

# Finland

## 1. Location and capability of nuclear facilities

About 27% of the total electricity supply in Finland is produced by its four nuclear power reactors. The Loviisa Power Plant units are owned by Fortum Power and Heat Oy (Fortum) and started commercial operation in 1981. The Olkiluoto Power Plant units are owned by Teollisuuden Voima Oy (TVO) and started commercial operation in 1979 and 1982. The Loviisa power plant has two Russian (Soviet) VVER (PWR) reactors and the Olkiluoto power plant has two Swedish BWRs reactors.

In 2002, the Finnish government approved expanding the power production capacities of the Loviisa and Olkiluoto plants.

Finland is the only Nordic country that has decided to develop nuclear power. The country's fifth nuclear power station is under construction now and will be operative in 2011. A small percentage of people believe Finland should build a sixth nuclear power plant. Finland's President Tarja Halonen however takes a stand on this issue. Halonen does not support the idea of building a sixth nuclear power plant in Finland, he does not consider nuclear power a permanent solution for the climate problem.

<http://www.norden.org/webb/news/news.asp?id=6762&lang=6>

### **Power Reactors**

Operational: 4

Shut down: 0

Decommissioned: 0

Under Construction: 1

Planned: 0

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

<http://www.uic.com.au/nip76.htm>

### **Research Reactors**

Operational: 1

Shut down: 0

Decommissioned: 1

Under Construction: 0

Planned: 0

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

### **Uranium Enrichment and Reprocessing:**

Finland stopped sending spent nuclear fuel to Russia for reprocessing in 1996. Finland has bought uranium from Canada, Australia and Africa, had it converted to UF<sub>6</sub> in Canada and France, and enriched it in Russia. Fuel fabrication has taken place in Germany, Sweden and Spain.

<http://www.ocrwm.doe.gov/factsheets/doeymp0410.shtml>; <http://www.uic.com.au/nip76.htm>; <http://www.uic.com.au/nip76.htm>

[http://www.bellona.no/en/international/russia/nuke\\_industry/waste\\_imports/22414.html](http://www.bellona.no/en/international/russia/nuke_industry/waste_imports/22414.html)

### **Uranium Mines**

Palmottu

Kesänkitunturi

Pahtavuoma-U

Vihanti-U

Nuottijärvi

Paukkajanvaara (restored)

<http://www.wise-uranium.org/uddeur.html#FI>

<http://www.wise-uranium.org/uoeur.html#FI>

## 2. Fissile Material Holdings

**Unseparated Civil Plutonium-** 11 tons (end of 2003)

[http://www.isis-online.org/global\\_stocks/end2003/plutonium\\_watch2005.pdf](http://www.isis-online.org/global_stocks/end2003/plutonium_watch2005.pdf)

### **Radioactive waste disposal**

*Low- and intermediate- level waste:* In Finland, low- and intermediate-level waste is disposed of in excavated repositories, constructed at both the Olkiluoto and Loviisa site. At Olkiluoto, this kind of

disposal facility has been in use since 1992. At Loviisa, the repository was commissioned in 1998.

[http://www.stuk.fi/ydinturvallisuus/ydinjatteen/ydinjate/en\\_GB/ydinjate/](http://www.stuk.fi/ydinturvallisuus/ydinjatteen/ydinjate/en_GB/ydinjate/)

*High-level waste:* Finland was one of the first countries to begin constructing an underground repository for high-level waste in 2001. Construction of the actual repository will start in 2010 and last for approximately ten years. The Finnish waste-disposal company Posiva Oy will research possible sites.

<http://www.yuccamountain.org/international.htm>

### 3. Nuclear Activities

#### Research Centers

FEI - Finnish Environment Institute

HUT - Helsinki University of Technology

VTT - Valtion Teknillinen Tutkimuskeskus

<http://www.radwaste.org/research.htm>

#### Nuclear Cooperation

*Russia:* In the context of the Finnish Bilateral Co-operation Programme with Neighboring Areas in North-West Russia and the Baltic countries, Finland started an assistance program with the Kola and Leningrad nuclear power plants in 1992, in order to improve their safety.

Finland and Russia were also involved in the Agreement for Co-operation in Peaceful Uses of Nuclear Energy which was established in late 1999 but extended until 2004. Negotiations on a new agreement have been underway since 2005. <http://www.ktm.fi/index.phtml?l=en&s=453>

*Eastern Europe:* Finland also took part in an evaluation report (1992-96) on RBMK reactors (old reactors of Soviet design) under an EU initiative to develop nuclear safety programs directed at Central European and former Soviet Union states.

*China:* Outside of Europe however, Finland's main partner in cooperation on energy and environment is China.

*France:* On Oct. 10, 2006, the Finnish government granted permission to the French nuclear group, Areva, for the prospect of uranium mining in Eno and Kontiolahti in eastern Finland. The grant did not cover test mining or test milling. Around 200 protesters, organized by the civic movement Uraaniton ("Uranium-Free") protested the deal in Helsinki. In 2007, the second request from Areva was denied from the Finnish Government. <http://www.wise-uranium.org/upeur.html>

*EU:* In 2006, Finland participated in the energy-related work of the Council of the Baltic Sea States and Barents Council. Finland also supported the strengthening of the EU's Northern Dimension in the energy sector. <http://www.ktm.fi/index.phtml?l=en&s=415>

*IAEA:* Finnish experts have also taken part in IAEA initiatives to support and cooperate with the nuclear safety authorities of member countries in Central and Eastern Europe since 1992.

[http://www.stuk.fi/english/npp/int\\_coop.html](http://www.stuk.fi/english/npp/int_coop.html)

### 4. International Non-proliferation Efforts

#### Treaties Signed and Ratified, date of deposit

Antarctic Treaty, 15 May 1984

Biological and Toxin Weapons Convention, 4 February 1974

Certain Conventional Weapons Convention, 8 May 1982

Chemical Weapons Convention, 7 February 1995

Comprehensive Nuclear Test Ban Treaty, 15 January 1999  
Convention on the Physical Protection of Nuclear Material, 22 September 1989  
Nuclear Non-Proliferation Treaty, 5 February 1969  
Outer Space Treaty, 12 July 1967  
Seabed treaty, 8 June 1971

Finland ratified the IAEA Additional Protocol 30 April 2004.

#### **Multilateral Groups**

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

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

*Nuclear Disarmament:* "The 1991-92 US-Russian Presidential declarations created a basis for unilateral reductions of the holdings of tactical weapons. The commitments and useful information given later strengthened the positive expectations of the fulfillment of these declarations. We deplore that those commitments have not been fully realised. Finland regrets that the development in dismantling the tactical nuclear weapons contradicts the declared goals. Those parties, which have specific obligations, have also their special responsibility to increase the openness on the matter of a confidence building measure." - **Statement by H.E. Markku Relmaa to the Seventh Review Conference of the NPT, 19 May 2005.** <http://www.reachingcriticalwill.org/legal/npt/RevCon05/MCI/Finland.pdf>

*Proliferation:* "We see it important that this session of the General Assembly will mark progress in the areas of disarmament and non-proliferation... Effective multilateralism is crucial in facing the growing threat of the proliferation of weapons of mass destruction. The Security Council has a central role in addressing those threats." - **Statement by President Tarja Halonen on behalf of the European Union to the 61st Session of the General Assembly, New York, 19 September 2006.** <http://www.reachingcriticalwill.org/political/1com/1com06/disarminindex06.html#finland>

*New nuclear weapons:* "However, we must also recognise that the long term success of our present and future efforts to strengthen the non-proliferation regime will also depend on the willingness of the nuclear weapon states to refrain from developing new kinds of nuclear arms to reduce their own stockpiles of nuclear weapons and their reliance on them in their military doctrines." - **Statement by H.E. Mr. Erkki Tuomioja to the Conference on Disarmament, 15 March 2005.** <http://www.reachingcriticalwill.org/political/cd/speeches05/Mar15Finland.pdf>

*Conference on Disarmament:* "There is a danger that this conference [CD] will sink into irrelevance that states will increasingly turn toward other ways and means of negotiating international disarmament commitments than this conference. That, I believe, is in nobody's true interest. The conference can yet redeem itself by engaging, finally and in earnest, in the FMCT negotiations, for which it is by far the most natural forum thanks to its composition and expertise." - **Statement by H.E. Mr. Erkki Tuomioja to the Conference on Disarmament, 15 March 2005.** <http://www.reachingcriticalwill.org/political/cd/speeches05/Mar15Finland.pdf>