



Iran's Nuclear History from the 1950s to 2005

1950s and 60s: Atoms for Peace

Iran's nuclear program was established under Shah in the late 1950s, with a 1957 nuclear cooperation agreement concluded under the Atoms for Peace program, followed by an agreement in 1960 to purchase a small, 5MW research reactor for Tehran University. The Atoms for Peace program was first articulated by President Eisenhower in an address to the United Nations General Assembly in 1953. He called for the establishment under the UN of an international atomic energy agency and for the use of nuclear materials in serving "the peaceful pursuits of mankind." He said "a special purpose would be to provide abundant electrical energy in the power-starved areas of the world." It was in this context that nuclear cooperation with Iran and other countries in the developing world was established and in many cases flourished. In 1967, Tehran's research reactor was fueled with highly enriched uranium provided by the United States. Iran signed the Non-Proliferation Treaty in July 1968 on the day it was opened for signature.

1974-1979: Iran Seeks Nuclear Power

The Shah established the Iran Atomic Energy Organization in 1974 and that year announced plans for an ambitious nuclear program that would eventually include over 20 nuclear power reactors. This program was actively supported by the major Western powers, and the United States, France, and Germany sought lucrative power reactor sales to Iran. In 1974, Iran signed a contract with the German firm Kraftwerk Union (now Siemens) to build the first power reactors at Bushehr. To help ensure the necessary low enriched uranium fuel, Iran invested hundreds of millions of dollars in the Eurodif uranium enrichment consortium based in France.¹ It also financed a project to attempt uranium enrichment by laser.²

Iran also expressed interest in acquiring a domestic reprocessing, or plutonium separation plant to handle power reactor spent fuel, an action opposed by the United States. Declassified National Security Council documents from 1975 and 1976 show that Iran's interest in reprocessing was a major sticking point in U.S.-Iranian negotiations of a peaceful nuclear cooperation agreement necessary for the United States to sell several nuclear power reactors to Iran.³ The United States was wary of Iran's interest in an Iranian reprocessing plant and of the ability of the IAEA to satisfactorily safeguard such a plant. Instead, the United States encouraged Iran to participate in a multinational plant or return the plutonium to the United States.

Just under the surface, however, Iran's nuclear program also included nuclear weapon intentions. According to Geoffrey Kemp, a leading Iranian expert now at the Nixon Center, the Shah's nuclear program was motivated partly by potential nuclear threats from Israel, Iraq, Pakistan, India, and the Soviet Union.⁴

¹ See Nuclear Threat Initiative, "Iran: Nuclear Chronology," http://www.nti.org/e_research/profiles/Iran/1825.html, [accessed 2004-12-22].

² Leonard S. Spector, *Nuclear Ambitions: The Spread of Nuclear Weapons 1989-1990*, (Boulder, Colo.: Westview Press, 1990), p 206.

³ Dafna Linzer, "Past Arguments Don't Square with Current Iran Policy," *The Washington Post*, March 27, 2005, A15.

⁴ Geoffrey Kemp, "Iran's Bomb and What to Do About It," in Geoffrey Kemp, ed., *Iran's Bomb: American and Iranian*

The Shah's nuclear intentions: In June 1974, the Shah said Iran would get nuclear weapons "without a doubt and sooner than one would think."⁵ Iranian officials backed off that remark, and the Shah claimed repeatedly afterward that Iran would not seek nuclear weapons. In February 1975, however, he said Iran had "no intention of acquiring nuclear weapons but if small states began building them, Iran might have to reconsider its policy."⁶

Akbar Etemad, who was the founder and first president of the Atomic Energy Organization of Iran (AEOI), said in a 2003 interview with *Le Figaro* that he had asked the Shah in the mid-1970s if he wanted to build a bomb. The Shah replied, according to Etemad, that it was premature to build a bomb as it would isolate Iran and prevent transfers of nuclear technology, but if in 10 to 20 years Iran's security situation changed or other states began to acquire bombs, "the nuclear military option would become a priority." Based on this statement, Etemad created a special nuclear research team "to give the country access to all technologies, giving the political decision-makers the possibility of making the appropriate decision and doing so while time permitted them to build a bomb if that is what was required."⁷

1979-1988 Revolution, the Iran-Iraq War, initial contact with Khan

The establishment of the revolutionary Islamic government in 1979 ended U.S. participation in Iran's nuclear energy program. For its own part, the new government cut back or cancelled much of the Shah's ambitious nuclear program including plans for power reactors. The government eventually decided to restart Bushehr project, although without the cooperation of Germany which had halted cooperation following the start of the Iran-Iraq war in 1980.

The devastating human costs of Iran's war with Iraq persuaded its leaders of the need for a strong deterrent. Under a U.S.-led arms embargo, Iran faced chemical weapons and Scud-type missile attacks from Iraq. Richard Perry wrote "The Iran-Iraq war taught the Iranians a valuable lesson about the importance of having a credible deterrent force of its own; Iran had none, and they were extremely vulnerable."⁸

In an address to the Islamic Revolutionary Guards Corps in October 1988, Hashemi Rafsanjani, then speaker of Iran's parliament, called for the development of nuclear and other unconventional weapons based on Iran's wartime experience. He said the importance of such weapons "was made very clear during the [Iran-Iraq] war." Although he has since rejected nuclear weapons on many occasions, Rafsanjani told the gathering, "We should fully equip ourselves both in the offensive and defense use of chemical, bacteriological, and radiological weapons."⁹

First contact with A.Q. Khan network: According to IAEA reports, Iran's efforts to develop an indigenous gas centrifuge program began in earnest in the mid-1980s with a search of open source literature. In 1987, it acquired from Khan (referred to in the November 2004 IAEA report as a "clandestine supply network") a set of technical drawings for a P-1 centrifuge and some samples of centrifuge components. The IAEA adds, "according to Iran, gas centrifuge R&D testing began at TNRC in 1988 and continued there until 1995, when those activities were moved to a workshop of the Kalaye Electric Company, a company in Tehran belonging to the Atomic Energy Organization of Iran (AEOI)."¹⁰

Bushehr construction restarts: In January, 1995, after multiple attempts with Russia and other countries to conclude an agreement for the completion of the Bushehr complex, Russia and Iran sign a contract to finish the reactors, which would fall under IAEA safeguards. The U.S. persuades Russia to halt negotiations with Iran over a centrifuge enrichment facility that was to have been part of the package.

⁵ Nuclear Threat Initiative.

⁶ Nuclear Threat Initiative.

⁷ Quoted in Paul Michaud, "Iran opted for N-bomb under Shah: Ex-official," *Dawn*, 23 September 2003.

⁸ Richard M. Perry, "Rogue or Rational State" A Nuclear-Armed Iran and U.S. Counter-proliferation Strategy," Research paper for the Air Command and Staff College, March 1997.

⁹ Middle East Defense News, "The China-Iran Nuclear Cloud," 22 July 1991.

¹⁰ IAEA Report, GOV/2004/83, November 15, 2004

1988-August 2002: Expanding the fuel cycle; illicit procurement

This period saw steady, deliberate progress in Iran's quest to pursue the full nuclear fuel cycle, with further development of its uranium mining infrastructure, research and development, and construction of uranium conversion and enrichment programs.

In 1991, Iran secretly imported from China approximately 1 metric ton of uranium hexafluoride (UF₆). Neither country reported the transfer to the IAEA (China was technically not obligated to as it was not yet a member of the NPT in 1991, but Iran was obligated under its IAEA safeguards agreement to report the acquisition of the material).

By March of 1994 Iran took delivery of the first of two shipments containing design drawings and components for 500 P-1 centrifuges. According to the IAEA, a second shipment occurred in July 1996. Between 1994 and 1999, the IAEA reports a total of 13 meetings between Iran and members of the "clandestine supply network" take place. Iran also received drawings for the more sophisticated P-2 centrifuge in 1995, but claimed that "a shortage in professional resources" led to no work beginning on the P-2 until 2002.

In early 1995, reconstruction of Bushehr gets underway, despite dogged diplomacy on the part of the first Bush and later Clinton administrations to stop it. Russia's agreement with Iran stipulates that the reactor is to be under IAEA safeguards, with Russia providing the fuel and taking it back after it has been unloaded from the reactor and cooled. The U.S. is successful in persuading Russia to halt negotiations with Iran over a centrifuge enrichment facility that was to have been part of the package.

In 1999 and 2002, Iran conducted tests on a few centrifuges installed at Kalaye Electric Company using some of the Chinese-sources UF₆. These constituted violations of Iran's IAEA safeguards obligations.

Natanz's Outing: Construction of the Natanz enrichment facilities began in 2001. On August 14, 2002, the [National Council of Resistance of Iran \(NCRI\) held a press conference](#) in Washington, DC to disclose activities taking place at both Natanz and Arak. Mr. Alireza Jafarzadeh, a former spokesperson for NCRI, stated "Although on the surface, regime's main nuclear activities revolves around Bushehr's nuclear plant, in reality many secret nuclear programs are at work without any knowledge of the International Atomic Energy Agency (IAEA). One of these top secret projects is Natanz's nuclear facility.

Although the NCRI identified Natanz as a suspect nuclear site, it did not identify Natanz as a uranium enrichment facility. [This honor belongs to ISIS](#), which released imagery of Natanz in December 2002, identifying it as a possible gas centrifuge facility.

September 2002 to 2005: IAEA investigates; diplomacy vs. enrichment

Britain, France, and Germany, often referred to as the EU-3 in the context of Iran negotiations, agreed in 2003 to launch a diplomatic effort to persuade Iran to forgo its uranium enrichment and reprocessing-related activities, along with its construction of the heavy water reactor at Arak.

On November 15, 2004, Iran and the EU-3, with the support of the High Representative of the European Union, signed the [Paris Agreement](#), which extended a temporary suspension of Iran's nuclear activities, pending negotiations of long-term arrangements.

The Agreement stated that Iran would, on a voluntary basis, "continue and extend its suspension to include all enrichment related and reprocessing activities, and specifically: the manufacture and import of gas centrifuges and their components; the assembly, installation, testing or operation of gas centrifuges; work to undertake any plutonium separation, or to construct or operate any plutonium separation installation; and all tests or production at any uranium conversion...."

While the suspension of enrichment-related work lasted for some two years, Iran continued its research and development and manufacturing of centrifuges. It also resumed operations at the uranium conversion facility at Esfahan in August 2005.

Nuclear decision making in Iran

Iran's decision-making process and chain of command for the nuclear program is not transparent, perhaps intentionally or perhaps as a result of the generally confusing decision-making process at the top tier of the Iranian leadership. Recent events have suggested that key nuclear decisions are dominated by the Supreme Leader and a relatively small group of senior leaders and advisors, including those in the Supreme National Security Council (SNSC).

The Atomic Energy Council: Officially, Iran's general nuclear policy is directed by the Atomic Energy Council, also sometimes known as the Supreme Atomic Energy Council or the Nuclear Energy Council. The Atomic Energy Council was created by the same law in 1974 that created the Atomic Energy Organization.

The 1974 law states that the Atomic Energy Council has 15 members and "approves the overall national policy and nuclear programs, as well as the regulations and issues directives to ensure the smooth functioning of such activities."¹¹ In 2003, an AEOI official explained that the 15-member Atomic Energy Council is composed of the president, cabinet ministers, head of the AEOI, and four nuclear scientists.¹² Recent public references to the Atomic Energy Council are rare. One notable reference to the council was in August 2003, when it authorized the AEOI to pursue contracts for the second phase of the Bushehr Nuclear Plant and authorized the AEOI to carry out studies on producing 7,000 MW of electricity by 2020.¹³

The Supreme Leader: Supreme leader Ayatollah Ali Khamenei has ultimate say over Iran's nuclear program. All major decisions on the nuclear issue, whether signing the Additional Protocol or suspending uranium enrichment, would require his approval. Ayatollah Khamenei has repeatedly disavowed nuclear weapons but also rejected calls for Iran to give up its nuclear program. In June 2004, he said, "The Iranian nation, based on the logic of Islam, has never pursued access to nuclear arms. At the same time, it reserves its right to develop nuclear technology as a national goal."¹⁴ In May 2008, he was quoted on Iran's state radio, [as reported by Agence France-Presse](#), saying "We will continue on our path with (nuclear) power and will not allow the oppressors to deny this nation's right..."

The constitution of Iran gives the supreme leader sweeping powers, including the "delineation of the general policies of the Islamic Republic of Iran after consultation with the Nation's Exigency [Expediency] Council," and "supervision over the proper execution of the general policies of the system."¹⁵ The supreme leader is also the commander of the armed forces, has the power to declare war and peace, has the power to dismiss the president, and is the final arbiter in disputes before the Expediency Council, which decides disputes between the leader-appointed Guardians Council and the elected Majles or parliament.

Supreme National Security Council: According to Iran's constitution, the SNSC is concerned mainly with defense and national security policies. Its constitutional duties include:

- Determining the defense and national security policies within the framework of general policies determined by the Leader.
- Coordination of activities in the areas relating to politics, intelligence, social, cultural and economic fields in regard to general defence and security policies.
- Exploitation of materialistic and intellectual resources of the country for facing the internal and external threats.¹⁶

Membership of the SNSC also reflects its focus on defense and national security. It does not include the head of the AEOI, but rather the heads of the military branches, including the Islamic Revolutionary Guards Corps. It also includes the president, head of the judiciary, head of the legislature, chief of the Supreme Command Council of the Armed Forces, the head of the Management and Planning Organization, foreign minister, defense minister, interior minister, information minister, and two representatives of the supreme leader.

¹¹ *Nuclear Law Bulletin*, number 17, Nuclear Energy Agency, Organization for Economic Cooperation and Development, <http://www.nea.fr/html/law/nlb/NLB-17-EN.pdf>, p.11

¹² Jalal Bozorgmehr, *Iran* (Tehran), "Concealment in nuclear activities is not possible," 17 March 2003, translated in FBIS Document IAP20030318000075.

¹³ Laurent Lozano, "Iran speeds up nuclear programme despite world criticism," Agence France Presse, 14 August 2003.

¹⁴ Hassan Hanizadeh, "Saddam Should Be Tried in Iran; Hazareth Ayatollah Ali Khamenei Discusses U.S.-EURO Over Iran Nuke," 21 June 2004, <http://www.Khomeini.com> (accessed June 28, 2004); in Takeyh and Gvosdev.

¹⁵ Salam Iran, "Article 110," <http://www.salamiran.org/IranInfo/State/Constitution/articles/a110.html>, (accessed 16 February 2005).

¹⁶ NetIran, "The Constitution of Islamic Republic of Iran: Chapter XIII: Supreme Council for National Security," <http://www.netiran.com?fn=con13>, (accessed 16 February 2005).