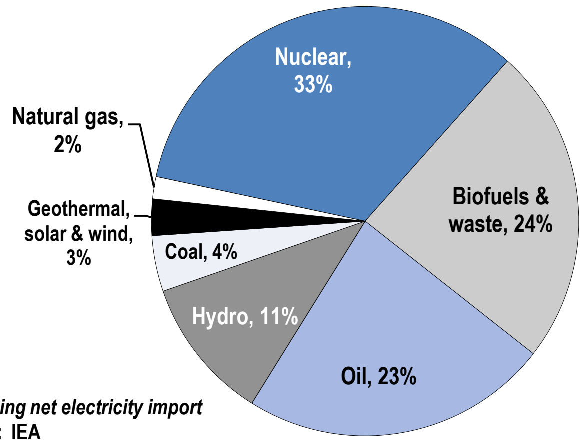
Sweden

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 eight large 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 heavily 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 together contribute two-thirds of supply, the highest share of any OECD country after Iceland, making electricity generation almost CO_2-free. Still, energy intensity — measured as the amount of energy consumed per unit of GDP — is remarkably high due to the large energy requirements of heavy industry, the country's cold temperatures, and its sparse population.

Total Primary Energy Supply* in 2016



**excluding net electricity import*
Source: IEA

The Swedish oil market, although fully open to competition, is dominated by the Saudi-owned company, Preem, which owns two of the five country's refineries. By comparison, the natural gas market is characterized by a small number of companies covering both the wholesale and retail market, and most gas is supplied under long-term contracts. Currently two entities are performing the Transmission System Operator (TSO) function in Sweden: the state-owned utility Svenska Kraftnät is assigned as system balancing administrator for gas, and Swedegas AB is the owner and operator of the transmission grid and of the only existing storage facility in Sweden.

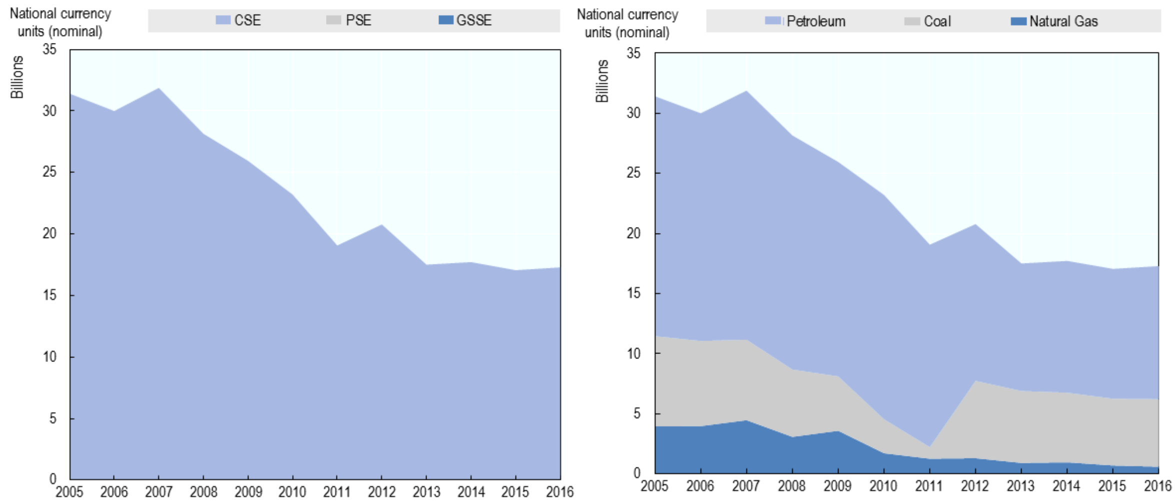
Sweden takes a free-market approach to energy policy, which puts an emphasis on competition in ensuring efficient energy supply within a policy framework that aims to encourage renewable-energy sources. The country also participates in the first cross-border electricity market in Europe, the Nord Pool. Three companies — Vattenfall (state-owned), Fortum (majority-owned by the Finnish State), and Uniper — generate the overwhelming bulk of power in Sweden, own most of the distribution assets, and account for around half of retail sales. Following the liberalization 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.

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 are subject to an energy tax, a CO_2 tax and a sulphur tax. There is also a levy on NO_X emissions. Rates of tax vary by fuel and according to whether the fuel is being used for heating or in transport; whether by manufacturing industry, energy industry or households; and, in the case of

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



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

electricity, for what it is being used and whether it is being used in the north or elsewhere in the country There are also exemptions from these rates.

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, which estimates of revenue forgone declined some 30% since 2006. Also the CO_2 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, through 79% in 2010, to 70% in 2011. In 2016, the reduction corresponds to 53% of the general CO_2 tax rate. The CO_2 tax exemptions for shipping have recently seen a similar decline, while the exemptions for domestic aviation and the rate reductions for greenhouses and agriculture have 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_2-Tax Rate for Industrial Consumers outside the EU ETS (2000-)	Industries outside the EU ETS are granted a reduction of the CO_2-tax rate on all fossil fuels used for heating purposes. The benchmark against which this tax expenditure is calculated is the standard CO_2-tax rate of SEK 1.12 per kg of CO_2 2016. In 2015, the Swedish parliament decided to progressively lower the reduction, from 40% to 20% in 2016, until its full abolishment by 2018.