

1. Location and capability of nuclear facilities

Sweden's ten nuclear power reactors provide approximately 50% of its electricity. Its first nuclear reactor began operating in 1972. In the 1970s, the Centre Party started the anti-nuclear debate, which culminated in a 1980 referendum canvassing three options for phasing out nuclear energy. However, in February 2005, the Centre Party reversed its position, saying that climate change must be put ahead of nuclear decommissioning. <http://www.uic.com.au/nip39.htm>; http://www-pub.iaea.org/MTCD/publications/PDF/cnpp2003/CNPP_Webpage/countryprofiles/Sweden/Sweden2003.htm

Power Reactors

Operational: 10
Shut down: 3
Decommissioned: 0
Planned: 0

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

Research Reactors

Operational: 0
Shut down: 3
Decommissioned: 1
Planned: 0

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

Uranium Mines

Ranstad - decommissioned (flooded)

At this time, uranium mining is banned in Sweden, and there hasn't been any uranium drilling since 1985. Exploration has been halted at the following mines: Skuppesavon, Pleutajokk, Kvarnån, Björkråmyran, Lilljuthatten, Nöjdfjället, Kläppibäcken, Tåsjö, Sågtjärn, Duobblon. Uranium exploration in Sweden is conducted primarily by two Canadian-based companies.

<http://www.stockinterview.com/News/07172006/Sweden.html>; <http://www.wise-uranium.org/uoeur.html#SE>

2. Fissile Material Holdings

Separated Civil Plutonium end 2003

In country: 0
In other countries: 0.83 tons
Total: 0.83 tons
Projected 2010-2020: 0

Highly Enriched Uranium end 2003

In country: 0.002 tons
Supplied by: US

Sweden intends to use civil MOX.

http://www.isis-online.org/global_stocks/end2003/plutonium_watch2005.pdf

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

Radioactive waste disposal

Low-level waste: Sweden has a centralized spent fuel storage near Oskarshamn, and will encapsulate spent fuel there for geological disposal by 2015. An underground repository for low- and intermediate-level waste has been operating near the Forsmark nuclear power plant since 1988. This repository consists of four rock caverns for different types of wastes.

Intermediate-level waste: The Forsmark plant has an underground rock silo for the most active components of intermediate-level waste. Spent fuel is shipped by sea to the interim store situated by the reactor site at Oskarshamn.

High-level waste: The CLAB interim repository for spent fuel handles high-level waste. Investigations for a final repository are ongoing. The locations in consideration are Östhammar or Oskarshamn, and a repository should be operational by the year 2015.

http://www.enviros.com/vrepository/not_subscribed/country/sweden/index.cfm

<http://www.world-nuclear.org/info/inf42.html>

3. Nuclear Activities

Research Centers

Äspö Hard Rock Facility
Äspö Modelling Task Force
KTH Dept of Nuclear Power Safety
NFL - Neutronforskningslaboratoriet i Studsvik
NUTEK - National Board for Industrial & Technical Development
Resursförmedlingen Norden
SLU Department of Radioecology
SKC - Svenskt kärntekniskt centrum / Swedish Centre for Nuclear Technology
TFR - Teknikvetenskapliga forskningsrådet
Uppsala University
<http://www.radwaste.org/research.htm>

Nuclear Cooperation

The Swedish Nuclear Fuel and Waste Management Company (SKB) has a broad network of international contacts and is party to formal collaboration agreements with the following organizations:

EU: Euratom
Finland: Teollisuuden Voima, Imatran Voima
France: Commissariat à l'Énergie Atomique (CEA), Agence Nationale pour la Gestion des Déchets Radioactifs (ANDRA)
Japan: Japan Nuclear Fuel Limited (JNFL)
Canada: Atomic Energy of Canada Limited (AECL)
Switzerland: Nagra
USA: US Department of Energy (DoE)

The following have signed participation agreements in the Äspö Hard Rock Laboratory project:

Canada: Atomic Energy of Canada, Limited (AECL)
Japan: Power Reactor & Nuclear Fuel Development Corporation (PNC) and Central Research Institute of Electric Power Industry (CRIEPI),
France: Agence Nationale pour la Gestion des Déchets Radioactifs (ANDRA)
Finland: Teollisuuden Voima (TVO)
UK: Nirex
Switzerland: Nagra
http://www-pub.iaea.org/MTCD/publications/PDF/cnpp2003/CNPP_Webpage/countryprofiles/Sweden/Sweden2003.htm

Russia: Sweden has been cooperating with Russia since 1992 to improve safety at Russian nuclear power plants. Cooperation includes programs on nuclear reactor safety, nuclear waste management, radiation protection, and nonproliferation.

<http://www.nti.org/db/nisprofs/russia/forasst/intnatl/sweden.htm>

Sweden is also part of the Contact Expert Group established in 1995 to enhance safety of waste management in Russia and to promote international cooperative efforts aimed at resolving radioactive waste management issues. <http://www.uic.com.au/nip12.htm>

4. International Non-proliferation Efforts

Treaties Signed and Ratified, date of deposit

Antarctic Treaty, 24 April 1984
APM Convention, 30 November 1998
Biological Weapons Convention, 5 February 1976
Certain Conventional Weapons Convention, 7 July 1982

Chemical Weapons Convention, 17 June 1993
Comprehensive Nuclear Test-Ban Treaty, 2 December 1998
Convention on the Physical Protection of Nuclear Materials, 1 August 1980
Nuclear Non-Proliferation Treaty, 9 January 1970
Open Skies Treaty, 28 June 2002
Outer Space Treaty, 11 October 1967
Sea Bed Treaty, 28 April 1972

Sweden ratified the IAEA Additional Protocol on 30 April 2004.

Multilateral Groups

Australia Group
Conference on Disarmament
Hague Code of Conduct against Ballistic Missile Proliferation
Missile Technology Control Regime
Nuclear Suppliers Group
Wassenaar Arrangement
Zangger Committee

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

NWFZ in the Middle East: " We would like to see the commencement of a process that would lead to the establishment of a zone free from nuclear, biological and chemical weapons in the Middle East. We believe that such a process needs to be started in parallel to the Middle East peace process. As we know from other regions of conflict and tension in the world, weapons issues and political issues have to be addressed simultaneously so as the two processes can feed into one another." - **Statement by Dr. Annika Thunborg to the Conference on Disarmament, Geneva, 2 March 2006.**
<http://www.reachingcriticalwill.org/political/cd/speeches06/2MarchSweden.html>

Nuclear Disarmament and Non-Proliferation: "Again, nuclear weapons can do nothing to counter proliferation. Actually it might very well work the other way, and we must be wary of the impact which the nuclear choices of some have on the security decisions of others. If development of nuclear weapons continue some may become inclined to disregard calls to forgo the possibility of building up their own nuclear arsenals or at least to be less supportive of non-proliferation efforts. We have recently experienced the strain this has put on the NPT. In a regional context possession itself triggers weapon decisions in neighbouring countries leading to increased regional and global tensions." - **Statement by Ambassador Elisabet Borsiin Bonnier to the Conference on Disarmament, 28 February 2006.**
<http://www.reachingcriticalwill.org/political/cd/speeches06/28FebSweden.pdf>

De-Alerting: "The United States and Russia keep their Cold War nuclear postures practically intact. This means that many nuclear weapons are still on "hair trigger alert". We call on the two states as well as other Nuclear Weapon States to "de-alert", that is to reduce the operational status of nuclear weapons systems. Through such measures, the risk of a nuclear war by mistake or accident would be significantly reduced. The example of the United Kingdom, which has taken all its nuclear weapons off high-alert, should be followed by the other Nuclear Weapon States. As a start, Nuclear Weapon States should increase transparency about present operational status and plans towards de-alerting."
- **Statement by H.E. Ms. Laila Freivalds, Minister of Foreign Affairs, to the Seventh Review Conference of the NPT, 3 May 2005.** <http://www.un.org/events/npt2005/statements/npt03sweden.pdf>