions described in Section T of the JCPOA, which prohibits a number of nuclear weapons-related activities.[100] Secretary of State Michael Pompeo stated during an April 12, 2018, Senate Foreign Relations Committee hearing that he had seen no evidence of Iranian noncompliance with the agreement. High Representative of the European Union for Foreign Affairs and Security Policy Mogherini stated on April 16 that "Iran is fully compliant with its nuclear commitments."[101]

The agreement, as noted, describes arrangements for agency inspectors to gain access to Iranian sites, including military sites, other than those that Tehran has declared to the agency, "if the

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[95] Robert Einhorn, "A Verdict on Iranian Military Nukes Won't Kill the Deal," *The National Interest*, November 30, 2015. November 30, 2015.

[96] Ibid.

[97] For greater detail on all the provisions of that law, see CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman.

[98] President Obama delegated to the Secretary of State the authority to issue this certification.

[99] INARA defines "material breach" as "any failure to perform those commitments, that substantially (A) benefits Iran's nuclear program; (B) decreases the amount of time required by Iran to achieve a nuclear weapon; or (C) deviates from or undermines the purposes of" the JCPOA.

[100] GOV/2018/24.

[101] "Remarks by HR/VP Federica Mogherini upon Arrival at the Foreign Affairs Council," *European External Action Service*, April 16, 2018.

IAEA has concerns regarding undeclared nuclear materials or activities, or activities inconsistent with" the JCPOA. The agreement also provides for alternative means to clarify the matter. The IAEA has not reported whether it has requested access to any Iranian military facilities, but the agency has a number of methods other than inspections, such as analyzing open source information and receiving intelligence briefings from governments, to monitor Iranian compliance with these and other JCPOA commitments. According to the April 2018 State Department report,

> [t]he IAEA continues to exercise its full authorities in pursuing any new safeguards-relevant or JCPOA-related information in Iran, including any new concerns regarding weaponization should they arise, through implementation of Iran's Safeguards Agreement, Additional Protocol, and the enhanced transparency and verification measures contained in the JCPOA.[102]

In a June 4, 2018, statement to the IAEA board Amano noted that the IAEA has been able to access "all the sites and locations in Iran which" agency inspectors "needed to visit."

Sanctions Relief under the JCPOA and Reimposition

Under the JCPOA, the overwhelming bulk of sanctions relief occurred at Implementation Day.[103] The U.S. sanctions laws waived and executive orders revoked are discussed in detail in CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman, which also analyzes the reimposition of all U.S. sanctions that were suspended or revoked, in accordance with President Trump's May 8, 2018, announcement of the U.S. withdrawal from the JCPOA.

Iran remains subject to its obligations pursuant to the JCPOA and Resolution 2231. A "snap back" mechanism was incorporated into the JCPOA to account for the possibility that Iran might not satisfactorily resolve a P5+1 inquiry about possible JCPOA noncompliance. According to the JCPOA, the United States (or any veto-wielding member of the U.N. Security Council) would be able to block a U.N. Security Council resolution that would continue the lifting of U.N. sanctions despite Iran's refusal to resolve the dispute. In that case, "... the provisions of the old U.N. Security Council resolutions would be reimposed, unless the U.N. Security Council decides otherwise." These provisions are included in U.N. Security Council Resolution 2231.[104] The wording implies that the Council has the option to reimpose some, but not all, sanctions that existed prior to the JCPOA. *The total time for this "dispute resolution" mechanism—between the time of the complaint of Iranian noncompliance and the reimposition of U.N. sanctions—is 65 days.*

The other P5+1 states are able to invoke this mechanism, if they choose. But whether the United States may do so is unclear because the resolution provides that only a "JCPOA participant state" may bring a noncompliance finding to the Security Council; U.S. officials have stated that the United States is no longer participating in the agreement.

[102] Department of State, April 2018.

[103] http://www.politico.com/story/2015/07/full-text-iran-deal-120080.html.

[104] http://www.scribd.com/doc/271711382/Iran-Deal-Draft-UNSC-Resolution-as-Uploaded-by-Inner-City-Press.

Formal Congressional Review and Oversight[105]

Legislation providing for U.S. congressional review was enacted as the Iran Nuclear Agreement Review Act of 2015 (INARA, P.L. 114-17).[106] Because the agreement was reached after July 10, the congressional review period was 60 days from the date of submission to Congress, which is to be within 5 days of finalization of the accord. The transmission of all required materials, according to the Administration, took place on July 19, 2015. No statutory sanctions could be waived during the review period, which concluded on September 17.

Joint resolutions of disapproval were introduced in each chamber: H.J.Res. 64 in the House, and S.Amdt. 2640 to H.J.Res. 61 in the Senate. However, the House acted on three bills: H.R. 3461 to *approve* the deal was voted down 162-269. Another bill, H.Res. 411, asserting that the President did not comply with P.L. 114-17 because the IAEA-Iran agreements were not submitted to Congress, passed the House 245-186. A third bill, H.R. 3460, denying the President the ability to waive any sanctions laws until January 2017, passed 247-186. None of the bills was taken up by the Senate. In that body, several cloture motions on the disapproval resolution (H.J.Res. 61) were defeated and the review process under P.L. 114-17 ended on September 17, 2015, with no resolution either approving or disapproving the JCPOA being enacted.

Iranian Parliamentary Review. In August 2015, the Iranian *Majles* (parliament) set up a 15-person committee to review the JCPOA. The committee asserted that the JCPOA had "flaws," but stopped well short of saying it should not be adopted.[107] Acting just before the deadline for Adoption Day, the *Majles* formally voted to approve the agreement, and Council of Guardians concurred. On October 21, 2015, Supreme Leader Khamene'i formally accepting the *Majles* and Council of Guardians decisions, while stressing stipulations, reservations, and distrust of the U.S. intent to fully implement its JCPOA commitments.[108]

Ongoing Oversight under INARA

INARA provides for Administration reporting to Congress under several scenarios and at differing intervals:

- **Material Breach Report.** INARA requires that the President report to Congress any information relating to a potentially significant Iranian breach of the JCPOA, within 10 days of receiving information on such a possible breach. Within 30 calendar days after submitting such a report, the Administration is to make a determination whether there has been a material breach of the JCPOA by Iran. This reporting requirement is largely mooted by the U.S. exit from the JCPOA.
- **Compliance Certification.** Under INARA, the Administration is required to certify, within 90 days or less of the end of the INARA congressional review period (first report by December 16, 2015), and each 90 days thereafter, that Iran is fulfilling its commitments under the JCPOA. If the President does not make the required certification of Iranian compliance, or reports a material breach by Iran, Congress "may" initiate within 60 days "expedited consideration" of legislation that would reimpose any Iran sanctions that the President had

[105] For more information on the potential use of legislative mechanisms to cease implementing the JCPOA, see CRS Report R44942, *U.S. Decision to Cease Implementing the Iran Nuclear Agreement*, by Kenneth Katzman, Paul K. Kerr, and Valerie Heitshusen.

[106] For greater detail on all the provisions of that law, see CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman.

[107] http://news.yahoo.com/iran-nuclear-review-panel-says-deal-flawed-103101551.html.

[108] Open Source Center. "Leader Issues Important Order to Ruhani on JCPOA." October 21, 2015.

suspended through use of waiver or other authority. As is any legislation, such "snap back" sanctions legislation would be subject to potential presidential veto. This certification requirement is mooted by the U.S. exit from the JCPOA.

- **Semi-Annual Report.** INARA requires an Administration report every 180 days on Iran's nuclear program and Iran's compliance with the agreement during the period covered in the report. The report is also to include whether Iranian banks are involved in terrorism financing; Iran's ballistic missile advances; and whether Iran continues to support terrorism. (First report was due by March 12, 2016.) It is unclear whether this reporting requirement remains active in light of the U.S. exit from the JCPOA.

U.S. Implementation of and Exit from the JCPOA

The Obama Administration and the IAEA asserted that they put in place measures to vigorously enforce the terms of the agreement. On September 17, 2015, then-Secretary of State Kerry announced the appointment of Ambassador Stephen Mull as Lead Coordinator for Iran Nuclear Implementation, leading an interagency effort to ensure that the nuclear steps Iran committed to in the JCPOA are fully implemented and verified. Deputy Secretary of State John Sullivan indicated during a July 17, 2017, hearing that Mull's position was "under review."[109] The position no longer exists; its functions are now handled by the State Department's Bureau of International Security and Nonproliferation.

The JCPOA in the Trump Administration

During the 2016 presidential campaign, Donald Trump was a vocal critic of the agreement. At times, he pledged to seek to renegotiate it, to strictly enforce its terms on Iran, or to abrogate it outright.[110] The JCPOA does not contain a provision for any party to end the agreement; nevertheless, the President could decide to stop implementing some or all of the U.S. commitments in the deal, but doing so leaves open the possibility for the agreement to be implemented by the remaining parties, including Iran.

Throughout some of its first year, the Trump Administration indicated support for the agreement. On February 10, 2017, following meetings with the Administration focused on the JCPOA, the EU High Representative for Foreign Policy, Frederica Mogherini, stated that Administration officials "reassured" her that the Administration intended to fully implement the JCPOA.[111]

However, by the beginning of 2018, U.S. officials expressed increasing hostility toward the JCPOA.

Then-Secretary of State Rex Tillerson told reporters on April 19, 2017, that the Administration will "review completely the JCPOA itself."[112] Asserting that "Iran's nuclear ambitions are a grave risk to international peace and security," Tillerson argued that the "JCPOA fails to achieve the objective of a non-nuclear Iran; it only delays their goal of becoming a nuclear state." Asked

[109] A Review of the State Department Reauthorization Bill for FY2018 and the State Department Reorganization Plans, Senate Committee on Foreign Relations, July 17, 2017.

[110] http://lobelog.com/can-the-iran-deal-survive-a-us-withdrawal/.

[111] http://www.reuters.com/article/us-usa-trump-eu-idUSKBN15P1XM.

[112] An April 18 letter from Tillerson to Congress stated that this NSC-led review "will evaluate whether suspension of sanctions related to Iran pursuant to the JCPOA is vital to the national security interests of the United States."

whether the United States should stop fulfilling its JCPOA commitments, Tillerson replied, "[w]e just don't see that that's a prudent way to be dealing with Iran, certainly not in the context of all of their other disruptive activities." Trump Administration officials argued that Iran may pursue nuclear weapons in the future. Trump Administration officials stated on July 17, 2017, that the Administration is "trying to take stronger steps to interpret the agreement more stringently against Iran" because the "existing restrictions on the JCPOA were, in our view, inadequately enforced."[113] The February 2018 Nuclear Posture Review asserts that "Iran's development of increasingly long-range ballistic missile capabilities, and its aggressive strategy and activities to destabilize neighboring governments, raises questions about its long-term commitment to foregoing nuclear weapons capability."

President Trump announced on October 13, 2017, that the Administration had completed the Iran policy review described above. With respect to the JCPOA, Trump announced that the Administration would not issue an INARA-specified compliance certification, and that he would direct his Administration to "work closely with Congress and our allies to address the deal's many serious flaws so that the Iranian regime can never threaten the world with nuclear weapons." Secretary Tillerson did not address Iranian compliance, but he wrote in a letter to Congress the same day that he was "unable to certify" that "continued suspension of [U.S.] sanctions" is "appropriate and proportionate to the specific and verifiable measures taken by Iran with respect to terminating its illicit nuclear program."[114]The withholding of the certification under INARA permitted Congress to act on legislation, under expedited procedures, reimposing those sanctions that were suspended. Congress did not take such action.

On January 12, 2018, President Trump stated that "the United States will not again waive sanctions" pursuant to the JCPOA absent "our European allies' agreement to fix the terrible flaws of the Iran nuclear deal."[115]In this statement, Trump also demanded new congressional legislation concerning the JCPOA. A senior Administration official explained the same day that Trump "hopes to see an amendment to the Iran Nuclear Agreement Review Act" which must

- "demand that Iran allow timely, sufficient and immediate inspections at all sites that are requested by international inspectors from the IAEA";
- "ensure" that Iran does not become capable of producing enough fissile material for a nuclear weapon in less than one year;
- allow the United States for an indefinite period of time to reimpose U.S. nuclear sanctions if Iran does not comply with these new criteria; and
- "state explicitly ... that we view Iran's long-range missile programs and nuclear weapons as inseparable and that Iran's development and testing of missiles should be subject to severe sanctions."

Congress has not acted on such legislation.

A senior Administration official stated on January 12 that the Trump Administration would "work with our European partners on some kind of follow-on agreement" to the JCPOA to address Iran's ballistic missile program, the JCPOA restrictions containing expiration dates, and improved inspections of Iran's nuclear program.[116] U.S. officials subsequently met several times with their

[113] "Administration Officials Background Briefing on Iran," July 17, 2017.

[114] Tillerson reiterated this finding in a January 12, 2018, letter to Congress.

[115] "Statement by the President on the Iran Nuclear Deal," January 12, 2018.

[116] "Senior Administration Officials Hold A Background Briefing Via Teleconference on Iran," January 12, 2018; "Director For Policy Planning Brian Hook Holds A State Department News Briefing Via Teleconference on the JCPOA Joint Commission Meeting," March 21, 2018.

counterparts from France, Germany, and the United Kingdom to discuss Trump's demands, but the two sides did not reach agreement on a path forward that was sufficient to satisfy President Trump's demands.

U.S. Exit from the JCPOA

On May 8, President Trump, noting that the two sides had been unable to reach an agreement, announced that the United States would no longer participate in the JCPOA and would reimpose sanctions that had been suspended pursuant to the JCPOA.[117] President Trump ordered Secretary of State Pompeo to "take all appropriate steps to cease the participation of the United States in the JCPOA," and, along with Secretary of the Treasury Steven Mnuchin, immediately "begin taking steps to reimpose all United States sanctions lifted or waived in connection" with the agreement.[118] The United States has notified the other P5+1 states that the United States will no longer attend meetings of the joint commission, the working group concerning the Arak reactor, and the procurement working group.[119]

Secretary Pompeo detailed a new U.S. approach with respect to Iran during a May 21, 2018, speech as applying "unprecedented financial pressure on the Iranian regime," working "with the Department of Defense and our regional allies to deter Iranian aggression," and advocating "tirelessly for the Iranian people." He asserted that, in exchange for "major changes" in Iran's behavior, the United States is "prepared to end the principal components of every one of our sanctions against the regime ..., re-establish full diplomatic and commercial relationships with Iran ..., [a]nd support the modernization and reintegration of the Iranian economy into the international economic system."

Pompeo listed a number of essential elements for any new agreement:

- "First, Iran must declare to the IAEA a full account of the prior military dimensions of its nuclear program, and permanently and verifiably abandon such work in perpetuity.
- Second, Iran must stop enrichment and never pursue plutonium reprocessing. This includes closing its heavy water reactor.
- Third, Iran must also provide the IAEA with unqualified access to all sites throughout the entire country.
- Iran must end its proliferation of ballistic missiles and halt further launching or development of nuclear-capable missile systems.
- Iran must release all U.S. citizens, as well as citizens of our partners and allies, each of them detained on spurious charges.
- Iran must end support to Middle East terrorist groups, including Lebanese Hizballah, Hamas, and the Palestinian Islamic Jihad.
- Iran must respect the sovereignty of the Iraqi Government and permit the disarming, demobilization, and reintegration of Shia militias.
- Iran must also end its military support for the Houthi militia and work toward a peaceful political settlement in Yemen.

[117] "Ceasing U.S. Participation in the JCPOA and Taking Additional Action to Counter Iran's Malign Influence and Deny Iran All Paths to a Nuclear Weapon," Presidential Memoranda, May 8, 2018.

[118] Ibid.

[119] CRS analyst conversation with State Department official, May 21, 2018.

- Iran must withdraw all forces under Iranian command throughout the entirety of Syria.
- Iran, too, must end support for the Taliban and other terrorists in Afghanistan and the region, and cease harboring senior al-Qaida leaders.
- Iran, too, must end the IRGC [Islamic Revolutionary Guard Corps] Qods Force's support for terrorists and militant partners around the world.
- And too, Iran must end its threatening behavior against its neighbors—many of whom are U.S. allies. This certainly includes its threats to destroy Israel, and its firing of missiles into Saudi Arabia and the United Arab Emirates. It also includes threats to international shipping and destructive ... cyberattacks."

On May 21, 2018, State Department Director for Policy Planning Hook stated that "the plan is to continue working with our allies, as we have been over the last few months, to create a new security architecture." During a July 2, 2018, press briefing Hook explained that, following Trump's May 8, 2018, announcement, Secretaries Pompeo and Mnuchin "decided to create joint teams of senior officials to visit every region of the world. These teams were launched on June 4." The United States is "bringing severe economic pressure on Iran until the regime changes its destabilizing policies," Hook stated. Although Hook explained that the administration's policy "is not about changing the regime, it is about changing the behavior of the leadership in Iran," most observers assert that it would be inconceivable for the current regime in Iran to change its behavior to comport with the requirements outlined by Secretary Pompeo. Pompeo himself stated during a June 22 television interview that, if Iran were to "ramp up" work on its nuclear program, "the wrath of the entire world will fall upon" the government, explaining that "wrath" referred to "moral opprobrium and economic power," rather than military action.

Reaction to the U.S. Exit

The U.S. exit from the JCPOA attracted broad criticism among the other parties to the JCPOA. The other JCPOA parties assert that unilateral U.S. reimposition of sanctions appears to violate the JCPOA. The agreement requires that a noncompliance notification to the U.N. Security Council, which would be necessary to trigger the reimposition of U.N. sanctions, be accompanied by "a description of the good-faith efforts the participant made to exhaust the dispute resolution process specified in this JCPOA." The agreement also states that the P5+1 and Iran "commit to implement this JCPOA in good faith and in a constructive atmosphere, based on mutual respect, and to refrain from any action inconsistent with the letter, spirit and intent of this JCPOA that would undermine its successful implementation." Whether this course of action violates UNSCR 2231 is unclear. U.S. officials have argued that the JCPOA is not legally binding.[120] But a European Union official told CRS in a November 30, 2016, email that "the commitments under the JCPOA have been given legally binding effect through UNSC Resolution 2231 (2015)."

Other P5+1 countries immediately reiterated their support for the JCPOA and announced that they intend to fulfill their JCPOA commitments and protect their companies from the effects of any U.S.-imposed sanctions. In a joint statement, France, Germany, and the United Kingdom declared their intention to remain party to the JCPOA and to "work with all the remaining parties" to the deal to ensure that Iran continues to receive "the continuing economic benefits ... linked to the agreement."[121] EU High Representative Mogherini stated that, if "Iran continues to implement

[120] See, for example, remarks by Colin Kahl to the Center for Strategic and International Studies, August 13, 2015.

[121] "Joint Statement from Prime Minister Theresa May, Chancellor Angela Merkel and President Emmanuel Macron Following President Trump's Statement on Iran," May 8, 2018.

its nuclear related commitments ... the European Union will remain committed to the continued full and effective implementation" of the agreement.

Iranian Reaction

Iranian officials have repeatedly stated that Tehran would fulfill its JCPOA commitments, as long as the United States did, and repeatedly have rejected renegotiating the JCPOA or negotiating a new agreement such as the sort described by U.S. officials.[122] However, Zarif has asserted that Iran "is fully prepared to return to the pre-JCPOA situation or even [to conditions] more robust than that if the US reneges on its promises to the extent that the JCPOA's continuation harms our national interests," Iranian Foreign Minister Javad Zarif asserted the previous month.[123] Deputy Foreign Minister Seyed Abbas Araqchi claimed that Iran "will be able to reach the industrial enrichment phase in less than two years";[124] other Iranian officials have asserted that the country can rapidly reconstitute its fissile material production capability.[125]

Iranian officials have described a number of possible responses to a U.S. decision to reimpose U.S. sanctions, including resuming uranium enrichment, referring the matter to the Joint Commission, decreasing cooperation with the IAEA, and withdrawing from the NPT.[126] These responses do not include the possible Iranian development of nuclear weapons, Iranian officials have said.[127] Asked on April 21 if Iran will continue to meet its JCPOA obligations if all P5+1 parties except for the United States continue to uphold their obligations, Zarif replied, "I believe that's highly unlikely," adding that

> it is important for Iran receive the benefits of the agreement. And there is no way that Iran would do a one-sided implementation of the agreement. And it would require a major effort because right now, with the United States ostensibly in the agreement, a lot has been lacking in terms of Iran benefiting from the deal.[128]

Following Trump's May 8 announcement, Iranian officials rejected negotiating any new agreements. In a May 10, 2018, letter to U.N. Secretary General António Guterres, Foreign Minister Zarif wrote that "[i]f JCPOA is to survive, the remaining JCPOA Participants and the international community need to fully ensure that Iran is compensated unconditionally through appropriate national, regional and global measures," adding that

> Iran has decided to resort to the JCPOA mechanism in good faith to find solutions in order to rectify the United States' multiple cases of significant non-performance and its unlawful withdrawal, and to determine whether and how the remaining JCPOA Participants and

[122] See, for example, "Countries that Undermine Nuclear Deal to Pay Dearly, says Iran," *Iranian Students News Agency*, April 18, 2018; and "Iran FM Says USA Will 'Regret' Dropping Nuclear Deal," *Press TV*, April 20, 2018.

[123] "Iranian FM Warns U.S. Against Violation of Nuclear Deal," *PressTV*, March 21, 2017.

[124] "Iran Major Power in Mideast Region – Official," *Tasnim News Agency*, February 22, 2017.

[125] See, for example, "Iran Can Resume 20 Per Cent Uranium Enrichment Only in 5 Days: Salehi," *Iranian Students News Agency (ISNA)*, August 22, 2017; "AEOI Chief: Iran Able to Resume 20% Enrichment in Maximum 5 Days," *FARS News Agency*, August 22, 2017; "Nuclear Chief: Iran Able to Immediately Return to Pre-JCPOA Conditions," *FARS News Agency*, April 10, 2018.

[126] "Iran to Reconsider Cooperation with IAEA if U.S. Violates Deal - Nuclear Chief," *Mehr News Agency*, January 8, 2018; Robin Wright, "The Scramble to Salvage the Iran Nuclear Deal," *The New Yorker*, April 22, 2018; "Zarif in New York: Interview on Nuclear Deal, Regional Issues," *Iran Primer*, U.S. Institute for Peace, April 23, 2018, available at http://iranprimer.usip.org/blog/2018/apr/23/zarif-new-york-interview-nuclear-deal-regional-issues.

[127] "Zarif in New York," April 23, 2018.

[128] Ibid.

> other economic partners can ensure the full benefits that the Iranian people are entitled to derive from this global diplomatic achievement.[129]

Supreme Leader Khamene'i stated on May 23 that Iran will only continue to participate in the JCPOA if Europe provides "concrete guarantees" that it maintains Iran's existing revenue stream from oil sales to the EU countries. He also demanded that Europe not to raise the issues of Iran's missiles programs or regional influence, and added that "Iran has the right to resume its nuclear activities."[130] President Rouhani expressed a similar view in a July 4 speech.[131]

According to Iranian officials, Tehran has begun preparations for expanding its uranium enrichment program, albeit within the parameters of the JCPOA for the time being. Spokesman of the Atomic Energy Organization of Iran (AEOI) Behrouz Kamalvandi stated on June 5 that the organization "will start the process of boosting the capacity of the country's uranium enrichment," by increasing Iran's capacity to produce uranium hexafluoride.[132] On June 27, 2018, Iran's official news agency announced that Iran has resumed operations[133] at its uranium conversion facility, which Iran has used to produce this material.[134]

Kamalvandi also explained that Iran would begin the process of "manufacturing and assembly of centrifuge rotors," which are critical components of such machines.[135] Iran "will begin building a centrifuge rotor plant," he noted.[136] In addition, AEOI head Ali Akbar Salehi stated that Tehran will begin using an "advanced centrifuge assembly centre in the Natanz nuclear facility," which Iran had not disclosed publicly.[137] Kamalvandi noted that Iran would continue to operate within the constraints of its JCPOA commitments, but added that, should the JCPOA collapse, Iran would produce centrifuges beyond those constraints.[138]

As noted, Iran remains subject to its obligations pursuant to the JCPOA and Resolution 2231 and could be subject to the reimposition of multilateral sanctions if Tehran violates these obligations.

Efforts to Preserve the Accord

Following the initial reactions to the U.S. exit from the accord, Iran and the other parties began negotiations on concrete steps that would continue to provide Iran with the economic benefits of the JCPOA. On May 16, 2018, in an apparent effort to meet Iran's demands for remaining in the

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[129] Available at http://en.mfa.ir/index.aspx?siteid=3&fkeyid=&siteid=3&pageid=36409&newsview=514551.

[130] "To Remain in JCPOA, Imam Khamenei Announces Conditions to be Met by Europe," May 23, 2018, available at http://english.khamenei.ir/print/5696/To-remain-in-JCPOA-Imam-Khamenei-announces-conditions-to-be.

[131] "JCPOA A Key Deal for Iran, EU, World/Iran to Stay in JCPOA without US if Its Interests Met/Time of Unilateralism Over; A Country Can't Decide for World, Other People," July 4, 2018. Available at http://www.president.ir/en/105171.

[132] Nuclear Chief: Iran To Start New Centrifuge Production In Natanz Tomorrow," *Fars News Agency*, June 5, 2018. The IAEA had received a letter on June 4 informing the agency of "a tentative schedule to start production" of this material. ("Iran Tells IAEA It Plans to Produce Feedstock for Centrifuges," *Reuters*, June 5, 2018).

[133] Iran has not produced any uranium hexafluoride since August 2009.

[134] "Iran UF6 Factory Resumes Work," *Islamic Republic News Agency*, June 27, 2018.

[135] *Fars News Agency*, June 5, 2018.

[136] "Iran to Inform IAEA of Plan to Boost Enrichment - Fuller Report," *Iranian Students News Agency*, June 4, 2018.

[137] "Iran to Begin Using Advanced Centrifuge Assembly Centre," *Islamic Republic of Iran News Network*, June 5, 2018. AEOI head Salehi stated on July 18 that Iran has completed constructing this facility ("Iran Completes Facility to Build Advanced Centrifuge," Islamic Republic of Iran Broadcasting, July 18, 2018).

[138] *Iranian Students News Agency*, June 4, 2018.

agreement, the EU announced "practical measures" for continued implementation of the JCPOA, including the following:

- maintaining and deepening economic relations with Iran;
- the continued sale of Iran's oil and gas condensate petroleum products and petrochemicals and related transfers;
- effective banking transactions with Iran;
- continued sea, land, air, and rail transportation relations with Iran;
- provision of export credit and special provisions in financial banking to facilitate economic and financial cooperation and trade and investment;
- further memoranda of understanding and contracts between European companies and Iranian counterparts;
- further investments in Iran; and
- the protection of European Union economic operators and ensuring legal certainty; and finally further development of a transparent, rules-based business environment in Iran.[139]

Several multilateral meetings since the U.S. exit have not produced a firm Iranian commitment to the JCPOA. At Iran's request, the Joint Commission held meetings, attended by all of the JCPOA parties except for the United States, on May 25 and July 6. At the conclusion of the July 6 meeting, the Joint Commission participants reaffirmed their commitment to the EU "practical measures" enumerated above.[140] However, President Rouhani reacted to the pledges by saying that "Unfortunately, the EU's package of proposals lacked an operational solution and a specific method for cooperation."[141] Rouhani's reaction likely reflected a lack of confidence that EU and other countries can counter the effects of a steady stream of announcements by EU, Japanese, South Korean, and Indian companies that they are leaving the Iran market rather than face the risk of reimposed U.S. sanctions. The corporate announcements are the result, at least in part, of Trump Administration official statements that the Administration plans to fully enforce reimposed sanctions and will likely deny requests by companies and their governments for waivers or exemptions to the U.S. sanctions. The issue of efforts by EU and other countries to preserve the economic benefits of the JCPOA is analyzed in: CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman, and CRS In Focus IF10916, *Efforts to Preserve Economic Benefits of the Iran Nuclear Deal*, by Cathleen D. Cimino-Isaacs, Kenneth Katzman, and Derek E. Mix.

[139] "Iran Nuclear Deal: EU, France, Germany, UK and Iran Meet to Discuss Way Forward," *European External Action Service*, May 16, 2018.

[140] "Statement from the Joint Commission on the Joint Comprehensive Plan of Action." *European External Action Service*, July 6, 2018.

[141] "Rouhani: EU's Incentive Package Disappointing." *Fars News*, July 6, 2018.

Appendix A. Chart on the JCPOA[142]

Table A-1. Summary of Timeline

IMPLEMENTATION	COMPONENTS	DATE/EXPECTED
Finalization Day	• Date on which JCPOA announced. • Joint Commission established comprised of representatives of Iran and the P5+1, with the EU High Representative. • Coordination led by EU High Representative. • Meet on quarterly basis or at request of any JCPOA participant. • Decision and work subject to U.N. rules of confidentiality. • Among other things, in charge of dispute resolution and establishing procurement channel.	July 14, 2015
JCPOA submitted to U.N. Security Council	• P5+1 will "promptly" send JCPOA to U.N. Security Council (UNSC) for review and adoption "without delay."	Resolution 2231 submitted on July 15 and adopted on Monday, July 20, 2015
Adoption Day	• 90 days (or earlier if agreed by P5+1 and Iran) after endorsement of JCPOA by the UNSC. From this date, participants start making preparations for implementing commitments. • EU to adopt regulation terminating nuclear-related sanctions with effect from Implementation Day. • U.S. President to issue sanctions waivers to take effect on Implementation Day. • Iran to prepare nuclear related commitments and notify IAEA that it will apply Additional Protocol provisionally with effect from Implementation Day.	October 18, 2015
Implementation Day	• Simultaneously with IAEA report verifying implementation by Iran of the nuclear-related measures, U.N. sanctions terminate, EU sanctions terminate (in some cases only suspended), U.S. "ceases" application of nuclear related sanctions.	Not tied to any date, but expected to occur within 4-6 months from Adoption Day. Roughly in the first half of 2016. Occurred on January 16, 2016
Transition Day	• 8 years after Adoption Day or the date when IAEA submits a report that all nuclear material in Iran remains in peaceful activities (whichever is earlier). EU terminates remaining sanctions. U.S. terminates or modifies remaining sanctions. Iran ratifies Additional Protocol.	Expected mid-October 2023
U.N. Security Council Resolution Termination Day	• 10 years from Adoption Day, the UNSC resolution endorsing JCPOA terminates—provided no U.N. sanctions have been reimposed. UNSC "would no longer be seized of the Iran nuclear issue."	Expected mid-October 2025

[142] Appendix prepared by Christopher Mann, Research Assistant, CRS; adapted from European Council on Foreign Relations.

Table A-2. JCPOA Commitments

COMMITMENTS	COMPONENTS	TIME FRAME
U.N. Security Council Resolution endorsing the JCPOA	• U.S. Congress will be faced with a UNSC Resolution endorsing JCPOA before casting votes on the deal	Resolution 2231 adopted on July 20, 2015. Comes into force within 90 days.
	Nuclear-Related: to be Carried Out by Iran	
Iran-IAEA Roadmap on Possible Military Dimension (PMD)	• Pursuant to Roadmap agreed between Iran and IAEA on 20 July 2015 (confidential document). • Iran will provide IAEA explanation on outstanding issues. • There will be technical and political meetings. • Arrangements in place regarding the issue of Parchin (there has been previous access to this military site). • All steps in Roadmap must be fulfilled before Implementation date.	Iran submits written answers by August 15, 2015. IAEA has one-month review. IAEA resolves remaining PMD issues/questions by October 15, 2015. IAEA presents report on PMD by December 15, 2015.
Enrichment only at Natanz—preventing "uranium path to weaponization"	• For 10 years: centrifuges reduced to 5,060 IR-1. Excess centrifuges stored under IAEA monitoring. • For 15 years: level of uranium enrichment capped at 3.67%. • For 15 years: Natanz is Iran's only enrichment facility. • Between years 11-15: Iran can replace IR-1 centrifuges at Natanz with more advanced ones.	Implementation Day
Enriched Uranium Stockpile—preventing "uranium path to weaponization"	• For 15 years: stockpile kept under 300 kg up to 3.67% enriched uranium hexafluoride (UF6) or the equivalent in other chemical forms (this is a 98% reduction from existing stockpiles). • Excess sold based on international prices. • Uranium oxide enriched 5%-20% fabricated into fuel for Tehran Research Reactor.	Implementation Day
Fordow—"uranium path to weaponization"	• Converted to research facility. • No more enrichment or R&D at this facility. • 1,044 IR-1 centrifuges in six cascades will remain here, but cannot enrich uranium.	Implementation Day
Research & Development	• For 10 years: R&D with uranium will only include IR-4, IR-5, IR-6, and IR-8 centrifuges. • After 8 years: Iran starts manufacturing agreed numbers of IR-6 and IR-8 centrifuges without rotors. • After 10 years: begin phasing out IR-1 centrifuges. • Manufacture advanced centrifuge machines only for the purposes specified with P5+1.	Implementation Day

COMMITMENTS	COMPONENTS	TIME FRAME
Arak Heavy Water Reactor—preventing "plutonium path to weaponization"	• Iran will redesign and rebuild reactor into lower power research reactor with P5+1 partnership. • Iran would take out the original core of the reactor; this will become unusable. • Permanent: Iran will not produce weapons grade plutonium. • For 15 years: no heavy water reactors in Iran. • Permanent: Iran ships out all spent fuel from Arak reactor.	Implementation Day Before Implementation date, Iran and P5+1 agree on joint venture.
Transparency—preventing "covert path to weaponization"	• By October 15, 2015: Iran clears up questions about its alleged past research on nuclear weapons (Possible Military Dimensions, or PMD) • Permanently: Additional Protocol measures—Iran will provisionally apply this and eventually its parliament will ratify it. • Permanently: full implementation of modified Code 3.1 of the Subsidiary Arrangements to its Safeguards Agreement. • For 20-25 years: IAEA has access to Iran's supply chain for its nuclear program and has continuous surveillance of centrifuge manufacturing and storage facilities. • Procurement channel created for Iran's purchase of nuclear related equipment and material.	Implementation Day PMD measures by October 15, 2015.
Access	• Requests for access to suspect sites will be made in good faith by IAEA. Not aimed at interfering with Iranian military/national security activities. • IAEA provides Iran reasons for concerns regarding undeclared nuclear materials or activities and request access to those locations. • Iran may propose to the IAEA alternative means of resolving the IAEA's concerns. • If cannot agree within 14 days of original IAEA request, the Joint Commission will adjudicate and if needed decision made by majority vote. • Consultation with, and voting by Joint Commission must happen within 7 days. • Iran would implement decision within 3 days (total of 24 days after original IAEA request).	Implementation Day
	Sanctions Relief to be Carried Out by P5+1	
U.N.	• UNSCR Resolution 2231 endorsing JCPOA goes into effect to terminate all previous resolutions targeting Iran's nuclear program—1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), 1929 (2010), and 2224 (2015). • Subject to snap-back under dispute resolution process (Preamble to agreement, paragraphs 36 and 37). • 15 days for review by the Joint Commission to assess the dispute. Time for review can be extended by mutual consent. • If unresolved, 15 days for review by Ministers of Foreign Affairs. Any participant could refer the issue to the Ministers. Time for review can be extended by mutual consent.	Implementation Day

COMMITMENTS	COMPONENTS	TIME FRAME
	• If unresolved, 15 days for review by Advisory Board (three members, one each appointed by the participants in the dispute and a third independent member). Will provide nonbinding decision. • Joint Commission has 5 days to review decision of Advisory Board. If no resolution and complaining party sees action as "significant non-performance"—unresolved issue can be treated as grounds to cease performing commitments in whole or part. Complaining party will notify UNSC. • UNSC will then vote on a resolution as to continuing lifting of sanctions. If resolution not adopted by 30 days, old UNSC resolution sanctions snap back. China and Russia cannot veto. Iran will cease to perform its obligations if sanctions snap back. • Sanctions snap-back not applicable with retroactive effect to contracts signed between any party and Iran. • After 5 years: U.N. sanctions on conventional weapons that were linked to Iran's nuclear activities terminate. • After 8 years: U.N. sanctions on Iran's missile program that were linked to Iran's nuclear activities terminate. • U.S. and international sanctions on Iran's conventional weapons and missile capabilities remain.	
USA	• Under easing of U.S. and EU sanctions, Iran will be allowed access to roughly $100 billion revenues frozen abroad in a special escrow. • Cease the application of economic sanctions against Iran's oil and banking sector allowing Iranian banks and companies to reconnect with international systems (see CRS Report RS20871, *Iran Sanctions*). • Will remove designation of certain entities and individuals (Attachment III). • Allows for licensed non-U.S. persons that are owned or controlled by a U.S. person to engage in activities with Iran permitted under JCPOA. • Allows for the sale of commercial passenger aircraft to Iran. • Allows for license for importing Iranian-origin carpets and foodstuffs into U.S. • U.S. takes appropriate measures to address laws at state or local level preventing full implementation of JCPOA—U.S. will actively encourage officials to adhere to JCPOA policy. • 8 years after Adoption date—if IAEA concludes that all nuclear activity in Iran remains peaceful—U.S. will seek legislative action to terminate/modify nuclear related sanctions. • U.S. sanctions on Iran targeting human rights, terrorism, and missile activities remain.	Implementation Day

COMMITMENTS	COMPONENTS	TIME FRAME
EU	• Terminate all provisions of the EU Regulation related to Iran's nuclear program. • Includes: financial and banking transactions; transactions in Iranian Rial; provision of U.S. banknotes to Iranian government; access to SWIFT; insurance services; efforts to reduce Iran's crude oil and petrochemical product sales; investment; transactions with Iran's energy and shipping sector; trade in gold and other precious metals; trade with Iran's automotive sector. • Removes individuals and entities designated under sanctions (Attachment 1) • EU refrains from reintroducing sanctions terminated under JCPOA (Iran views any reintroduction as grounds to cease performing its commitments). • Refrain from policy intended to adversely affect normalization of economic relations with Iran. • For 8 years after Implementation date: EU's arms embargo and restrictions on transfer of ballistic missiles remain.	Implementation Day
Congressional Review	• 60 days: Vote to approve or disapprove agreement. • 12 days: President has 12 days to veto. • 10 Days: Congress has 10 days to override presidential veto. • Every 90 days after the review period, the Administration is required to certify Iran is fully complying with the agreement. If such certification is not made, Congress has the opportunity to enact a resolution snapping back U.S. statutory U.S. sanctions.	Thursday, September 17, 2015: congressional approval/disapproval deadline. Tuesday, September 29, 2015: deadline for presidential veto. Friday, October 9, 2015: congressional deadline for overriding presidential veto.

Appendix B. Nuclear Weapons Development[143]

An effective nuclear weapons capability has three major elements: producing fissile material in sufficient quantity and quality for a nuclear explosive device; designing and weaponizing a survivable nuclear warhead; and producing an effective means for delivering the weapon, such as a ballistic missile.[144] The U.S. government assesses that, although Iran could eventually produce nuclear weapons, it has not yet decided to do so and has not mastered all of the necessary technologies for building a nuclear weapon. Tehran had a nuclear weapons program but halted it in 2003, according to U.S. government estimates.[145]

Before the JCOA took effect, then-Under Secretary of State for Political Affairs Wendy Sherman explained during an October 3, 2013, Senate Foreign Relations Committee hearing that Iran would have needed as much as one year to produce a nuclear weapon if the government made the decision to do so.[146] This estimate took into account the amount of time that Iran would have needed to produce a sufficient amount of weapons-grade highly enriched uranium (HEU), which is widely regarded as the most difficult task in building nuclear weapons, as well as to develop the other components necessary for a nuclear weapon. This estimate did not include the time that Iran would need to be able to render a nuclear weapon deliverable by a ballistic missile. Then-Secretary of Defense Leon Panetta stated in January 2012 that Iran would have needed "possibly ... one to two years in order to put [a nuclear weapon] on a deliverable vehicle of some sort."[147]

A senior intelligence official explained during a December 2007 press briefing that the "acquisition of fissile material" was the "governing element in any timelines" regarding Iran's production of a "nuclear device."[148] However, the estimate articulated by Sherman assumed that Iran would need two to three months to produce enough weapons-grade HEU for a nuclear weapon.[149] This estimate also apparently assumed that Iran would use its declared nuclear facilities to produce fissile material for a weapon.[150] The other assumptions behind the estimate are not clear.[151]

Tehran would probably use covert enrichment facilities to produce fissile material for nuclear weapons—a tactic that would require a longer period of time, according to testimony from then-

[143] For more information about Iran's ballistic missile program, see CRS Report R42849, *Iran's Ballistic Missile and Space Launch Programs*, by Steven A. Hildreth.

[144] For a more detailed discussion, see Office of Technology Assessment, *Technologies Underlying Weapons of Mass Destruction* (OTA-BP-ISC-115), December 1993.

[145] A 2007 National Intelligence Estimate defined "nuclear weapons program" as "nuclear weapon design and weaponization work and covert uranium conversion-related and uranium enrichment related work."

[146] "Reversing Iran's Nuclear Program," Hearing of the Senate Foreign Relations Committee, October 3, 2013.

[147] Transcript of remarks by Secretary Panetta from CBS's 60 Minutes interview, January 29, 2012.

[148] "Unclassified Key Judgments of the National Intelligence Estimate: Iran: Nuclear Intentions and Capabilities," Background Briefing with Senior Intelligence Officials, December 3, 2007.

[149] The White House. "Parameters for a Joint Comprehensive Plan of Action Regarding the Islamic Republic of Iran's Nuclear Program." April 2, 2015.

[150] It is worth noting that no country has ever used a centrifuge facility designed and built for low-enriched uranium production to produce weapons-grade HEU. Therefore, Iran may need a trial-and-error period to determine the proper modifications for its own centrifuge facilities, were Tehran to adapt them for such a purpose.

[151] For a detailed discussion of the variables such estimates must take into account, see *Iran's Nuclear, Chemical, and Biological Capabilities: A Net Assessment*, International Institute for Strategic Studies, 2011, pp. 69-70 and William C. Witt, Christina Walrond, David Albright, and Houston Wood, *Iran's Evolving Breakout Potential*, Institute for Science and International Security, October 8, 2012.

Director of National Intelligence James Clapper during an April 18, 2013, Senate Armed Services Committee hearing. In his February 2016 testimony to Congress, Director Clapper said that

> We continue to assess that Iran's overarching strategic goals of enhancing its security, prestige, and regional influence have led it to pursue capabilities to meet its nuclear energy and technology goals and give it the ability to build missile-deliverable nuclear weapons, if it chooses to do so. Its pursuit of these goals will dictate its level of adherence to the JCPOA over time. We do not know whether Iran will eventually decide to build nuclear weapons.[152]

As noted in the body of this report, U.S. officials have argued that the International Atomic Energy Agency would likely detect an Iranian attempt to use its safeguarded facilities to produce weapons-grade HEU. They have also expressed confidence in the United States' ability to detect covert Iranian enrichment plants.

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[152] *Statement for the Record Worldwide Threat Assessment of the US Intelligence Community*, Senate Armed Services Committee, February 9, 2016.