

Fortum's Annual Report 2014

Fortum is an energy company highly committed to sustainability. We strive to respond to the needs of our customers by generating, selling and distributing low-carbon electricity and heat and by offering energy-sector expert services.

Responsible fuel purchasing

Fuels represent a significant purchasing category at Fortum, EUR 782 (2013: 944) million in 2014. The share of fuels is also significant in the joint venture Fortum Värme's purchases, EUR 101 (2013: 144) million in 2014. In purchasing, special attention is paid to the origin and responsible, production of the fuels.

Natural gas

The natural gas used in our operations in Russia, the Baltic countries and Finland originated from several suppliers in Russia. The natural gas used in Poland was purchased mainly from Poland.

The gas used by the joint venture Fortum Värme's subsidiary Stockholm Gas in Sweden originated from Norway.

Coal

The coal used in Finland originated from Russia. The coal used in Poland originated mainly from Poland. The Russian power plants used coal from Russia and Kazakhstan.

The coal used by the joint venture Fortum Värme in Sweden was from Russia.

In Finland, we have a legal obligation to have an amount of fuels in reserve equivalent to three months of average electricity production. There are no similar legal obligations in other countries, but we do maintain sufficient reserves for uninterrupted energy production in all countries where we operate. The crisis in Ukraine and the sanctions imposed by the EU and the USA have increased the risks related to fossil fuels. Coal of a quality suitable for our combustion plants is produced also outside of Russia. We are monitoring the situation, and we are prepared to change our ways of operating if the situation so requires.

Fortum is a member of the [Bettercoal initiative](#), and uses the Bettercoal Code and

tools in assessing the sustainability of the coal supply chain. In 2014, a total of 14 coal suppliers, one of which supplies coal also to Fortum, conducted a self-assessment in line with the Bettercoal initiative, and one mine was audited. At the end of the year, approval of the self-assessment and audit process of Fortum's biggest coal supplier was still in the works. Fortum aims to continue with Bettercoal-based self-assessments in 2015 in Poland and Russia. The goal in both countries is to complete a self-assessment of at least one supplier.

Biomass and other biofuels

The majority of the biomass we used consisted of wood pellets, wood chips and industrial wood residues that originated from Finland, Poland and Lithuania.

We have recognised the challenges related to the origin of biomass and other biofuels, and we are developing measures to verify the traceability and sustainability of the fuels. In 2013, a verification system was established for the bio-oil production in the bio-oil plant integrated with Fortum's Joensuu power plant. The system has been in use since the start-up of production. The verification system is used to prove compliance with nationally legislated sustainability criteria for bio-oil. The Finnish Energy Authority approved the verification system in late 2014. We will further develop the verification system after the approval.

In Sweden, the joint venture Fortum Värme purchased biomass and bio-oil from Sweden, Finland, Russia, Brazil and Malaysia, among others. Fortum Värme is a participant in the WWF Global Forest & Trade Network (GFTN) through GFTN Sweden and became a member of the Forest Stewardship Council (FSC) in 2012. Additionally, Fortum Värme has been a member of the Roundtable of Sustainable Palm Oil (RSPO) since 2005.

Fortum Värme became a member of the Roundtable of Responsible Soy organisation in 2014.

Uranium

The fuel assemblies used at Loviisa's power plant are completely of Russian origin. The fuel supplier acquires the uranium used in the fuel assemblies from Russian mines in accordance with Fortum's agreement. The mines in operation in November 2014 were the Krasnokamensk, Khiagda and Dalur mines.

Both ARMZ Uranium Holding Co., a uranium producer, and TVEL, which is responsible for refining and manufacturing uranium, have environmental and occupational safety systems in place in all their plants. The Dalur uranium mine has ISO 14001 environmental certification, and the Krasnokamensk mine (JSC PIMCU) is aiming to certify its management systems for quality, environment, and occupational health and safety by the end of 2015. The zirconium material manufacturing plant and the plant responsible for manufacturing uranium oxide pellets and fuel assemblies have ISO 14001 environmental management system certification and OHSAS 18001 occupational health and safety management system certifications.

We regularly assess the quality, environmental, and occupational health and safety management systems of our nuclear fuel suppliers and the manufacturing of nuclear fuel assemblies. In summer 2014, Fortum's experts reviewed the fuel supplier's conversion and enrichment facility operations in Russia.

Read more: [Supplier assessment](#)

Origin of fuels used at Fortum in 2014¹⁾

| Fuel | Country of origin |
|-------------|----------------------------|
| Biomass | Finland, Poland, Lithuania |
| Coal | Russia, Poland, Kazakhstan |
| Natural gas | Russia |
| Uranium | Russia |
| Oil | Russia |
| Peat | Finland, Estonia |

1) The biggest countries of origin based on the purchasing volumes in 2014