

Iran Nuclear Agreement

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September 29, 2015

Congressional Research Service

7-5700

www.crs.gov

R43333

Summary

On July 14, 2015, Iran and the six powers that have 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) that attempts to ensure that Iran's nuclear program can be used for purely peaceful purposes, in exchange for a broad suspension of U.S. sanctions and a lifting of those sanctions imposed by the European Union (EU) and the United Nations. The JCPOA largely reflects what was agreed in an April 2, 2015, framework for the accord, and those issues that were left open in the framework agreement were clarified and specified in the JCPOA. The agreement, if it enters into force following review by the U.S. Congress and Iran's political system, will replace a Joint Plan of Action (JPA) interim nuclear accord in operation since January 2014.

The Administration and the other P5+1 governments assert that the JCPOA represents 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 Administration further asserts that the JCPOA contains provisions for U.N. sanctions to be reimposed if Iran is found not in compliance with its requirements, although the Administration and many experts acknowledge it is difficult to predict the degree to which international governments might reimpose their sanctions in the event U.N. sanctions are reimposed.

Critics of the agreement, including some U.S. allies in the Middle East, express concerns that the accord requires the United States to give up its main source of leverage on Iran, which is the extensive international sanctions regime. Some countries in the region, including Israel and the Persian Gulf monarchies, have expressed concerns that an accord would give Iran additional resources to extend its influence in the region. These and other critics note that the United States has committed, in U.N. Security Council Resolution 2231 of July 20, 2015, which endorses the JCPOA, to a lifting of a U.N. prohibition on arms sales to Iran or arms exports by Iran in five years, and on Iran's development of nuclear-capable ballistic missiles within eight years. These provisions could set the stage for Iran to become a more powerful regional actor. Some U.S. allies also are said to fear that the JCPOA could produce a broader U.S.-Iran rapprochement that could cause the United States to decrease its support for regional allies or otherwise decline to act against the objectionable aspects of Iran's foreign policy. Some groups express concern that the deal does not address Iranian human rights abuses or its holding of several Iranian-American nationals on various charges. The Administration asserts that it is undertaking numerous initiatives to counter Iran's destabilizing activities in the Middle East.

Some supporters of the agreement argue that the accord could produce greater U.S.-Iran cooperation against the threat to the region posed by the Islamic State organization's seizure of territory in Iraq and Syria. U.S. officials acknowledge that Iran and the United States have held bilateral talks on the Islamic State and other regional issues such as the Syria conflict during the negotiations of a comprehensive nuclear accord, but President Obama has said that the Administration is "not counting on" a broader change in Iranian behavior.

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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 that contained provisions designed to alleviate international concerns regarding Iran's uranium enrichment and heavy water reactor programs. Iran temporarily suspended aspects of its nuclear program 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) which bore fruit after the June 2013 election of Iranian President Hassan Rouhani. A November 24, 2013, Joint Plan of Action (JPA; sometimes referred to in international documents as JPoA) 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. The IAEA is still monitoring Iran's compliance with the JPA. The agency expects to "continue conducting JPA-related activities, including the provision of monthly updates, until the date on which the JCPOA is implemented," according to an August IAEA report.¹

As part of the diplomatic efforts cited above, the U.N. Security Council adopted several resolutions, the most recent and sweeping of which (Resolution 1929) was adopted in June 2010. These resolutions require 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 requires 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.² Several of these resolutions imposed economic and other sanctions on Iran.

In addition to concluding the JPA, Iran signed a joint statement with the IAEA on November 11, 2013, describing a "Framework for Cooperation."³ According to the statement, Iran and the IAEA agreed 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 has long sought to resolve some outstanding questions regarding Tehran's nuclear program, some of which concern possible Iranian research on nuclear weapons development.

¹ *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/2015/53, August 14, 2015.

² 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.

³ Available at <http://www.iaea.org/press/?p=4018>.

Background on Iran's Nuclear Program⁴

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.⁵

A November 2007 National Intelligence Estimate⁶ assessed that Iran “halted its nuclear weapons program” in 2003.⁷ The 2007 estimate, and subsequent statements by the intelligence community, also assessed that Tehran is keeping open the “option” to develop nuclear weapons.⁸ 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 weapon⁹ if the government made the decision to do so.¹⁰ Tehran would need two to three months of this period to produce enough weapons-grade HEU for a nuclear weapon.¹¹

U.S. officials argue that the IAEA and/or U.S. intelligence would likely detect an Iranian attempt to use its safeguarded facilities for producing weapons-grade HEU.¹² The intelligence community assesses that Iran, if it were to decide to do so, is more likely to produce weapons-grade HEU covertly, Director Clapper stated in a March 2015 interview.¹³ But U.S. officials also express confidence in the ability of U.S. intelligence to detect Iranian covert nuclear facilities.¹⁴ U.S.

⁴ For more information, see CRS Report RL34544, *Iran's Nuclear Program: Status*, by Paul K. Kerr.

⁵ “Press Briefing by Senior Administration Officials on IAEA Report on Iran's Nuclear Activities,” November 8, 2011.

⁶ “Iran: Nuclear Intentions and Capabilities,” National Intelligence Estimate, November 2007.

⁷ The estimate defined “nuclear weapons program” as “nuclear weapon design and weaponization work and covert uranium conversion-related and uranium enrichment related work.”

⁸ 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).

⁹ 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.)

¹⁰ “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 “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.)

¹³ PBS “Charlie Rose” Interview with James Clapper, Director of National Security, March 3, 2015.

¹⁴ “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).

officials have argued that Iran currently does not appear to have any nuclear facilities of which the United States is unaware. For example, CIA Director John Brennan stated during a March 2015 interview that the United States has “a good understanding of what the Iranian nuclear program entails.”¹⁵ Asked during a July 31 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.” President Obama has said that the goal for the JCPOA was to increase the time needed for Iran to produce enough fissile material for one nuclear weapon to between six months and one year, as well as to improve the international community’s ability to detect such a scenario.¹⁶

IAEA Safeguards

The IAEA’s ability to inspect and monitor nuclear facilities, as well as to obtain information, in 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 the 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.”

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 provides fuel until 2021. The JCPOA focuses on Iran’s enrichment program and its heavy water reactor due to their potential for nuclear weapons material production, and all the facilities discussed below are addressed in the JCPOA.

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-

¹⁵ “Exclusive: CIA Director John Brennan Provides Insight into Agency Overhaul to Face Modern Threats,” *Fox News Sunday*, March 22, 2015.

¹⁶ “Exclusive: Full Text of Reuters Interview with Obama,” *Reuters*, March 2, 2015. Also see Deputy Secretary of State Antony Blinken’s testimony before the House Committee on Foreign Affairs March 19, 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>.

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).

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.** Iran is constructing a heavy water-moderated reactor at Arak, which, according to Tehran, is intended to produce radioisotopes for medical use and to replace the Tehran Research Reactor. The JPA limits further development of the facility. Heavy water production requires a separate production plant, which Iran possesses. Prior to the JPA, Tehran notified the IAEA that it had produced enough heavy water to commission the reactor. The reactor is a proliferation concern because heavy water reactors produce spent fuel containing plutonium better suited for nuclear weapons than plutonium produced by light water-moderated reactors.²¹ If it were to be completed in its current configuration, the reactor could produce enough plutonium for between one and two nuclear weapons per year.²² However, plutonium must be separated from the used fuel—a procedure called “reprocessing.” Iran has always maintained that it would not engage in reprocessing.

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

²¹ Both the Tehran Research Reactor and the Bushehr reactor are light-water reactors.

²² Kahl, May 14, 2015.

The Joint Plan of Action (JPA)

The JPA, which began implementation on January 20, 2014, was intended to freeze most aspects of Iran's nuclear program and allow time to negotiate a comprehensive agreement. Iran has enough uranium hexafluoride containing up to 5% uranium-235, which, if further enriched, would yield enough weapons-grade HEU for as many as eight nuclear weapons.²³ The total amount of Iranian LEU containing 20% uranium-235 would, if it had been further enriched, have been sufficient for a nuclear weapon. Since the JPA, Iran has 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.²⁴ Iran has diluted the rest of that stockpile so that it contains no more than 5% uranium-235. Tehran's uranium conversion facility is not set up to reconvert the reactor fuel to uranium hexafluoride.²⁵ 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.²⁶

Nuclear Program Provisions Under the JPA²⁷

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

- **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 to refrain from installing additional centrifuges at the Natanz facility and pledged not to construct additional enrichment facilities. At its pilot plant, Iran was not allowed to accumulate enriched uranium. 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.** Under the JPA, 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

²³ 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.

²⁴ 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).

²⁵ *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.

²⁶ *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.

²⁷ 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.

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.²⁸ Iran also pledged to refrain from building a line in its uranium conversion facility for reconverting the uranium oxide back to uranium hexafluoride.

- **LEU Stockpile Limits.** The JPA also required Iran, in effect, to freeze the amount of stocks of enriched uranium hexafluoride containing up to 5% uranium-235 by converting it to uranium oxide.²⁹ The uranium dioxide is to be set aside for research and development (R&D) on fuel for Iran's Bushehr nuclear power reactor.
- **Centrifuge R&D.** According to the JPA, Iran continued 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 as part of an R&D program.
- **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 reportedly accessed such records (the video is not streamed in real time to the agency), but not on a daily basis.³⁰
- **Arak Reactor.** Under the JPA, 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. The agreement allowed Tehran to continue some construction at the reactor site and also produce reactor components off-site that are not covered by the agreement. Iran also agreed to refrain from reprocessing spent nuclear material and building a reprocessing facility³¹ and to submit updated design information about the reactor to the IAEA and agree upon a suitable safeguards plan for the reactor.
- **Additional Information.** Iran was to provide the IAEA with other information about its nuclear programs, such as plans for future nuclear facilities. Tehran is required to provide some of this information by code 3.1 of Iran's subsidiary arrangement to its IAEA safeguards agreement. Iran has also provided IAEA inspectors with "managed access" to its centrifuge assembly workshops, centrifuge rotor production workshops, centrifuge storage facilities, and uranium mines and mills.³²

²⁸ This material is unsuitable for further enrichment. Uranium hexafluoride is the form of uranium used as feedstock for centrifuge enrichment.

²⁹ Iran began operating a conversion plant for this purpose in July 2014.

³⁰ 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.

³¹ There is no public official evidence that Iran has a reprocessing facility.

³² 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.)

“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.³³ The Obama Administration has not acknowledged that Iran or any other country has the right to enrich uranium because the United States argues 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.”³⁴ Similarly, the JCPOA states that, if the agreement is fully and successfully implemented, Iran will fully enjoy its right to nuclear energy for peaceful purposes under the relevant articles of the NPT in line with its obligations therein, and the Iranian nuclear program will be treated in the same manner as that of any other non-nuclear-weapon state party to the NPT.

Sanctions Easing Under the JPA

The JPA provided for what the Administration terms “limited, temporary, targeted, and reversible” sanctions relief for Iran.³⁵ Almost all U.S. sanctions laws provide the President with waiver authority, as well as the power to determine sanctions violations. Sanctions imposed only by executive order can be eased by a superseding order.³⁶ Its provisions include the following:

- **Access to Some Hard Currency.** Iran has been able to repatriate \$700 million per month in hard currency from oil sales, and to access an additional \$65 million per month of its hard currency holdings abroad for tuition for Iranian students abroad.
- **Oil Exports Capped.** Iran’s oil exports have been required to remain at their December 2013 level of about 1.1 million barrels per day (mbd). However, Iran’s sales of oil products such as condensates are not specifically prohibited by the JPA, making Iran’s practical level of sales during the JPA about 1.3 mbd. This is a nearly 50% drop from 2011 levels of about 2.5 million barrels per day.
- **Resumption of Trade in Selected Sectors.** Iran was permitted to resume sales of petrochemicals and trading in gold and other precious metals, and to resume transactions with foreign firms involved in Iran’s auto sector.

³³ 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.

³⁴ “Background Briefing By Senior Administration Officials On First Step Agreement On Iran’s Nuclear Program,” November 24, 2013.

³⁵ White House Office of the Press Secretary. “Fact Sheet: First Step Understandings Regarding the Islamic Republic of Iran’s Nuclear Program.” November 23, 2013.

³⁶ For information on the use of waivers and other authorities to implement the sanctions relief of the JPA, see CRS Report R43311, *Iran: U.S. Economic Sanctions and the Authority to Lift Restrictions*, by Dianne E. Rennack, and CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman.

The Joint Comprehensive Plan of Action (JCPOA)

The JPA contained provisions that set the stage for a comprehensive nuclear agreement—a Joint Comprehensive Plan of Action (JCPOA). According to the JPA, Iran and the P5+1 “aim to conclude negotiating and commence implementing” the second step of the comprehensive solution “no more than one year after the adoption of this document” (by November 24, 2014).

As agreed in the JPA, the JCPOA would include a “mutually defined [Iranian] enrichment programme with practical limits and transparency measures to ensure the peaceful nature of the programme.” Specifically, the two sides were to reach agreement on permanent comprehensive sanctions relief in exchange for restrictions 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 “for a period to be agreed upon.” Tehran would be obligated to “resolve concerns related to” the Arak reactor, refrain from reprocessing spent nuclear fuel or constructing a facility “capable of reprocessing,” implement “agreed transparency measures and enhanced monitoring,” and ratify and implement its Additional Protocol. “Following successful implementation of the final step of the comprehensive solution for its full duration,” the JPA stated, “the Iranian nuclear programme 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.³⁷ Reiterating previous Iranian statements, the JPA also states that “Iran reaffirms that under no circumstances will Iran ever seek or develop any nuclear weapons.”

P5+1–Iran negotiations on a comprehensive settlement began in February 2014 and made progress, although insufficient to meet the July 20, 2014 and subsequent November 24, 2014, deadlines for a JCPOA. On November 24, 2014, Iran and the P5+1 announced that they were extending the talks—and all provisions of the JPA—with the intent of finalizing a detailed agreement by June 30, 2015. The parties stated they would first attempt to reach an overarching framework and roadmap for the agreement “within four months” and would conclude the technical details of a comprehensive agreement by June 30, 2015. The framework accord was agreed on April 2, 2015, in Lausanne, Switzerland.³⁸ 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 remain in effect until the JCPOA is formally “adopted,” as discussed below.

On September 17, Secretary Kerry announced the appointment of Ambassador Stephen Mull as Lead Coordinator for Iran Nuclear Implementation, stating that Mull is to “lead the interagency effort to ensure that the nuclear steps Iran committed to in the JCPOA are fully implemented and verified, and that we and our partners are taking reciprocal action on sanctions.” Mull is to report directly to Kerry and Deputy Secretary of State Anthony Blinken. “Interagency coordination will involve the Departments of State, Treasury, Energy, Homeland Security, Commerce, Justice, and

³⁷ 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.

³⁸ 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).

Defense, as well as others in the intelligence and law enforcement communities,” Kerry explained.³⁹

Overview Timeline of Implementing the JCPOA

The JCPOA outlines specified steps that are to take place, as follows:

- **Finalization Day: July 14, 2015.** Iran, China, France, Germany, the Russian Federation, the United Kingdom and the United States, with the High Representative of the European Union for Foreign Affairs and Security Policy and Iran endorse 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 comes into effect 90 days after endorsement of JCPOA by U.N. Security Council, or earlier by mutual consent. Resolution 2231, for that purpose, was adopted on July 20, 2015. The Administration asserts that the 90 day time frame between the adoption of Resolution 2231 and the entry into force of the JCPOA (October 18) allows time for review of the JCPOA by Congress under the Iran Nuclear Agreement Review Act (P.L. 114-7) and any other legislature of Iran or the other P5+1 states.
- **Implementation Day.** Upon IAEA-verified implementation by Iran of the several stipulated nuclear related measures (ex. reducing centrifuges), the United States, the U.N. and the EU will cease application of specific sanctions (see text below). The U.N. Security Council will terminate the provisions of its resolutions on Iran: 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008), 1835 (2008), 1929 (2010) and 2224 (2015).
- **Transition Day.** Represents initial stages of Iran’s emergence from U.N. Security Council scrutiny. Transition Day is eight years from Adoption Day—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 to be removed from sanctions, the United States is required to remove from designation specified additional Iranian entities subjected to sanctions. The Administration is also required to seek legislative termination of sanctions that were suspended on Implementation Day.
- **UNSCR Termination Day.** Ten years from Adoption Day. 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.

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

³⁹ “Secretary of State John Kerry Appointment of Ambassador Stephen D. Mull as Lead Coordinator for Iran Nuclear Implementation,” September 17, 2015.

produce enough weapons-grade HEU for one nuclear weapon to a minimum of one year, for a duration of at least 10 years.⁴⁰ 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. The nuclear provisions agreed in the JCPOA appear to be generally consistent with the nuclear provisions of the April 2 framework accord.

Enrichment Program

The JCPOA sets out specific limitations on Iran’s enrichment of uranium for fixed durations. Iran must be reported by the IAEA to have completed most of the tasks below before qualifying for sanctions relief specified on Implementation Day. 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.

- **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 has agreed to refrain from producing enriched uranium containing more than 3.67% uranium-235 for at least 15 years.
- **Facility Limitation.** Iran has agreed to enrich uranium only at the Natanz commercial-scale facility for 15 years and to refrain during that time from building any new enrichment facilities.
- **LEU Stockpile Limitation.** Iran has agreed to reduce its LEU stockpile to no more than 300 kilograms of LEU containing 3.67% uranium-235 for a 15 year period. Tehran has three options for disposing of the remaining portion of its current 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.⁴¹ 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 so that it contains a maximum of 3.67% uranium-235.
- **Fordow Conversion.** Iran has agreed to convert its Fordow enrichment facility into “a nuclear, physics, and technology centre.” For 15 years, Iran will maintain no more than 1,044 IR-1 centrifuges at the facility, and will not conduct uranium enrichment or related research and development (R&D) there. The facility, which

⁴⁰ “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.)

⁴¹ Russian Deputy Foreign Minister Sergey Ryabkov stated on August 14 that Iran will export this material to Russia (“The Iran Nuclear Deal: Russia’s Interests and Prospects for Implementation,” Transcript of a Meeting with Russian Deputy Foreign Minister Sergey Ryabkov, Center for Energy and Security Studies [CENESS], August 14, 2015).

- will not contain any nuclear material. 348 of the IR-1 centrifuges may be used to produce stable isotopes for medical and industrial uses.⁴²
- **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 eight 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.** The JCPOA also contains detailed restrictions on centrifuge R&D which last for at least 10 years. Moreover, Iran is to refrain for 10 years from pursuing R&D on any technologies other than gas centrifuge enrichment.

Arak Reactor

Pursuant to provisions similar to those of the April 2 framework accord, Iran is 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. Tehran is to render the Arak reactor’s original core inoperable. Iran will manage an international project to redesign and construct the replacement reactor. Iran is required to begin, but not complete, the redesign process to qualify for sanctions relief under the Implementation Day stipulations of the JCPOA.

The JCPOA prohibits Iran from reprocessing spent reactor fuel, except to produce “radio-isotopes for medical and peaceful industrial purposes.” The JCOA 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.” According to the JCPOA, Iran is required to refrain from building heavy water-moderated reactors for 15 years, and it pledges to refrain from constructing any indefinitely.

Other Provisions

Verification

According to the JCPOA, the IAEA will monitor Iranian compliance with the provisions concerning its enrichment program and the Arak program. The IAEA will increase its number of inspectors in Iran and use modern verification technologies. Iran will also allow a “long-term IAEA presence in Iran.” In addition, Tehran “has agreed to implement” the Additional Protocol to its safeguards agreement.⁴³ Iran is also to implement the modified code 3.1 of the subsidiary arrangements to its IAEA safeguards agreement. It is worth noting that Iran’s IAEA safeguards

⁴² Ryabkov stated on August 14 that Russian and Iranian officials had met several times to discuss stable isotope production, adding that the two sides would reach an agreement on the details of such production in “several months” (Ibid.).

⁴³ 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.”

obligations last for an indefinite duration. Potential nuclear-related exports to Iran would remain subject to the Nuclear Suppliers Group's export guidelines.⁴⁴

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.⁴⁵ IAEA Director General Yukiya Amano told reporters on July 14, 2015, that the agency's "workload will increase" under the JCPOA. Amano intends to request additional resources from the agency's Board of Governors.⁴⁶ On August 25, 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."⁴⁷

The Obama Administration argues that these provisions will prevent Iran from developing a nuclear weapon covertly. Secretary 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."⁴⁸

The JCPOA and UN 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.

Access to Undeclared Sites. The JCPOA also 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. 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 the commission's members agreed to do so. The Joint Commission would have 7 days to reach a decision; "Iran would implement the

⁴⁴ 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.

⁴⁵ This plant is currently not under IAEA safeguards.

⁴⁶ "IAEA Director General Amano's Remarks to the Press on Agreements with Iran," July 14, 2015.

⁴⁷ "IAEA Director General Yukiya Amano's Statement to the Board of Governors," September 7, 2015.

⁴⁸ "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.

necessary means within three additional days.” (*The total time for the stipulated procedures would be 24 days.*)

The JCPOA contains several provisions apparently designed to 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 U.N. Security Council resolution endorsing the JCPOA is to establish a “procurement channel” for Iran’s nuclear program. The Joint Commission established by the JCPOA will monitor and approve transfers made via the channel, which will be in effect for 10 years. IAEA officials will have access to information about, and may participate in meetings regarding such transfers when they are proposed.

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.⁴⁹

International Cooperation

The JCPOA discusses a variety of nuclear projects in Iran which 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. 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.⁵⁰ 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.” In addition to these forms of cooperation, the JCPOA envisions forms of technical cooperation

⁴⁹ 2001 IAEA Safeguards Glossary.

⁵⁰ 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.

between Iran and the IAEA.⁵¹ The Administration argues that international nuclear cooperation will provide additional transparency into Iran's nuclear program.⁵²

Nuclear Weapons Research and Development

In addition to addressing Iran's ability to produce fissile material, the JCPOA contains other provisions that 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."⁵³ 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 Research

Regarding the outstanding issues in the IAEA's investigation of Iran's nuclear program, the JCPOA states that Tehran will "complete" a series of steps set out in an Iran-IAEA "Roadmap for Clarification of Past and Present Outstanding Issues." According to IAEA reports, the agency has evidence that Iran may have conducted work relevant to nuclear weapons, such as research about a nuclear payload for missiles. U.N. Security Council resolutions require 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 a May 2015 report 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, due to the lack of access to documentation, material, and personnel.⁵⁴

According to Amano, this road map "sets 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."⁵⁵ Iran completed the first step of this process by providing the IAEA on August 15 with the government's "explanation in writing and related documents ... for the clarification of past and present outstanding issues"

⁵¹ Implementing a provision of UN Security Council resolution 1737, the IAEA halted some technical cooperation with Iran in 2007.

⁵² "Background Conference Call by Senior Administration Officials on Iran," July 14, 2015.

⁵³ 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."

⁵⁴ *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.

⁵⁵ "IAEA Director General Amano's Remarks to the Press on Agreements with Iran," July 14, 2015.

regarding the country's nuclear program.⁵⁶ The IAEA submitted questions on September 8 about "ambiguities" regarding this information.⁵⁷ The November 2013 framework specified measures to address the outstanding questions. According to the road map, Amano is 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.⁵⁸ 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. (See "Other Provisions" section.)

British Foreign and Commonwealth Office official Simon Gass stated on September 9, 2015, that "I do not think that anybody believes that we will get a complete understanding of anything that has ever been done in Iran, which was probably never going to happen, but I think we will get a pretty good sense of what past activities have been undertaken."⁵⁹ 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.⁶⁰ However, Jofi Joseph, a former Obama Administration official whose portfolio included the Iranian nuclear issue, agreed this past April that

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.⁶¹

Sanctions Relief Under the JCPOA

The easing of sanctions under the JCPOA is relatively consistent with the stipulations of the framework accord. Under the JCPOA, the overwhelming bulk of sanctions relief occurs at Implementation Day—the day when the IAEA certifies that Iran has completed those stipulated core nuclear requirements listed in Annex V of the JCPOA (primarily reducing the size and scope of its enrichment of uranium). According to the JCPOA, the following sanctions are to be eased:⁶²

- On Implementation Day, many U.S., virtually all EU, and most U.N. sanctions are to be lifted or suspended that Iran has taken certain key nuclear-related steps that are U.N. Security Council Resolution 2231 of July 20 contains this provision.
- The U.S. sanctions that are to be suspended are primarily those that sanction foreign entities and countries for conducting specified transactions with Iran (so-called "secondary sanctions"). U.S. sanctions that prohibit U.S. firms from

⁵⁶ "IAEA Receives Information from Iran under Road-Map Agreement," August 15, 2015.

⁵⁷ IAEA Statement on Iran, September 9, 2015.

⁵⁸ "Road-map for the Clarification of Past and Present Outstanding Issues Regarding Iran's Nuclear Program," July 14, 2015.

⁵⁹ "Oral Evidence: Foreign Policy Developments," HC 381, September 9, 2015.

⁶⁰ *Iran: Status of the P-5+1, Panel 2*, Senate Committee on Foreign Relations Hearing, July 29, 2014.

⁶¹ "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>.

⁶² <http://www.politico.com/story/2015/07/full-text-iran-deal-120080.html>.

conducting most transactions with Iran are not being suspended. However, the JCPOA does commit the United States to a slight modification in the U.S. “trade ban” with Iran (Executive Order 12959 of May 1995) to permit: licensing the sale to Iran of commercial aircraft, and the importation of Iranian luxury goods such as carpets, caviar, and some fruits and nuts.⁶³

- The U.S. sanctions to be suspended are mostly those imposed since U.N. Security Council Resolution 1929 was enacted in June 2010.⁶⁴ That resolution identified Iran’s energy sector as a potential contributor to Iran’s “proliferation-sensitive nuclear activities.”⁶⁵
- **Type of Sanctions to Be Removed or Suspended.** The sanctions relief on Implementation Day includes lifting or suspension of U.S. sanctions on foreign firms involved in Iran’s:⁶⁶ (1) energy sector, including those that penalize Iran’s exportation of oil and sanction foreign sales to Iran of gasoline and energy sector equipment, and which limit foreign investment in Iran’s energy sector; (2) U.S. sanctions on foreign banks that conduct transactions with Iranian banks; (3) U.S. sanctions on Iran’s auto sector and trading in the *rial*. The United States is to revoke 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), including the National Iranian Oil Company (NIOC), various Iranian banks, and many energy and shipping-related institutions. That step would enable foreign companies to resume transactions with those Iranian entities without risking being penalized by the United States.
- **U.S. Laws to Be Waived and Executive Orders to Terminated.** The suspension of U.S. sanctions as required under the JCPOA will necessitate: exercising presidential authority to waive sanctions mandated by the core operative provisions of the Iran Sanctions Act (P.L. 104-172 as amended),⁶⁷ Section 1245(d)(1) of the National Defense Authorization Act for FY2012 (P.L. 112-81); the Iran Threat Reduction and Syria Human Rights Act (P.L. 112-158); the Iran Freedom and Counter-Proliferation Act (Subtitle D of P.L. 112-239); and the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (CISADA, P.L. 111-195). The statutory basis for the sanctions would remain unchanged by the agreement. Implementing the U.S. commitment will also require terminating the provisions of the following Executive Orders: 13574, 13590, 13622, 13645, and Sections 5-7 and 15 of Executive Order 13628. For information on the exact provisions of 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*.

⁶³ 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.

⁶⁴ 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.

⁶⁵ The text of the Resolution is at https://www.iaea.org/sites/default/files/unsc_res1929-2010.pdf.

⁶⁶ <http://iranmatters.belfercenter.org/blog/translation-iranian-factsheet-nuclear-negotiations>; and author conversations with a wide range of Administration officials, think tank, and other experts, in Washington, DC. 2015.

⁶⁷ 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.

- **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. The JCPOA requires all U.N. sanctions to terminate after 10 years of adoption of the JCPOA. Under the JCPOA, the eight year mark after JCPOA adoption is known as the Transition Day and the 10-year mark is known as the Termination Day.
- **EU Lifting of Sanctions on Implementation Day.** The EU sanctions to be lifted include (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) the lifting of EU sanctions (assets freezes/visa bans) on entities listed in Annex II, Attachment 1. This attachment does not include one controversial personality – IRGC-Qods Force Commander Qasem Soleimani. EU nuclear-related sanctions on him are to remain until Transition Day, although he will remain sanctioned under EU decisions on Syria and on terrorism. U.S. sanctions on Soleimani will remain, including secondary sanctions on entities that deal with him.
- **U.S. Sanctions to Remain in Place.** Other U.S. sanctions that are not required to be suspended in accordance with the JCPOA are mostly those sanctioning Iran’s support for terrorism, its human rights abuses, and worldwide arms and WMD-related technology to Iran. The specific Executive Orders and statutory provisions that will not be suspended 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),⁶⁸ 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. Iran also will be remaining on the “terrorism list” and all sanctions triggered by that designation will remain in place, at least for now. 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.
- **U.N. Sanctions on Arms Sales and Ballistic Missiles to Be Terminated After Several Years.** One issue that arose during final negotiations on the JCPOA was the suspension 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 in the JCPOA. However, as subsequently negotiated, the ban on Iran’s development of nuclear-capable ballistic missiles is to be lifted within eight years of the JCPOA and the ban on conventional arms sales to Iran and on Iran’s exportation of arms are to be lifted within five years,⁶⁹ as stipulated in Resolution 2231. However, as noted, U.S. sanctions on foreign entities that assist

⁶⁸ The JCPOA does commit the United States to terminate sanctions with respect to some entities designated for sanctions under INKSNA.

⁶⁹ <http://www.scribd.com/doc/271711382/Iran-Deal-Draft-UNSC-Resolution-as-Uploaded-by-Inner-City-Press>.

Iran with such programs will remain in place, as will 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 contains language requiring that the parties to the agreement not reimpose the sanctions that will be suspended, as long as Iran is complying. The agreement states that if U.S. sanctions are reimposed (other than through reimposition 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 those sanctions that are being suspended under “non-nuclear” justifications such as Iranian support for terrorism or armed factions in the Middle East, or for human rights violations. Iran interprets reimposition to be those sanctions that target the same sectors of Iran’s economy on which sanctions are being lifted or suspended (energy, financial, auto, shipping). However, there does not appear to be a prohibition on enacting further U.S. sanctions (other than those being suspended under the JCPOA) on arms sales to Iran, human rights violations and Iranian support for terrorism or armed factions in the region.

Automatic 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 compliance dispute. 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 2231.⁷⁰ *The total time for this “dispute resolution” mechanism – between the time of the complaint of Iranian non-compliance and the reimposition of U.N. sanctions, is 65 days.*

A related question is whether the effect of sanctions currently realized could ever be reconstituted if U.N. sanctions are lifted but U.S. sanctions are reimposed. The effect of all sanctions has depended on the substantial degree of international compliance and cooperation with the sanctions regime that has taken place since 2010. 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, because U.N. Security Council sanctions are lifted, they are no longer bound to cooperate with U.S. sanctions.

Implications for Iran of the JCPOA Sanctions Relief

The suspension of sanctions on Implementation Day would likely have significant implications for Iran’s economy, including the following:

- **Crude Oil Exports.** Iran will be able to export crude oil without restriction. Iranian energy officials estimate that Iran could double its oil exports from the 1.1 mbd level of the JPA period within about six months. Significant quantities of Iranian oil will likely hit the market immediately after sanctions suspension

⁷⁰ <http://www.scribd.com/doc/271711382/Iran-Deal-Draft-UNSC-Resolution-as-Uploaded-by-Inner-City-Press>.

- because Iran reportedly has about 30 million - 50 million barrels of oil stored, and therefore available for immediate release onto the market.
- Access to Restricted Foreign Exchange Reserves.** Upon the suspension or lifting of sanctions on Implementation Day, Iran will have access to about \$120 billion in foreign exchange assets currency that it has been unable to repatriate to its Central Bank. However, according to Treasury Secretary Jacob Lew in testimony on the JCPOA in late July, about \$65 billion of those funds are obligated. About \$20 billion is owed to China for infrastructure projects performed in Iran by Chinese firms. About \$45 billion is owed to cover loans to Iranian energy companies and other Iranian firms. The Department of the Treasury says that only about \$56 billion would be available for Iran to use at its discretion, after these obligations are paid. The funds consist of some assets deposited before restrictions on the movement of the funds was imposed in February 2013 (Iran Threat Reduction Act), but the bulk of the assets are oil sales proceeds deposited since that restriction went into effect.
 - According to the Department of the Treasury, Iran's foreign exchange reserves are held by many banks around the world, and particularly in those of Iran's five remain oil customers: China, India, South Korea, Japan, and Turkey.⁷¹ Some funds might be held in EU banks as well. Other banks said to hold Iranian foreign exchange funds are, according to a determination of waiver provided to Congress on June 17, 2015, in Oman, Switzerland, and South Africa.⁷² And, banks in the United Arab Emirates, a major trading partner of Iran, might hold some of the monies as well.
 - Post-Sanctions Economic Growth.** Economists estimate that Iran's economy could grow as much as 7% after sanctions are suspended.⁷³ Iran's energy sector, automotive production sector, and other industrial sectors are likely to rebound strongly as importation of parts becomes easier to finance. Some assert that Iran will use the additional economic resources generated by the deal to enhance its regional position. The Administration acknowledges Iran might steer some extra funding to regional allies but argues that Iran will use the great bulk of the additional funds to invest in its domestic economy which has been starved by sanctions for several years.
 - Commercial Aircraft Sales.** Iran is likely to seek to purchase significant quantities of commercial aircraft because of the advanced age of most of the aircraft used by its airlines. The deal commits the United States to license commercial aircraft sales to Iran, including U.S.-made aircraft. If such sales are consummated, U.S.-Iran trade in dollars, which has been highly limited by sanctions for many years, could expand significantly. The importation to the United State of U.S. luxury goods is likely not to boost bilateral trade significantly because of the low-volume and low dollar-figure nature of these imports by U.S. buyers.

⁷¹ Author conversations with diplomats from East Asia. 2014-15.

⁷² Assistant Secretary of State for Legislative Affairs Julia Frifield. Letter to Senator Bob Corker, Chairman Senate Committee on Foreign Relations. June 17, 2015. Enclosure to letter: Department of State. Determination and Certification pursuant to the National Defense Authorization Act of FY2012. Undated.

⁷³ <http://www.businessinsider.com/baml-chart-on-irans-economy-2015-7>.

Selected Regional Reaction to the Agreement

The JCPOA could have profound 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). On the one hand, an Iran nuclear agreement that removes the threat of a nuclear-armed Iran has the potential to lower regional tensions. On the other hand, the sanctions relief of the JCPOA will presumably increase the economic resources available to Iran to promote its interests in the region, many of which, such as the maintenance in office of Syrian President Bashar Al Assad, are inimical to the stated interests of the United States and its allies. These issues are discussed in greater depth in: CRS Report R44142, *Iran Nuclear Agreement: Selected Issues for Congress*, coordinated by Kenneth Katzman and Paul K. Kerr

Gulf States

The GCC states have publicly accepted the JCPOA but express concern that the deal could lead Iran to expand its regional influence, in part because Iran will have more funds to provide to its regional allies. Some GCC leaders have publicly associated their concerns about the agreement with criticisms of U.S. reticence to act militarily to try to oust Assad, the U.S. pullout of all troops from Iraq in 2011, and U.S. assertions that it will not deploy ground combat troops to battle the Islamic State organization in Iraq or Syria. The GCC leaders assert that Iran is pursuing a sectarian agenda aimed at empowering Shiite Muslims in the region at the expense of Sunnis.

In an apparent attempt to assuage GCC concerns about U.S. resolve and the tentative accord with Iran, President Obama met with GCC leaders at Camp David during May 13-14, 2015. The meeting resulted in statements of additional U.S. support for the security of the GCC states, and the leaders and deputy leaders who attended the meetings reportedly expressed substantial satisfaction with the results. There reportedly was further discussion of joint U.S.-GCC steps to counter Iran's destabilizing regional activities during a White House meeting on September 4, 2015, between President Obama and Saudi Arabia's King Salman. For additional information on the U.S.-GCC summit and its results, see CRS Report RL32048, *Iran, Gulf Security, and U.S. Policy*, by Kenneth Katzman.

Some regional governments and factions generally friendly to Tehran, such as Syria and Lebanon's Hezbollah, welcomed the accord, at least in part because sanctions relief could provide Tehran with additional resources to help those governments battle Sunni-led rebellions. One threat common to Iraq, Syria, Iran, and to the Gulf states is the threat posed by the Islamic State organization that has captured substantial territory in both Iraq and Syria.

Israel

Israel's leaders routinely assert that their country is uniquely threatened by the possibility that Iran might eventually obtain nuclear weapons, despite limitations and safeguards in any comprehensive accord. Israeli Prime Minister Binyamin Netanyahu, including in a speech to a joint session of Congress on March 3, 2015, has repeatedly warned of the alleged perils of a deal that would in any way ease the international sanctions regime against Iran and accept Iran's retention of enriched uranium or of infrastructure potentially usable for the generation of fissile material. Netanyahu stated, the day the JCPOA was announced, that the deal is a "historic

mistake” and that Israel would “not be bound” by the accord.⁷⁴ His critical view of the deal is widely shared across the Israeli political spectrum.

Some Israeli commentators called on Netanyahu to refrain from all-out efforts to thwart congressional acceptance of the deal given their skepticism about his ability to decisively influence the process and worries they assert about possible damage or missed opportunities relating to strategic arrangements with the United States.⁷⁵ Before the JCPOA was announced, Israel and the United States reportedly began preliminary consultations on an aid and arms sales package to assuage Israeli concerns regarding the deal and address “qualitative military edge” requirements regarding newly considered U.S. arms sales to Gulf Arab states.⁷⁶ In its effort to build congressional support for the Iran deal, the Administration sent letters to several Members of Congress stipulating ongoing or planned steps to help Israel defend itself and counter Iran’s destabilizing regional influence.

Implications for U.S.-Iran Relations⁷⁷

There is debate over whether the JCPOA will alter the broader U.S.-Iran relationship. Iran and the United States have been mostly at odds since the February 1979 Islamic revolution, and came into limited naval conflict during the 1980-1988 Iran-Iraq War, when U.S. forces defended the GCC states from attack by Iran. In 1984, the United States placed Iran on its list of “state sponsors of terrorism” and has accused Iran of numerous acts of terrorism against the United States and its interests. Iran is holding four dual U.S.-Iran nationals in Iran on charges that U.S. officials say have no merit, but this issue was not part of the JCPOA.

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 since the JCPOA was finalized that the deal will not be accompanied by a breakthrough in U.S.-Iran relations or any change in Iran’s regional policies. The United States has publicly asserted that the nuclear negotiations centered only on that issue, and does not seek to resolve all the issues in U.S.-Iran relations. However, in interviews after the April 2 framework deal was announced, President Obama stated that he hopes that a finalized deal “ushers in a new era in U.S.-Iran relations.”⁷⁸ A September 27, 2013, phone call President Obama placed to Rouhani represented the first direct contact between presidents of the two countries since the 1979 Islamic revolution.

A nuclear deal could build on the growing, tacit cooperation between the United States and Iran on several regional issues. U.S. diplomats negotiated with Iranian officials to form the post-Taliban government in Afghanistan in late 2001, and Iran and the United States have tacitly cooperated in the formation of virtually all post-Saddam governments in Iraq. U.S. officials

⁷⁴ CRS Report RL33476, *Israel: Background and U.S. Relations*, by Jim Zanotti.

⁷⁵ See, e.g., Ben Caspit (translated from Hebrew), Netanyahu threatens to ‘kill himself’ in order to stop Iran deal,” *Al-Monitor Israel Pulse*, July 15, 2015; Yossi Verter, “Netanyahu lost his Iran bet, but his next gamble may be disastrous,” *haaretz.com*, July 15, 2015.

⁷⁶ The sources for this paragraph are Amos Harel, “Washington, Jerusalem discussing massive compensation for Iranian nuclear deal,” *haaretz.com*, May 20, 2015; and Leslie Susser, “The Challenge: Getting the US Back in Israel’s Corner,” *Jerusalem Report*, May 18, 2015. On May 19, 2015, the Defense Security Cooperation Agency published a notification of a proposed U.S. sale to Israel of \$1.879 billion worth of munitions and associated parts.

⁷⁷ For detail on U.S.-Iran relations, see CRS Report RL32048, *Iran, Gulf Security, and U.S. Policy*, by Kenneth Katzman.

⁷⁸ Roger Cohen. “U.S. Embassy, Tehran.” *New York Times*, op-ed. April 8, 2015.

acknowledge that bilateral meetings on the comprehensive accord have discussed the threat posed by the Islamic State organization, the situation in Bahrain, and the fate of three American nationals confirmed or believed held by Iran. On Iraq, the United States and Iran are indirectly cooperating to support the Shiite-dominated government of Prime Minister Haydar Al Abbadi against Islamic State forces. On Syria, Iran continues to support the government of President Al Assad, although some U.S. diplomats are said to perceive that Iran might yet be persuaded to help move Assad aside.

A possible hindrance to any post-nuclear agreement U.S.-Iran rapprochement will be remaining U.S. sanctions and issues unrelated to nuclear issues. U.S. officials have stressed that no sanctions that address long-standing U.S. concerns about Iran's use of terrorism or its human rights abuses will be eased as part of a nuclear deal with Iran. U.S. officials also maintain that a nuclear deal will not cause the United States to cease its public criticism of Iran's human rights practices and its detention of U.S. citizens.

Formal Congressional Review

Legislation providing for congressional review was enacted as the Iran Nuclear Agreement Review Act of 2015 (P.L. 114-17). Because the agreement was reached after July 10, the congressional review period is 60 days from the date of submission to Congress, which is to be within five 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 can be waived during the review period which, according to the stipulated timetable, is to conclude on September 17. If a congressional resolution of disapproval is passed by both chambers, President Obama could not waive sanctions for another 12 days during which he would presumably exercise his threat, stated on July 14, to veto a resolution of disapproval. Congress would then have 10 days to try to override the veto, during which sanctions could not be waived. So, the maximum period during which statutory sanctions could not be waived is 82 days after receipt of the agreement. Joint resolutions of disapproval have been introduced in each chamber: H.J.Res. 64 in the House, and S.Amdt. 2640 to H.J.Res. 61 in the Senate. The JCPOA does not provide for any sanctions relief earlier than 90 days from the July 20, 2015, adoption of U.N. Security Council Resolution 2231 – which is calculated as October 19. For other provisions of that law, please see CRS Report RS20871, *Iran Sanctions*, by Kenneth Katzman.

Appendix A. Chart on the JCPOA⁷⁹

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. 	Expected mid-October 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.
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

⁷⁹ Appendix prepared by Christopher Mann, Research Assistant, CRS; adapted from European Council on Foreign Relations.⁷⁹

Table A-2. JCPOA Commitments

COMMITMENTS	COMPONENTS	TIMEFRAME
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	TIMEFRAME
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: Joint Commission assesses 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	TIMEFRAME
	<p>members, one each appointed by the participants in the dispute and a third independent member). Will provide non-binding 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 votes on a resolution as to continuing lifting of sanctions. If resolution not adopted by 30 days, old UNSC resolution sanctions snap-back. China and Russia cannot veto. Iran will cease to perform its obligations if sanctions snap back. Sanctions snap-back not applicable with retroactive effect to contracts signed between any party and Iran. After 5 years: U.N. sanctions on conventional weapons that were linked to Iran’s nuclear activities terminate. After 8 years: U.N. sanctions on Iran’s missile program that were linked to Iran’s nuclear activities terminate. U.S. and international sanctions on Iran’s conventional weapons and missile capabilities remain. 	
USA	<ul style="list-style-type: none"> Under easing of U.S. and EU sanctions, Iran will be allowed access to roughly \$100 billion revenues frozen abroad in a special escrow. Cease the application of economic sanctions against Iran’s oil and banking sector allowing Iranian banks and companies to reconnect with international systems (see CRS Report RS20871, Iran Sanctions). Will remove designation of certain entities and individuals (Attachment III). Allows for license 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	TIMEFRAME
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 I) • 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 Development⁸⁰

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.⁸¹ 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.⁸²

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.⁸³ 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.”⁸⁴

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.”⁸⁵ 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.⁸⁶ This estimate also apparently assumes that Iran would use its declared nuclear facilities to produce fissile material for a weapon.⁸⁷ The other assumptions behind the estimate are not clear.⁸⁸

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

⁸⁰ 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.

⁸¹ For a more detailed discussion, see Office of Technology Assessment, *Technologies Underlying Weapons of Mass Destruction* (OTA-BP-ISC-115), December 1993.

⁸² 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.”

⁸³ “Reversing Iran’s Nuclear Program,” Hearing of the Senate Foreign Relations Committee, October 3, 2013.

⁸⁴ Transcript of remarks by Secretary Panetta from CBS’s 60 Minutes interview, January 29, 2012.

⁸⁵ “Unclassified Key Judgments of the National Intelligence Estimate: Iran: Nuclear Intentions and Capabilities,” Background Briefing with Senior Intelligence Officials, December 3, 2007.

⁸⁶ The White House. “Parameters for a Joint Comprehensive Plan of Action Regarding the Islamic Republic of Iran’s Nuclear Program.” April 2, 2015.

⁸⁷ 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.

⁸⁸ 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 testimony to Congress in March 2013, Director Clapper said that “Tehran has the scientific, technical, and industrial capacity to produce nuclear weapons. This makes the central issue its political will to do so. Such a decision will reside with the supreme leader, and at this point we don't know if he'll eventually decide to build nuclear weapons.”⁸⁹ As noted in the body of this report, U.S. officials have argued that the International Atomic Energy Agency would likely detect an Iranian attempt to use its safeguarded facilities to produce weapons-grade HEU. They have also expressed confidence in the United States' ability to detect covert Iranian enrichment plants.

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⁸⁹ Senate Select Intelligence Committee Hearing on National Security Threats to the United States, March 12, 2013.