



**Congressional
Research Service**

Informing the legislative debate since 1914

Iran Nuclear Agreement

Kenneth Katzman

Specialist in Middle Eastern Affairs

Paul K. Kerr

Specialist in Nonproliferation

September 15, 2017

Congressional Research Service

7-5700

www.crs.gov

R43333

Summary

On July 14, 2015, Iran and the six powers that negotiated with Iran 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 a Joint Plan of Action (JPA) interim nuclear accord in effect from 2014 to 2016. A resolution of disapproval of the JCPOA was not enacted by Congress by the deadline of September 17, 2015, set by the Iran Nuclear Agreement Review Act (P.L. 114-17), and 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 is abiding 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 remain available even after the key nuclear restrictions of the JCPOA expire. The agreement contains provisions for U.N. sanctions to be reimposed if Iran violates its commitments. Critics of the JCPOA expressed concerns that the extensive sanctions relief provided under the accord gives Iran additional resources to extend its influence in the region and that that the accord does not contain any restrictions on 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. The expiration of these restrictions sets the stage for Iran to emerge as a key regional actor.

Top Trump Administration officials have argued that the JCPOA does not address Iran’s “malign” activities in the region and any other activities that the Administration considers provocative or destabilizing, such as the continued development of ballistic missiles. Administration officials have also said that these weaknesses in the agreement might lead the Administration to conclude that the agreement is not adequately serving U.S. interests. Yet, P5+1 and other U.S. allies argue that the agreement contributes to regional stability and that the United States should continue to implement it.

In the 114th Congress, legislation was 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. Some of that legislation, as well as other proposals, have been reintroduced in the 115th Congress. 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 has been enacted. 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	10
Arak Reactor	12
Other Provisions	12
Iranian Compliance with the Nuclear Requirements	19
Sanctions Relief under the JCPOA	20
Implications for the Region and for U.S.-Iran Relations	23
Formal Congressional Review and Oversight.....	23
Ongoing Oversight under INARA	24
Ongoing Implementation of the JCPOA	24
The JCPOA in the Trump Administration.....	25

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 Contact 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 Cooperation³ 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/2017/35, August 31, 2017.

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 Program⁵

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 Estimate⁷ 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 At the time, 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 this time 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.")

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 hearing (*Statement for the Record Worldwide Threat Assessment of the Intelligence Community*, Senate Select Committee on Intelligence, May 11, 2017).

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 facilities¹⁶ and have indicated that Iran currently does not appear to have any nuclear facilities of which the United States is unaware. For example, asked during a July 31, 2015, press briefing about possible Iranian undeclared nuclear facilities, U.S. Secretary of Energy Ernest Moniz stated that “we feel pretty confident that we know their current configuration.”

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.”

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 Facilities¹⁹

Iran has not built any new nuclear facilities or expanded the existing ones since beginning implementation of the JPA in January 2014. Iran operates a Russian-built nuclear power reactor, for which Russia is providing fuel until 2021. The JCPOA, however, focuses on Iran's enrichment program and its heavy water reactor due to their potential for nuclear weapons material production.

Iran has three gas centrifuge enrichment facilities (Natanz Fuel Enrichment Plant, Natanz Pilot Fuel Enrichment Plant, and Fordow 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. The IR-2m centrifuges 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.
- **Fordow Fuel Enrichment Plant.** Iran was using IR-1 centrifuges in this facility to produce LEU containing approximately 20% uranium-235 until the JPA took effect. Iran has installed about 2,700 first-generation centrifuges, approximately 700 of which were enriching uranium.
- **Arak Heavy Water Reactor.**²¹ Iran has been constructing a heavy water-moderated reactor at Arak, a type of reactor that produces spent fuel containing

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 (JCPOA) 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 to 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, (continued...))

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. The Arak reactor, if it were completed, could produce enough 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, but the JPA limited further development of the facility.

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 JPA²⁸

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

(...continued)

2017.

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

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.

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.

- **Centrifuge Limits.** The JPA required Iran 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 facility and the Fordow facility to produce enriched uranium containing as much as 5% uranium-235.
- **Level of Enrichment Limits.** Iran could 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.** Iran was required, in effect, to freeze the amount of stocks of enriched uranium hexafluoride containing up to 5% uranium-235.³⁰
- **Centrifuge R&D.** Iran was permitted 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

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.

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

"Right to Enrichment"

The JPA acknowledged that Iran's right to the peaceful use of nuclear energy under the nuclear Non-Proliferation Treaty (NPT) will be part of a comprehensive solution, but shied away from stating that enrichment is part of this right. It 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."

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 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.

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 make sufficient progress to meet July 20 or November 24 deadlines in 2014 for a JCPOA. On November 24, 2014, Iran and the P5+1 announced their intent to finalize a detailed agreement by June 30, 2015, and that they would first attempt to reach an overarching framework and roadmap for the agreement within four months. The framework accord was agreed on April 2, 2015, in Lausanne, Switzerland.³⁷ The parties strived to meet the June 30 deadline to finalize a JCPOA to meet a congressional requirement for a 30-day review period under the Iran Nuclear Agreement Review Act (P.L. 114-17). However, because the JCPOA was not finalized until July 14, 2015, a 60-day review period was triggered 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 other legislature of Iran or the other P5+1 states. On Adoption Day, the United States issued the provisional presidential waivers required to implement U.S. sanctions relief, with the waivers to formally 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. Implementation Day was declared on January 16, 2016, after the IAEA made the required certification of Iran’s completion of the stipulated tasks.³⁸

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.

- **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. 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.
- **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 JCPOA 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 last for an indefinite duration. Potential nuclear-related exports to Iran remain subject to the Nuclear Suppliers Group’s export guidelines.³⁹

Resolution 2231 also ended the role of the U.N. panel of experts, which Resolution 1929 had created to work with a committee that monitored states’ compliance with the resolutions discussed above. Resolution 1737 had established the committee. 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.⁴⁰

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 will, according to the Obama Administration, 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.⁴¹ 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.

³⁹ 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.

⁴⁰ *Note by the President of the Security Council, Security Council Tasks under Security Council Resolution 2231 (2015)*, S/2016/44, January 16, 2016.

⁴¹ “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.)

An IAEA report on January 16, 2016, certified that Iran had met the requirements for Implementation Day stipulated below.⁴²

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

- **Centrifuge Limitation.** Tehran is to use no more than 5,060 IR-1 centrifuges to enrich uranium for 10 years, 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.** Iran is to refrain from producing enriched uranium containing more than 3.67% uranium-235 for at least 15 years.
- **Facility Limitation.** For 15 years, Iran is to enrich uranium only at the Natanz commercial facility and is not to build any new enrichment facilities.⁴³
- **LEU Stockpile Limitation.** For 15 years, Iran is to maintain its LEU stockpile at no more than 300 kilograms of LEU containing 3.67% uranium-235.⁴⁴ Tehran had three options for disposing of the remaining portion of its LEU stockpile: diluting the material so that it contains the same levels of uranium-235 found in natural uranium; selling the LEU to another country; or selling it to an international LEU bank recently established by the IAEA. 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.⁴⁵ All fuel plates for the Tehran Research Reactor have been irradiated, according to the January 2016 IAEA report.

⁴² GOV/INF/2016/1.

⁴³ After 10 years, Iran may produce enriched uranium at the pilot centrifuge facility as part of R&D work.

⁴⁴ 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.)

⁴⁵ "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.

The JCPOA-established Joint Commission has deemed some enriched uranium in Iran as “unrecoverable”; this material does not count 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 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-235.⁴⁶ Iran had approximately 100 kilograms of this material when Tehran and the P5+1 agreed to the JCPOA.⁴⁷ 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.⁴⁸

- **Fordow Conversion.** Iran agreed to convert its Fordow enrichment facility into “a nuclear, physics, and technology centre” and, for 15 years, to maintain no more than 1,044 IR-1 centrifuges at the facility and to not conduct uranium enrichment or related research and development (R&D) there. The facility will not contain any nuclear material. 348 of the IR-1 centrifuges may be used to produce stable isotopes for medical and industrial uses.⁴⁹
- **Centrifuge Production.** 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 can begin to manufacture two types of advanced centrifuges; after 10 years, Iran can produce complete versions of those centrifuges and store them under IAEA monitoring “until they are needed for final assembly.”
- **Centrifuge R&D.** For 10 years, Iran is to refrain from pursuing R&D on any technologies other than gas centrifuge enrichment.

⁴⁶ 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.

⁴⁷ *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.

⁴⁸ Ibid. Decision of the Joint Commission, January 10, 2017.

⁴⁹ 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). Moreover, a September 2016 IAEA report indicates that Iran has disconnected and modified two centrifuges at Fordow and “installed [them] separately in the same wing of the facility” (*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/2016/46, September 8, 2016). Tehran told the IAEA in a July 2016 letter that the two centrifuges are to be used for the “initial research and R&D activities related to stable isotope production.”

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.⁵⁰ The parties issued the document on November 22, 2015. Chinese and Iranian companies signed the first consultancy services contract" for this project on April 23.⁵¹

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."⁵² 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 two 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. 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.⁵³ The IAEA verified on August 7, 2017, that Iran had 111 metric tons of heavy water.⁵⁴

Other Provisions

Verification

The IAEA is to monitor Iranian compliance with the JCPOA provisions concerning its enrichment program and the Arak program. 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

⁵⁰ "Joint Statement of Intent Concerning the Arak Heavy Water Reactor Research Reactor Modernization Project under the Joint Comprehensive Plan of Action," October 18, 2015.

⁵¹ Chair's Statement Following the 25 April 2017 Meeting of the JCPOA Joint Commission, April 25, 2017.

⁵² 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..

⁵³ GOV/2017/35. The report does not name the heavy water's destination.

⁵⁴ GOV/2017/35.

Enrichment Monitor. Iran has pledged to allow a “long-term IAEA presence in Iran” and “has agreed to implement” the Additional Protocol to its safeguards agreement.⁵⁵ 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 2016.⁵⁶ 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.⁵⁷

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.⁵⁸ 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.”⁵⁹

IAEA Director-General Yukiya Amano told reporters on July 14, 2015, that the agency’s workload would increase under the JCPOA and that he would request additional resources from the agency’s Board of Governors.⁶⁰ On August 25, 2015, the 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.”⁶¹ IAEA verification of the JCPOA for 2016 is being funded by extra-budgetary contributions,⁶² but the IAEA Board of Governors has integrated these costs into the agency’s regular budget.⁶³

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.”⁶⁴

⁵⁵ 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.)

⁵⁶ GOV/2016/46.

⁵⁷ 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.

⁵⁸ This plant was not under IAEA safeguards prior to the JCPOA.

⁵⁹ GOV/2016/55.

⁶⁰ “IAEA Director General Amano’s Remarks to the Press on Agreements with Iran,” July 14, 2015.

⁶¹ “IAEA Director General Yukiya Amano’s Statement to the Board of Governors,” September 7, 2015.

⁶² GOV/2016/55.

⁶³ Ambassador Henry S. Ensher, IAEA Board of Governors Meeting June 6-10, 2016. Conversation with U.S. officials, July 1, 2016.

⁶⁴ “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.

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

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 fulfilment 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. Tehran may respond to such a request 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.⁶⁵ 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.⁶⁶ 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."⁶⁷ Moreover, Tehran is to permit exporting governments to "verify the end-use of all items, materials, equipment, goods and technology"

⁶⁵ 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."

⁶⁶ Information about the channel is available at <http://www.un.org/en/sc/2231/pdf/160113-Information-on-the-procurement-channel.pdf>.

⁶⁷ INFCIRC/254/Rev.12/Part 1.

listed in the NSG's "Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Materials, Software, and Related Technology."⁶⁸

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."⁶⁹

According to a June 29, 2017, briefing by U.N. Under Secretary-General Jeffrey Feltman, the Security Council had received 16 nuclear-related export proposals since Implementation Day; the council approved 10 of those proposals.⁷⁰

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.⁷¹

The average time for the IAEA to draw the broader conclusion for states with complex nuclear programs has been five to seven years.⁷² 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."⁷³ 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."⁷⁴

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

⁶⁸ INFCIRC/254/Rev.9/Part 2.

⁶⁹ *Iran Nuclear Agreement: The International Atomic Energy Agency's Authorities, Resources, and Challenges*, U.S. Government Accountability Office, GAO-16-565, June 2016.

⁷⁰ Under Secretary-General Jeffrey Feltman, Security Council Briefing on the Third Report of the Secretary-General on the Implementation of Resolution 2231 (2015), June 29, 2017.

⁷¹ *2001 IAEA Safeguards Glossary*.

⁷² Conversation with U.S. official, July 31, 2015.

⁷³ 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.

⁷⁴ Yukiya Amano, "The Iran Deal: International Perspectives," Carnegie International Nuclear Policy Conference 2017, March 20, 2017.

also envisions forms of technical cooperation between Iran and the IAEA.⁷⁵ The Obama Administration argued that international nuclear cooperation would provide additional transparency into Iran's nuclear program.⁷⁶

U.S. sanctions laws prohibit the United States from engaging in most forms of nuclear cooperation with Iran. Moreover, the United States does not have a civil nuclear cooperation agreement with Iran, and 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.⁷⁷ 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."⁷⁸ 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

⁷⁵ Implementing a provision of U.N. Security Council resolution 1737, the IAEA halted some technical cooperation with Iran in 2007.

⁷⁶ "Background Conference Call by Senior Administration Officials on Iran," July 14, 2015.

⁷⁷ 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.

⁷⁸ 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."

Council resolutions required Iran to resolve these questions by providing full information to the 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."⁷⁹ The November 2013 framework specified measures to address the outstanding questions. "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.⁸⁰ The road map specified that Amano was to present a report to the IAEA Board of Governors by December 15, 2015, which contains the agency's "final assessment on the resolution" of the aforementioned outstanding issues.⁸¹ On December 2, Amano presented this report, as a final assessment on all past and present outstanding [Iranian nuclear] issues described in a November 2011 report.⁸²

The December 2 report indicates 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."⁸³

"It is up to ... [IAEA] Member States to determine the appropriate response" to the report, Amano observed in a November 11, 2015, speech.⁸⁴ 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 notes Iran's cooperation with the road map and "further notes that this closes the Board's consideration" of the "outstanding issues

⁷⁹ "IAEA Director General Amano's Remarks to the Press on Agreements with Iran," July 14, 2015.

⁸⁰ *Final Assessment on Past and Present Outstanding Issues Regarding Iran's Nuclear Programme*, GOV/2015/68, December 2, 2015.

⁸¹ "Road-map for the Clarification of Past and Present Outstanding Issues Regarding Iran's Nuclear Program," July 14, 2015.

⁸² 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.

⁸³ IAEA Director General Amano's Introductory Statement to the Board of Governors, December 15, 2015.

⁸⁴ "IAEA Director General Yukiya Amano's Remarks at the International Institute for Strategic Studies on 11 November 2015."

regarding Iran's nuclear programme."⁸⁵ The board is no longer focused on Iran's compliance with past Security Council resolutions and past issues concerning Iran's safeguards agreement. Instead, the board is "seized of a separate agenda item covering 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.

According to the road map, Iran stated that it would present, in writing, its "comprehensive assessment to the IAEA" on Amano's report. Iran issued that document on January 7, 2016, which apparently acknowledges Iranian "scientific studies of dual-use technologies" for "peaceful civilian or conventional military uses."⁸⁶ But the statement reiterated previous Iranian claims that the country has done no work on nuclear weapons and that some of the evidence underlying the agency's concerns is inauthentic.

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.⁸⁷ 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.⁸⁸

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 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.⁸⁹

⁸⁵ GOV/2015/72.

⁸⁶ *Communication Dated 7 January 2016 Received from the Permanent Mission of the Islamic Republic of Iran to the 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.

⁸⁷ *Iran: Status of the P-5+1, Panel 2*, Senate Committee on Foreign Relations Hearing, July 29, 2014.

⁸⁸ "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>.

⁸⁹ Robert Einhorn, "A Verdict on Iranian Military Nukes Won't Kill the Deal," *The National Interest*, November 30, 2015. November 30, 2015.

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.⁹⁰

Iranian Compliance with the Nuclear Requirements

Regarding Iranian compliance with the JCPOA, INARA requires the President⁹¹ 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”.⁹²

Tillerson issued this certification on July 17, 2017 and State Department Spokesperson Heather Nauert stated on July 18, 2017, that “Iran is in compliance with” the agreement. President Trump has indicated that his administration may not issue this certification in the future. (See “The JCPOA in the Trump Administration”). 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.⁹³

Although these reports and Tillerson’s certification indicate that Iran has not engaged in any JCPOA- prohibited activities, 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 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 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.⁹⁴ The IAEA has not reported whether it has requested access to any Iranian military facilities, but the agency has a

⁹⁰ Ibid.

⁹¹ The authority to issue this certification has been delegated to the Secretary of State.

⁹² 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.

⁹³ See, for example, GOV/2017/35, Brief Summary - 2016 Report on the Protection of the Constitution: Facts and Trends, April 7, 2017 (report from German domestic intelligence service); German Federal Foreign Office on the Second Anniversary of the Signing of the Agreement on Iran’s Nuclear Programme, July 14, 2017; Chair’s statement following the 21 July 2017 meeting of the JCPOA Joint Commission, July 21, 2017; and Statement by the United Kingdom, 2017 Preparatory Committee for the 2020 Review Conference of the Treaty on Non-Proliferation of Nuclear Weapons, May 2-12, 2017.

⁹⁴ GOV/2017/35.

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.

Sanctions Relief under the JCPOA

Under the JCPOA, the overwhelming bulk of sanctions relief occurred at Implementation Day.⁹⁵ A comprehensive, detailed explanation of the U.S. sanctions being suspended was published by the Office of Foreign Assets Control (OFAC) on Implementation Day.⁹⁶

- The sanctions lifted or suspended were mostly those imposed since U.N. Security Council Resolution 1929 was enacted in June 2010,⁹⁷ and which identified Iran’s energy sector as a potential contributor to Iran’s “proliferation-sensitive nuclear activities.”⁹⁸
- **Sectors Receiving Sanctions Relief.** The U.S. sanctions suspended were those that sanction foreign entities and countries for conducting specified transactions with Iran (so-called “secondary sanctions”), including U.S. sanctions on foreign firms (1) that are involved in Iran’s energy sector, including Iran’s production of and exportation of oil, or that sell Iran gasoline and energy sector equipment; (2) that conduct transactions with most major Iranian banks; and (3) that are involved in Iran’s automobile production sector and trading in the *rial*. The United States revoked the designations made under various Executive Orders of numerous specified Iranian economic entities and personalities listed in Attachment III of Annex II of the JCPOA. That step enabled foreign companies to resume transactions with these entities without risking being penalized by the United States. The JCPOA also committed the United States to minor modifications to the direct ban on U.S. trade with Iran.⁹⁹
- **U.S. Laws to Be Waived and Executive Orders to Be Terminated.** To implement the JCPOA, the President waived sanctions in the core operative provisions of (1) the Iran Sanctions Act (P.L. 104-172 as amended),¹⁰⁰ (2) Section 1245 of the National Defense Authorization Act for FY2012 (P.L. 112-81); (3) the Iran Threat Reduction and Syria Human Rights Act (P.L. 112-158); and (4) the Iran Freedom and Counter-Proliferation Act (Subtitle D of P.L. 112-239). The statutory basis for these sanctions remains unchanged. The President also terminated the following Executive Orders: 13574, 13590, 13622, 13645, and Sections 5-7 and 15 of Executive Order 13628. The President also revoked the designations of the entities listed in Attachment III—mainly shipping and energy-

⁹⁵ <http://www.politico.com/story/2015/07/full-text-iran-deal-120080.html>.

⁹⁶ The guidance can be found at https://www.treasury.gov/resource-center/sanctions/Programs/Documents/implement_guide_jcpoa.pdf.

⁹⁷ The exact U.S. sanctions laws whose provisions might be waived are discussed in: CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman, and CRS Report R43311, *Iran: U.S. Economic Sanctions and the Authority to Lift Restrictions*, by Dianne E. Rennack.

⁹⁸ The text of the Resolution is at https://www.iaea.org/sites/default/files/unsc_res1929-2010.pdf.

⁹⁹ The U.S. importation of these luxury goods was permitted during 2000-2010, under a modification to the Executive Order 12959 that imposed a ban on U.S. trade with Iran.

¹⁰⁰ The provision of the Iran Sanctions Act that triggers sanctions on foreign entities that sell WMD-related technology or “destabilizing numbers and types” of advanced conventional weaponry to Iran are not being suspended under the JCPOA.

related entities, as well as some Iranian banks—thereby ending U.S. sanctions on these entities under various Executive Orders and laws (particularly the Comprehensive Iran Sanctions, Accountability, and Divestment Act [CISADA, P.L. 111-195]). For more detail, on the Executive Orders and the laws referenced above, see CRS Report RS20871, *Iran Sanctions*, and CRS Report R43311, *Iran: U.S. Economic Sanctions and the Authority to Lift Restrictions*.

- **EU Lifting of Sanctions on Implementation Day.** The EU sanctions lifted on Implementation Day included (1) the EU ban on purchases of oil and gas from Iran; (2) the ban on Iran’s use of the SWIFT electronic payments system that enables Iran to move funds from abroad to its Central Bank or its commercial banks; and (3) sanctions on entities listed in Annex II, Attachment 1 of the JCPOA.
- **Request for Congress to Lift Sanctions Outright.** The JCPOA requires the U.S. Administration, within eight years (“Transition Day”), to request that Congress lift virtually all of the sanctions that will be suspended under the JCPOA.
- **Some U.S. Sanctions to Remain in Place.** The JCPOA does not require the United States to suspend sanctions on Iran’s support for terrorism, its human rights abuses, and worldwide arms and WMD-related technology sales to Iran. The specific Executive Orders and statutory provisions that have not been altered include (1) E.O. 13224 sanctioning terrorism entities (not specific to Iran); (2) the Iran-Iraq Arms Non-Proliferation Act that sanctions foreign firms that sell arms and weapons of mass destruction-related technology to Iran; (3) the Iran-North Korea-Syria Non-Proliferation Act (INKSNA),¹⁰¹ and (4) the Executive Orders and the provisions of CISADA and the Iran Threat Reduction and Syria Human Rights Act that pertain to human rights or democratic change in Iran. Executive Order 13382 sanctioning proliferation entities also remains in place although, as noted, the JCPOA requires the United States to “de-list” numerous entities that have been sanctioned under that Order. The JCPOA does not specifically ban the imposition of additional sanctions on these categories of Iranian behavior as long as the sanctions that are suspended are not reimposed. One such additional sanctions law enacted in the 115th Congress, the Countering America’s Adversaries through Sanctions Act (P.L. 115-44), targets Iranian human rights abuses, proliferation, and support for terrorist groups.
- The United States has not pledged in the JCPOA to remove or to reconsider Iran’s designation as a state sponsor of terrorism. That designation triggers numerous U.S. sanctions, including a ban on any U.S. foreign aid to Iran and on U.S. exportation to Iran of controlled goods and services, and a prohibition on U.S. support for international lending to Iran. And, those Iranian entities involved in most forms of proliferation activity and in Iran’s foreign policy remain designated for sanctions under various Executive Orders. These entities include the Islamic Revolutionary Guard Corps (IRGC), the IRGC-Qods Force, various IRGC commanders, and IRGC-affiliated entities.
- **U.N. Sanctions on Arms Sales and Ballistic Missiles to Be Terminated After Several Years, and Missile Restriction only Voluntary** One issue that arose

¹⁰¹ The JCPOA does commit the United States to terminate sanctions with respect to some entities designated for sanctions under INKSNA.

during final negotiations on the JCPOA was the status of U.N. sanctions on Iran’s development of nuclear-capable ballistic missiles and on Iran’s importation or exportation of conventional weaponry. The April 2 framework accord indicated that these sanctions would remain in place, but the JCPOA itself does not contain any commitments pertaining to ballistic missiles or arms transfers to or from Iran. Resolution 2231 addresses ballistic missiles but only “calls upon” (a voluntary formulation) Iran to refrain from developing (including testing) ballistic missiles “designed to be capable of delivering a nuclear weapon.” And, this missile restriction expires eight years from Adoption Day (by October 2023). Resolution 2231 requires Security Council approval for any conventional arms transfers to or from Iran for five years from Adoption Day (by October 2020).¹⁰² U.S. sanctions on foreign entities that sell arms to Iran remain in place, as do specific U.N. Security Council Resolutions that prohibit weapons shipments to Lebanon and to Yemen.

- **Ban on Reimposing those Sanctions that are Lifted or Suspended.** The JCPOA requires the parties to the agreement to refrain from reimposing the sanctions that are lifted or suspended, as long as Iran is complying. The agreement states that if U.S. sanctions are reimposed (other than on the grounds of Iranian noncompliance), Iran would not be bound by its nuclear commitments. An Iranian letter to the President of the U.N. Security Council, dated July 20, interprets the provision to bar the reimposition of lifted sanctions under “non-nuclear” justifications such as Iranian support for terrorism or armed factions in the Middle East, or for human rights violations.

Dispute Resolution and Reimposition of Sanctions (“Snap-Back”)

The JCPOA (paragraph 36 and 37) contains a mechanism for the “snap back” of U.N. sanctions if Iran does not satisfactorily resolve a P5+1 inquiry about a possible breach of compliance. 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 2231.¹⁰³ 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 potential for the incoming Trump Administration to use the JCPOA’s dispute resolution mechanism—or other methods—to try to undermine the JCPOA, should there be a decision by the new Administration to do so, is discussed below.

A related question is whether a reimposition of U.N. sanctions would produce an effect on Iran similar to that observed during 2011-2015. The effectiveness of sanctions depended on the substantial degree of international cooperation with the sanctions regime that has taken place. A wide range of countries depend on energy and other trade with Iran and might be reluctant to resume cooperating with reimposed U.S. sanctions unless Iran commits egregious violations of its commitments. Countries that do not wish to reimpose their sanctions on Iran could argue that,

¹⁰² <http://www.scribd.com/doc/271711382/Iran-Deal-Draft-UNSC-Resolution-as-Uploaded-by-Inner-City-Press>.

¹⁰³ <http://www.scribd.com/doc/271711382/Iran-Deal-Draft-UNSC-Resolution-as-Uploaded-by-Inner-City-Press>.

because U.N. Security Council sanctions are lifted, they are no longer bound to cooperate with U.S. sanctions. The Obama Administration asserted that the EU has pledged to fully reimpose EU sanctions on Iran in a full snap-back scenario based on Iranian non-compliance. However, the reimposition of U.S. sanctions would likely deter many foreign companies that do business in the United States from resuming business interactions with Iran. See: CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman.

Implications for the Region and for U.S.-Iran Relations¹⁰⁴

The JCPOA has had significant implications for the Middle East, and particularly for Israel and for the states of the Gulf Cooperation Council (GCC: Saudi Arabia, Kuwait, Bahrain, UAE, Qatar, and Oman). The JCPOA has, by most accounts, reduced any near term threat of a nuclear-armed Iran. On the other hand, the sanctions relief of the JCPOA has increased the economic resources available to Iran to promote its interests in the region, including the maintenance in office of Syrian President Bashar Al Assad. These issues are discussed in greater depth in CRS Report R44017, *Iran's Foreign and Defense Policies*, by Kenneth Katzman.

There has been debate over whether the JCPOA would alter the U.S.-Iran relationship. Neither President Obama nor any other U.S. official indicated in connection with Implementation Day that any restoration of formal diplomatic relations was under discussion. Iran's Supreme Leader Ayatollah Ali Khamene'i, who reportedly is concerned that the nuclear deal could increase U.S. cultural, political, social, and economic influence in Iran, has asserted several times that the JCPOA will not be accompanied by a breakthrough in U.S.-Iran relations or any change in Iran's regional policies. The Trump Administration's characterization of Iran as an adversary whose "malign" regional activities, ballistic missiles, and other "provocative" behavior must and will be countered has further dampened prospects for a broader repair of U.S.-Iran relations. See also CRS Report RL32048, *Iran: Politics, Human Rights, and U.S. Policy*, by Kenneth Katzman.

Formal Congressional Review and Oversight¹⁰⁵

Legislation providing for 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, according to the stipulated timetable, is to conclude 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

¹⁰⁴ For detail on U.S.-Iran relations and Iranian policy in the Middle East, see CRS Report R44017, *Iran's Foreign and Defense Policies*, by Kenneth Katzman, and CRS Report RL32048, *Iran: Politics, Human Rights, and U.S. Policy*, by Kenneth Katzman.

¹⁰⁵ For more information on the potential use of legislative mechanisms to cease implementing the JCPOA, see: CRS Report R44942, *Options 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.

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.

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.
- **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 suspended through use of waiver or other authority. As is any legislation, such “snap back” sanctions legislation would be subject to potential presidential veto.
- **Semi-Annual Report.** INARA requires an Administration report every 180 days after the finalization of the JCPOA on July 14, 2015, on Iran’s nuclear program and Iran’s compliance with the agreement during the period covered in the report. The report is to include not only Iran’s compliance with its nuclear commitments but also whether Iranian banks are involved in terrorism financing; Iran’s ballistic missile advances; and whether Iran continues to support terrorism. (First report is due by March 12, 2016.)

Ongoing Implementation of 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. Mull, who remains in the position, reports

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.

directly to the Secretary and Deputy Secretary of State, coordinating JCPOA implementation by the Departments of State, Treasury, Energy, Homeland Security, Commerce, Justice, and Defense, as well as others in the intelligence and law enforcement communities.¹⁰⁹ Deputy Secretary of State John Sullivan indicated during a July 17 hearing that Mull's position is "under review."¹¹⁰ As noted, the IAE has been monitoring Iran's compliance with its nuclear-related commitments.

The JCPOA in the Trump Administration

One question that has arisen is whether the JCPOA will continue to be implemented by the Trump Administration. During the 2016 presidential campaign, President Donald Trump was a vocal critic of the agreement, although his comments on the JCPOA were often contradictory. At times, he pledged to seek to renegotiate it, to strictly enforce its terms on Iran, or to abrogate it outright.¹¹¹

The Administration has asserted that Iran is an adversary and that Iran's actions are inimical to U.S. interests. On February 1, 2017, the Trump Administration announced that it was "officially putting Iran on notice" for recent actions that "threaten U.S. friends and allies in the region," including the January 29, 2017, test of a ballistic missile and "weapons transfers [to groups such as Houthi rebels in Yemen], support for terrorism, and other violations of international norms." Administration officials stated a "deliberative process" was under way to formulate responses to Iran's adverse actions, and that U.S. actions would be separate from and not in conflict with U.S. commitments in the JCPOA.

The Trump Administration has subsequently 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 intends to fully implement the JCPOA.¹¹² The G7 stated on April 11 that

Continued and full implementation of the JCPOA is essential to build confidence that Iran's nuclear program is exclusively peaceful in nature. We value the JCPOA's comprehensive structure and the commitment by all parties to its solid verification mechanism.¹¹³

The statement also emphasized "the need for all parties to entirely and consistently fulfill all their commitments under the JCPOA in good faith." Furthermore, Christopher Ford, National Security Council Senior Director for weapons of mass destruction and Counterproliferation, stated during a March 21, 2017 conference that, pending further guidance, the United States will "adhere strictly to its commitments under the JCPOA."¹¹⁴

Secretary of State Rex Tillerson told reporters on April 19, 2017, that the administration will "review completely the JCPOA itself."¹¹⁵ Asserting that "Iran's nuclear ambitions are a grave risk

¹⁰⁹ "Secretary of State John Kerry Appointment of Ambassador Stephen D. Mull as Lead Coordinator for Iran Nuclear Implementation," September 17, 2015.

¹¹⁰ A Review of the State Department Reauthorization Bill for FY2018 and the State Department Reorganization Plans, Senate Committee on Foreign Relations, July 17, 2017.

¹¹¹ <http://lobelog.com/can-the-iran-deal-survive-a-us-withdrawal/>.

¹¹² <http://www.reuters.com/article/us-usa-trump-eu-idUSKBN15P1XM>.

¹¹³ "G7 Statement on Non-Proliferation and Disarmament," April 11, 2017.

¹¹⁴ "Morning Keynote with NSC Senior Director Christopher Ford," YouTube video, 26:00, posted by Carnegie Live, March 21, 2017, <https://www.youtube.com/watch?v=JJxg8LevhA>.

¹¹⁵ An April 18 letter from Tillerson to Congress stated that this NSC-led review "will evaluate whether suspension of (continued...)

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 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. “Nevertheless, the administration stated in June 2017 that “we will continue to uphold our commitments” as the review continues.¹¹⁶ Trump administration officials stated on July 17 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.”¹¹⁷ The United States, along with the other JCPOA participants, “confirmed their continued adherence to JCPOA commitments and stressed the need to ensure its full and effective implementation in a constructive atmosphere” during a July 21 meeting of the Joint Commission.¹¹⁸

Press reports since August 2017 indicate that the President might be seeking options to consider cessation of U.S. implementation of the JCPOA. Should the Administration decide to do so, a question that arises concerns the mechanisms for doing so. 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. Doing so would leave open whether the JCPOA could still be implemented by the remaining parties, including Iran. The following represent some of the possible scenarios for implementation of an Administration decision to discontinue implementing the accord.

- With or without stated abrogation of the JCPOA, the President could reimpose those executive orders that were revoked, and terminate the waivers to U.S. sanctions laws that have been exercised to implement the JCPOA. Doing so would render foreign firms vulnerable to U.S. penalties were they to enter into transactions with Iran that were again made subject to U.S. sanctions. To date, and as recently as September 14, 2017, the Administration has renewed all the legislative waivers needed to continue implementing the deal.
- President Trump has stated that he might decline to certify Iran as “compliant” under INARA on the next occasion that the administration must issue the INARA-specified certification (October 15, 2017).¹¹⁹ Doing so would enable Congress to act on legislation, under expedited procedures, reimposing those sanctions that were suspended. The reimposition of sanctions—or the separate enactment of new sanctions laws—could cause Iran to assert that the United States is in non-compliance with the JCPOA.¹²⁰
- The Administration could assert that minor Iranian violations of the JCPOA, under INARA or within the dispute resolution mechanism of the JCPOA itself, justify the “snap back” of international sanctions. Both the JCPOA and

(...continued)

sanctions related to Iran pursuant to the JCPOA is vital to the national security interests of the United States.”

¹¹⁶ Chargé d’Affaires Andrew J. Schofer, U.S. Statement, Agenda Item 6 Verification and Monitoring in Iran, IAEA Board of Governors Meeting, June 12-16, 2017.

¹¹⁷ “Administration Officials Background Briefing on Iran,” July 17, 2017.

¹¹⁸ Chair’s Statement Following the 21 July 2017 Meeting of the JCPOA Joint Commission.

¹¹⁹ Excerpts: Donald Trump’s Interview With The Wall Street Journal, *Wall Street Journal*, July 25, 2017.

¹²⁰ https://www.washingtonpost.com/world/national-security/iran-nuclear-deal-could-collapse-under-trump/2016/11/09/f2d2bd02-a68c-11e6-ba59-a7d93165c6d4_story.html.

Resolution 2231 appear to lack a mechanism for preventing a snap-back if the other P5+1 countries disagree with the U.S. assertions of Iranian non-compliance.

An effort to reimpose U.S. sanctions could violate several JCPOA provisions. For example, the agreement apparently requires that a non-compliance 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 would violate UNSCR 2231 is unclear. U.S. officials have argued that the JCPOA is not legally binding.¹²¹ 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).”

Iranian leaders, for their part, have asserted that they expect the new Administration to implement fully the agreement.¹²² Rouhani stated on April 10, 2017, that Iran “will never be the first to violate the JCPOA. We have made a pledge and reached a deal. Iran always stands by its pledges until the end, as long as the other side remains loyal to its pledges.”¹²³ 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.¹²⁴ Deputy Foreign Minister Seyed Abbas Araqchi claimed that Iran “will be able to reach the industrial enrichment phase in less than two years.”¹²⁵ An aide to Rouhani indicated in December 2016 that, should the United States violate the JCPOA, Iran would formulate a collective response with the other agreement participants.¹²⁶ They and outside experts have asserted that the JCPOA is a multilateral agreement that the United States cannot abrogate without injury to relations with the other P5+1 negotiating partners.¹²⁷ Zarif stated in February 2017 that Iran will not accept renegotiation of the agreement.¹²⁸ In July, he argued that “it would be extremely dangerous to even contemplate reopening these negotiations.”¹²⁹

Iranian officials have continued to express similar positions. Rouhani stated on August 29 that “[i]f any of the other sides of the deal, such as the United States, violate the deal, we will give them an answer,” adding “[w]e will never violate the JCPOA in the first place, but we will not sit around.”¹³⁰ Salehi further explained this position in a September 8 interview:

If the United States pulls out of the agreement, but the rest of the countries stay committed -- namely Britain, France, Germany, China, Russia -- then Iran would most

¹²¹ See, for example, remarks by Colin Khal to the Center for Strategic and International Studies, August 13, 2015.

¹²² https://www.washingtonpost.com/world/national-security/iran-nuclear-deal-could-collapse-under-trump/2016/11/09/f2d2bd02-a68c-11e6-ba59-a7d93165c6d4_story.html.

¹²³ “Iran President Vows to Honour Nuclear Deal,” *Vision of the Islamic Republic of Iran Network 1*, April 10, 2017.

¹²⁴ “Iranian FM Warns U.S. Against Violation of Nuclear Deal,” *PressTV*, March 21, 2017.

¹²⁵ “Iran Major Power in Mideast Region – Official,” *Tasnim News Agency*, February 22, 2017.

¹²⁶ “No Unilateral Response to Breach of JCPOA, an Aide to Iran President Says,” *Entekhab*, December 2, 2016.

¹²⁷ *Ibid.*

¹²⁸ “FM: Iran Not to Accept Renegotiation on N. Deal,” *FARS News Agency* February 7, 2017.

¹²⁹ Robin Wright, “Is the Nuclear Deal with Iran Slipping Away?,” *The New Yorker*, July 19, 2017.

¹³⁰ Iran President Answers Questions on Domestic, Foreign Issues in TV Interview, *President.Ir*, August 29, 2017.

probably stick with the commitments to the agreement without the U.S. But if the U.S. leaves the treaty and Europe follows, then this deal will certainly collapse and Iran will go back to what it was before and, technically speaking, to a much higher level.¹³¹

In August 2017, Iranian officials asserted that the country can rapidly reconstitute its fissile material production capability.¹³²

¹³¹ Susanne Koelbl, "Iranian Vice President Salehi on Nuclear Deal," *Der Spiegel*, September 08, 2017.

¹³² 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.

Appendix A. Chart on the JCPOA¹³³

Table A-I. Summary of Timeline

IMPLEMENTATION	COMPONENTS	DATE/EXPECTED
Finalization Day	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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

¹³³ 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	<ul style="list-style-type: none"> U.S. Congress will be faced with a UNSC Resolution endorsing JCPOA before casting votes on the deal 	<p>Resolution 2231 adopted on July 20, 2015.</p> <p>Comes into force within 90 days.</p>
Nuclear-Related: to be Carried Out by Iran		
Iran-IAEA Roadmap on Possible Military Dimension (PMD)	<ul style="list-style-type: none"> 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. 	<p>Iran submits written answers by August 15, 2015.</p> <p>IAEA has one-month review.</p> <p>IAEA resolves remaining PMD issues/questions by October 15, 2015.</p> <p>IAEA presents report on PMD by December 15, 2015.</p>
Enrichment only at Natanz—preventing “uranium path to weaponization”	<ul style="list-style-type: none"> 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”	<ul style="list-style-type: none"> 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”	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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”	<ul style="list-style-type: none"> 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”	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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. If unresolved, 15 days for review by Advisory Board (three 	Implementation Day

COMMITMENTS	COMPONENTS	TIME FRAME
USA	<p>members, one each appointed by the participants in the dispute and a third independent member). Will provide nonbinding decision.</p> <ul style="list-style-type: none"> • 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. <p>Under easing of U.S. and EU sanctions, Iran will be allowed access to roughly \$100 billion revenues frozen abroad in a special escrow.</p> <ul style="list-style-type: none"> • 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, <i>Iran Sanctions</i>). • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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. 	<p>Thursday, September 17, 2015: congressional approval/disapproval deadline.</p> <p>Tuesday, September 29, 2015: deadline for presidential veto.</p> <p>Friday, October 9, 2015: congressional deadline for overriding presidential veto.</p>

Appendix B. Nuclear Weapons Development¹³⁴

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.¹³⁵ 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.¹³⁶

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.¹³⁷ This estimate takes into account the amount of time that Iran would need 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 does 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 need “possibly ... one to two years in order to put [a nuclear weapon] on a deliverable vehicle of some sort.”¹³⁸

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.”¹³⁹ However, the estimate articulated by Sherman assumes that Iran would need two to three months to produce enough weapons-grade HEU for a nuclear weapon.¹⁴⁰ This estimate also apparently assumes that Iran would use its declared nuclear facilities to produce fissile material for a weapon.¹⁴¹ The other assumptions behind the estimate are not clear.¹⁴²

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-

¹³⁴ 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.

¹³⁵ For a more detailed discussion, see Office of Technology Assessment, *Technologies Underlying Weapons of Mass Destruction* (OTA-BP-ISC-115), December 1993.

¹³⁶ 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.”

¹³⁷ “Reversing Iran’s Nuclear Program,” Hearing of the Senate Foreign Relations Committee, October 3, 2013.

¹³⁸ Transcript of remarks by Secretary Panetta from CBS’s 60 Minutes interview, January 29, 2012.

¹³⁹ “Unclassified Key Judgments of the National Intelligence Estimate: Iran: Nuclear Intentions and Capabilities,” Background Briefing with Senior Intelligence Officials, December 3, 2007.

¹⁴⁰ The White House. “Parameters for a Joint Comprehensive Plan of Action Regarding the Islamic Republic of Iran’s Nuclear Program.” April 2, 2015.

¹⁴¹ 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.

¹⁴² 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.¹⁴³

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.

Author Contact Information

Kenneth Katzman
Specialist in Middle Eastern Affairs
kkatzman@crs.loc.gov, 7-7612

Paul K. Kerr
Specialist in Nonproliferation
pkerr@crs.loc.gov, 7-8693

¹⁴³ *Statement for the Record Worldwide Threat Assessment of the US Intelligence Community*, Senate Armed Services Committee, February 9, 2016.