

Iran

1. Location and capability of nuclear facilities

Iran's nuclear program commenced in the 1950s with the development plans of a large-scale nuclear power program. Progress on this program was continually stalled by political and security upheavals; the eight-year war with Iraq brought it to a screeching halt. Under Khomeini, Iran's nuclear program grew steadily on all fronts. Not all aspects of this program were disclosed to the IAEA, however. In December 2002, the US accused Iran of pursuing a nuclear weapons programme based on satellite images of nuclear reactor sites in Natanz (uranium enrichment plant) and Arak (heavy-water reactor).

While denying any plans for nuclear weapons, Iran admitted to having construction plans for two enrichment facilities, a heavy water production plant, and a fuel fabrication plant, as well as having undertaken research into conversion and enrichment activities. In August 2003, Iran began testing a ten-machine cascade at the Pilot Fuel Enrichment Plant at Natanz with uranium hexafluoride.

Concerns over Iran's nuclear program mounted, and Iran agreed to sign (but not ratify) the IAEA Additional Protocol on 18 December 2003. It began implementing the Protocol anyway, but stopped implementation when its case was referred to the Security Council.

The primary concern is over enrichment, which Iran posits is necessary for full energy independence and mastery of the fuel cycle, and skeptics argue would enable Iran to develop weapons if it so chose. In 2004, Iran heeded the IAEA's call to halt uranium enrichment and engage in talks with the EU. In March Iran offered a comprehensive package with minimal enrichment capabilities and intrusive inspections, which the EU rejected. In August 2005, Iranian President Ahmadinejad rejected a European package that included a civilian nuclear programme but no uranium enrichment and pledged an "irreversible resumption of enrichment."

The Board of the International Atomic Energy Agency debated the issue for nearly a year, and eventually referred Iran to the Security Council. In July 2006, the Security Council passed Resolution 1696, demanding Iran suspend all enrichment and reprocessing activities by August 31 or face economic and diplomatic sanctions. When Iran did not comply, the Security Council passed Resolution 1737 on 23 December 2006, imposing sanctions on Iran. Iran vowed to continue its nuclear programme, insisting it is only developing nuclear energy and calling the sanctions illegal and immoral. In February 2007, the IAEA reported that Iran is continuing with its uranium enrichment. On 24 March 2007, the Security Council unanimously passed Resolution 1747 elaborating further sanctions.

<http://www.fas.org/sgp/crs/nuke/RS21592.pdf>; <http://www.reachingcriticalwill.org/legal/iran.html>;

http://www.nti.org/e_research/profiles/Iran/1819_1822.html

Power Reactors

Operational: 0

Under Construction: 1

<http://www.iaea.or.at/programmes/a2/>

http://www.nti.org/e_research/profiles/Iran/index.html

Research Reactors

Operational: 5

Shut down: 0

Planned: 0

<http://www.iaea.or.at/worldatom/rddb/>

Fuel Fabrication

Natanz- uranium enrichment facilities

Parchin- suspected uranium enrichment facilities

Lavisan- suspected nuclear program facilities

Arak- heavy water production

Darkhovin- suspected underground nuclear weapons facility of unspecified nature

Esfahan- research center (Nuclear Technology/Research Center), University of Esfahan, research reactors, suspected hexafluoride plant, missile production facilities

<http://www.fas.org/nuke/guide/iran/facility/index.html>

Uranium Enrichment

In February 2007, the IAEA reported that Iran was operating or about to switch on 1000 centrifuges at its facility in Natanz. <http://www.spiegel.de/international/0,1518,468275,00.html>

Uranium Mines

Saghand, Yazd province - under development

Gchine, Bandar Abbas - under consideration

<http://www.wise-uranium.org/uoasi.html#IR>

2. Fissile Material Holdings

Highly Enriched Uranium end of 2003: 0.007 tons

Supplied by: US, China

http://www.isis-online.org/global_stocks/end2003/civil_heu_watch2005.pdf

Radioactive waste disposal

The Atomic Energy Organization of Iran (AEOI) is responsible for waste management and disposal.

Waste disposal facilities include Anarak, Esfahan, and Qom.

http://www-pub.iaea.org/MTCD/publications/PDF/cnpp2003/CNPP_Webpage/countryprofiles/Iran/Iran2003.htm

3. Nuclear Activities

Research Centers

Amirkabir University of Technology

Atomic Energy Organisation of Iran (AEOI)

Bouali-Sina University

Guilan University

Esfahan University

Iranian Nuclear Regulatory Authority (INRA)

Khajch-Nasi-Toosi University of Technology

National Nuclear Safety Department (NNSD)

Shiraz University and Shiraz University of Medical Sciences

Tehran University - Tehran Nuclear Research Center (TNRC)

University of Mashhad

Iran University of Science and Technology

<http://www-pub.iaea.org/MTCD/publications/PDF/cnpp2002/index.htm>

Nuclear Cooperation

US: 1974 contract for construction of nuclear plants and supply of nuclear fuel.

Germany: 1976 contract for construction of nuclear plants and supply of nuclear fuel.

France: 1976 purchase of Tricastin uranium enrichment plant, operated by European consortium; 1977 contract for construction of nuclear plants and supply of nuclear fuel.

Namibia: 1976 purchase of RTZ uranium mine in Rossing.

South Africa: 1976 contract for the purchase of uranium yellowcake and technical training; agreement in 1988-89 for the provision of large quantities of yellow cake remains in dispute; European officials claim the deal went through; South Africa insists it had cancelled the deal.

Pakistan: 1987 agreement for long-term nuclear cooperation and technical training.

Argentina: A 1987 agreement from Argentina's Applied Research Institute to provide Iran with a pilot-scale mill- later cancelled in 1992 by Argentine President Carlos Menem; uranium enrichment and heavy water production facilities agreement was blocked by the US.

China: 1990 agreement for long-term nuclear cooperation, including technical training, provision of a 27KW miniature neutron source reactor and two 300MW Qinshan power reactors; later, Iran and China were in negotiations for a plutonium-producing research reactor, two power reactors and a uranium

conversion plant; the agreement was blocked by the US; in 1997, China's Beijing Research Institute of Uranium Geology aided Iran with uranium exploration; in February 2003, Iran admitted to having imported from China 1.8 tons of nuclear material used to manufacture uranium metal.

Germany: In 1991, Germany's Leybold sold Iran a vacuum arc furnace for fuel fabrication.

UK: The UK firms Air Products, British Nuclear Fuels, Fisons, and Leeds & Northrup allegedly sold Iran fluorine gas.

Russia: 1995 agreement to complete construction of Bushehr reactors as well as three additional reactors at the site. In February 2007, Russia announced it is delaying starting up Iran's first nuclear power plant because Tehran is behind with payments - which Iran denies.

http://www.nti.org/e_research/profiles/Iran/1819_1822.html; <http://cns.miis.edu/research/wmdme/flow/iran/mining.htm>;

<http://cns.miis.edu/research/wmdme/flow/iran/fuelf.htm>; <http://cns.miis.edu/research/wmdme/flow/iran/milling.htm>

4. International Non-proliferation Efforts

Treaties Signed and Ratified, date of deposit

Biological and Toxin Weapons Convention, 22 August 1973

Comprehensive nuclear Test-Ban Treaty, signed 24 September 1996 (not yet ratified)

Nuclear Non-Proliferation Treaty, 5 March 1970

Outer Space Treaty, signed 27 January 1967 (not yet ratified)

Seabed Treaty, 11 February 1971

Iran signed the Additional Protocol on 18 December 2003 but has not yet ratified.

Multilateral Groups

Conference on Disarmament

5. Positions Taken in International Fora on Various Issues of Nuclear Disarmament

Iran's nuclear programme: "All States Parties to the NPT, without discrimination, have an inalienable right to produce nuclear energy for peaceful purposes. As this right is 'inalienable', it cannot be undermined or curtailed under any pretext. Any attempt to do so would be an attempt to undermine a pillar of the treaty and indeed the treaty itself. Iran, like any other non-nuclear weapon state, has no obligation to negotiate and seek agreement for the exercise of its inalienable right, nor can it be obligated to suspend it. . . . Iran did suspend its enrichment activities precisely for the sake of confidence-building. The question remains, though, how does one measure confidence and where is the limit of confidence-building? Is confidence building a pretext for depriving Iran of its inalienable right under the NPT?"

- **Statement by Ambassador Moaiyeri to the Conference on Disarmament, 24 January 2007.**

http://www.reachingcriticalwill.org/political/cd/speeches07/1session/Jan24Iran_rightofreply.pdf

"Over seventeen hundred man/days of the most robust and intrusive inspections by the IAEA have not proven anything contrary to our initial statement that Iran's nuclear program is peaceful and has never diverted towards prohibited activities. The fact that during all these years of research there has been no diversion of nuclear material towards prohibited activities is by itself a proof of Iran's peaceful intentions. In the course of the past three years, the Islamic Republic of Iran, through voluntary implementation of the Additional Protocol and its suspension of all enrichment related activities took step far beyond its contractual obligations in order to help build confidence. Any additional legal obligation therefore has to be negotiated by the member states and adopted as new additional safeguards measures. Iran observed a voluntary suspension of uranium enrichment and related activities for three years while reiterating that "permanent cessation" of a peaceful nuclear program, which is totally legitimate and permissible under the NPT and carried out under the comprehensive safeguards of the IAEA, abrogates its inalienable right under the Treaty and therefore does not constitute a realistic prescription." - **Statement by Foreign Minister Manouchehr Mottaki to the Conference on Disarmament,**

Geneva, 30 March 2006. <http://www.reachingcriticalwill.org/political/cd/speeches06/30MarchIran.html>

Nuclear Disarmament: "The threat posed by the accumulation of estimated 27,000 nuclear weapons, in nuclear weapon states, remains a grave worldwide concern. The lack of progress towards nuclear disarmament and the failure of certain nuclear weapon states to fulfil their obligations on total elimination of their nuclear arsenals as well as their new military doctrines based on the threat of nuclear weapons continue to be a source of threat for the international community." - **Statement by Mr. Reza Najafi to the 61st Session of the General Assembly First Committee on Disarmament and International Security, 9 October 2006.** <http://www.reachingcriticalwill.org/political/1com/1com06/statements/Iranoct9.pdf>

NPT: "Despite the difficulties that the non-proliferation regime has historically faced, we can generally assess that the NPT has been successful in containing the number of nuclear weapon states. Without the NPT, there would have certainly been more nuclear weapons in the hand of more countries in the world. This in turn would have put our planet at greater risk of more insecurity and instability." - **Statement by Kamal Kharrazi , Minister of Foreign Affairs, to the Seventh Review Conference of the NPT, 3 May 2005.** <http://www.un.org/events/npt2005/statements/npt03iran.pdf>