

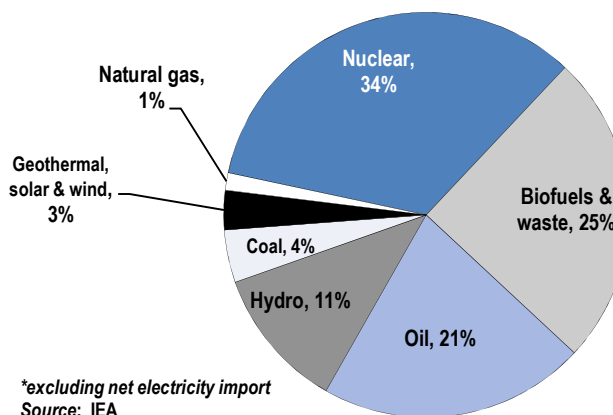
## Sweden

The OECD Inventory of Support Measures for Fossil Fuels identifies, documents and estimates direct budgetary support and tax expenditures supporting the production or consumption of fossil fuels in OECD countries and partner economies (Argentina, Brazil, the People's Republic of China, Colombia, India, Indonesia, the Russian Federation, and South Africa).

### Energy resources and market structure

Sweden has minimal fossil-energy resources and relies on imported oil and natural gas. At the same time, the country possesses important supplies of renewable energy, mainly in the form of biomass and hydropower. Non-fossil energy sources, including nuclear power, contribute two-thirds of supply, the highest share of any OECD country after Iceland, making electricity generation almost CO<sub>2</sub>-free. Energy intensity — measured as the amount of energy consumed per unit of GDP — is relatively high due to the presence of a large energy-intensive industry sector, the country's climate, and its sparse population.

Total Primary Energy Supply\* in 2017



The Swedish oil market, although fully open to competition, is dominated by the Saudi-owned company, Preem, which owns two of the country's five refineries. By comparison, the natural gas market is characterized by a small number of companies covering both the wholesale and retail market with the country's gas supply entirely imported from Denmark through a single pipeline. The private company Swedegas AB is the Transmission System Operator (TSO) which owns and operates the transmission grid and the only existing storage facility in Sweden.

Sweden takes a free-market approach to energy policy, which puts an emphasis on competition in ensuring efficient energy supply within a policy framework that aims to encourage renewable-energy sources. The country also participates in the first cross-border electricity market in Europe, the Nord Pool. Vattenfall (state-owned), Fortum (majority-owned by the Finnish State), and Uniper (47% owned by Fortum) generate most of the power in Sweden while Vattenfall Eldistribution AB (state-owned), Ellevio AB and E.ON Energidistribution AB account for most of the distribution assets and retail sales. Following liberalisation in the 1990s, more than half of electricity consumers have switched suppliers, a rate well above the average for the rest of the European Union.

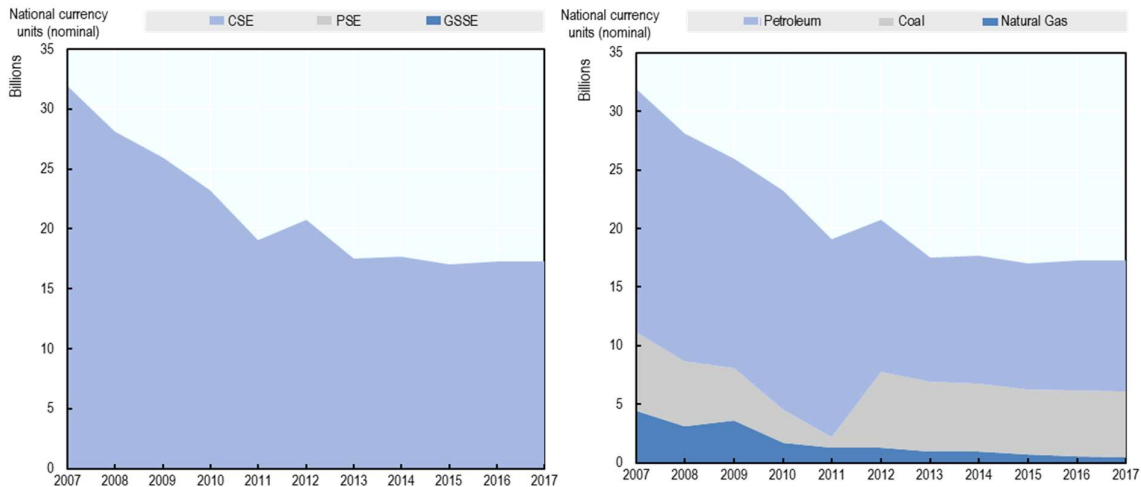
Owing to its temperate climate, district heating forms a significant part of the energy market in Sweden. The sector has experienced a vigorous shift towards low-carbon fuels in the last decade. Provisional figures in 2017 indicate that biofuels and wastes accounted for 84% of the total district heating production in the country.

### Energy prices and taxes

All energy prices are freely determined by the market in Sweden, except for electricity and gas network tariffs, which are regulated ex-ante by the Energy Markets Inspectorate (EI). Those controls set the maximum amount of revenue that energy-network owners can collect through charges they levy on users of their networks. The tariffs for gas are subject to ex-ante approval of rate-setting methodology in order to ensure the tariffs are objective and non-discriminatory.

Energy products maybe subject to energy, CO<sub>2</sub> and sulphur taxes. Rates of tax vary by fuel and according to whether the fuel is used for heating or in transport; whether by manufacturing industry, energy industry or households; and, in the case of electricity, for what purpose the electricity is used and whether the use occurs in the northern parts of the country. Specific cases exist for exemptions from the full rates of these taxes. There is also a levy on NO<sub>x</sub> emissions.

### Total support for fossil fuels in Sweden by support indicator (left) and fuel type (right)



Note: CSE=Consumer Support Estimate; PSE=Producer Support Estimate; GSSE=General Services Support Estimate.

### Recent developments and trends in support

The Swedish government has put substantial effort into phasing out fossil-fuel support throughout the last decade. The most significant support measure is the Reduced energy tax rate for diesel used in motor vehicles, with revenue forgone estimates for this measure registering an average annual decline of 20% from 2007 to 2017. In a similar development, the CO<sub>2</sub> tax rate reduction for diesel used as fuel for machinery in agriculture and forestry has been decreasing over time — from 77% when the scheme was first implemented, then 79% in 2010, down to 70% in 2011. In 2017, the reduction corresponds to 53% of the general CO<sub>2</sub> tax rate. The CO<sub>2</sub> tax exemptions for shipping have recently seen a similar decline, while exemptions for domestic aviation and rate reductions for greenhouses and agriculture have altogether been phased-out. Given the lack of oil and natural gas production in Sweden, the beneficiaries of all support measures recorded are intermediate and final consumers.

#### Examples of measures

##### Reduced Energy-Tax Rate on Diesel for the Mining Industry (2010-)

Since 2010, the mining industry has been granted an 84% energy-tax reduction on diesel used for fuelling stationary machinery. In 2013, the Swedish parliament decided to increase the reduction rate to 86%. From 2016, the reduction rate is set to 89%.

##### Reduced CO<sub>2</sub>-Tax Rate for Industrial Consumers outside the EU ETS (2000-2017)

Industries outside the EU ETS are granted a reduction of the CO<sub>2</sub>-tax rate on all fossil fuels used for heating purposes. The benchmark against which this tax expenditure is calculated is the standard CO<sub>2</sub>-tax rate of SEK 1.13 per kg of CO<sub>2</sub> in 2017 and is adjusted annually following the consumer price index. In 2015, the Swedish parliament decided to progressively lower the reduction, from 40% to 20% in 2016 until 2018, when the reductions ceased and became identical with the general rate.