

EU

Energy

Flows & Figures

Federal Ministry
Republic of Austria
Sustainability and Tourism

The Austrian Presidency of the Council
of the European Union, 2nd half of 2018

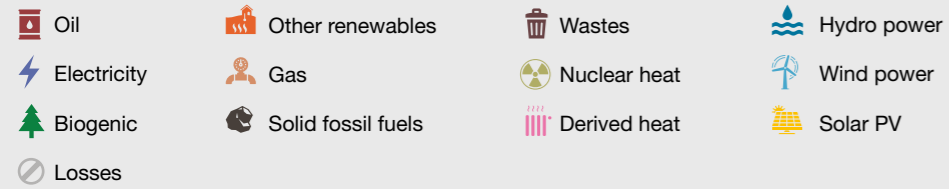


Austrian
Presidency
of the
Council of the
European Union

e 20
u 18
- a t

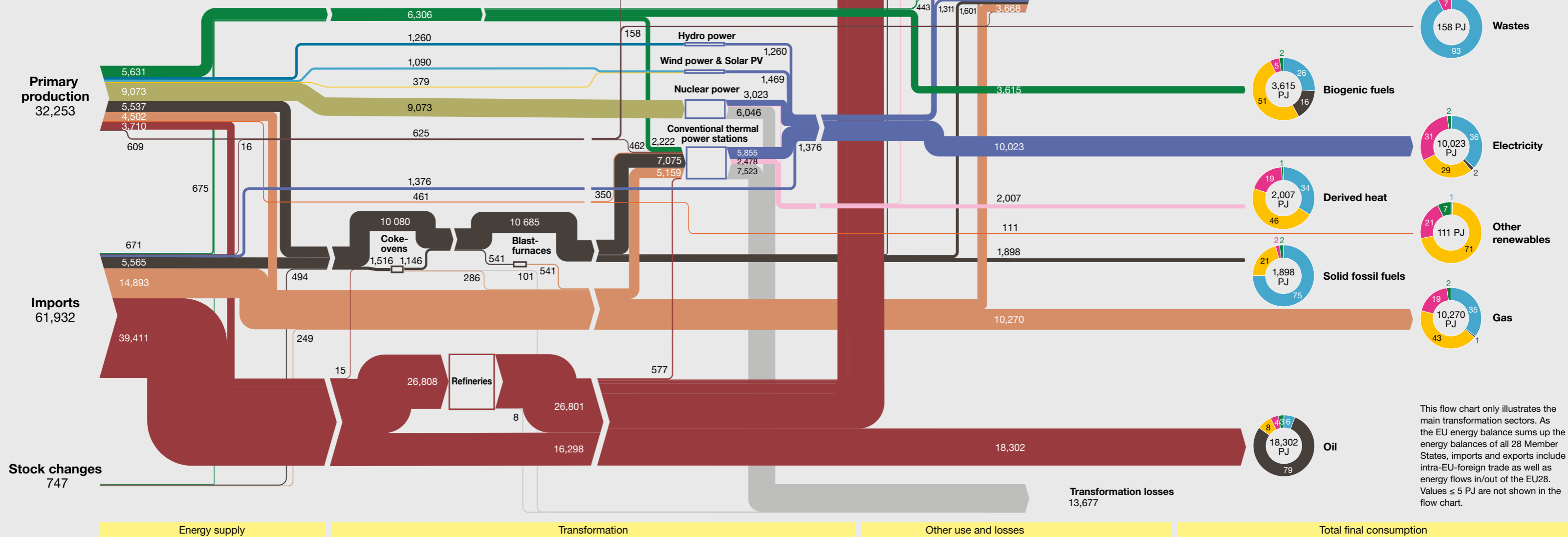
EU Energy Flow Chart 2016

Based on the energy balances of Eurostat (May 2018 edition) in Petajoule (PJ)



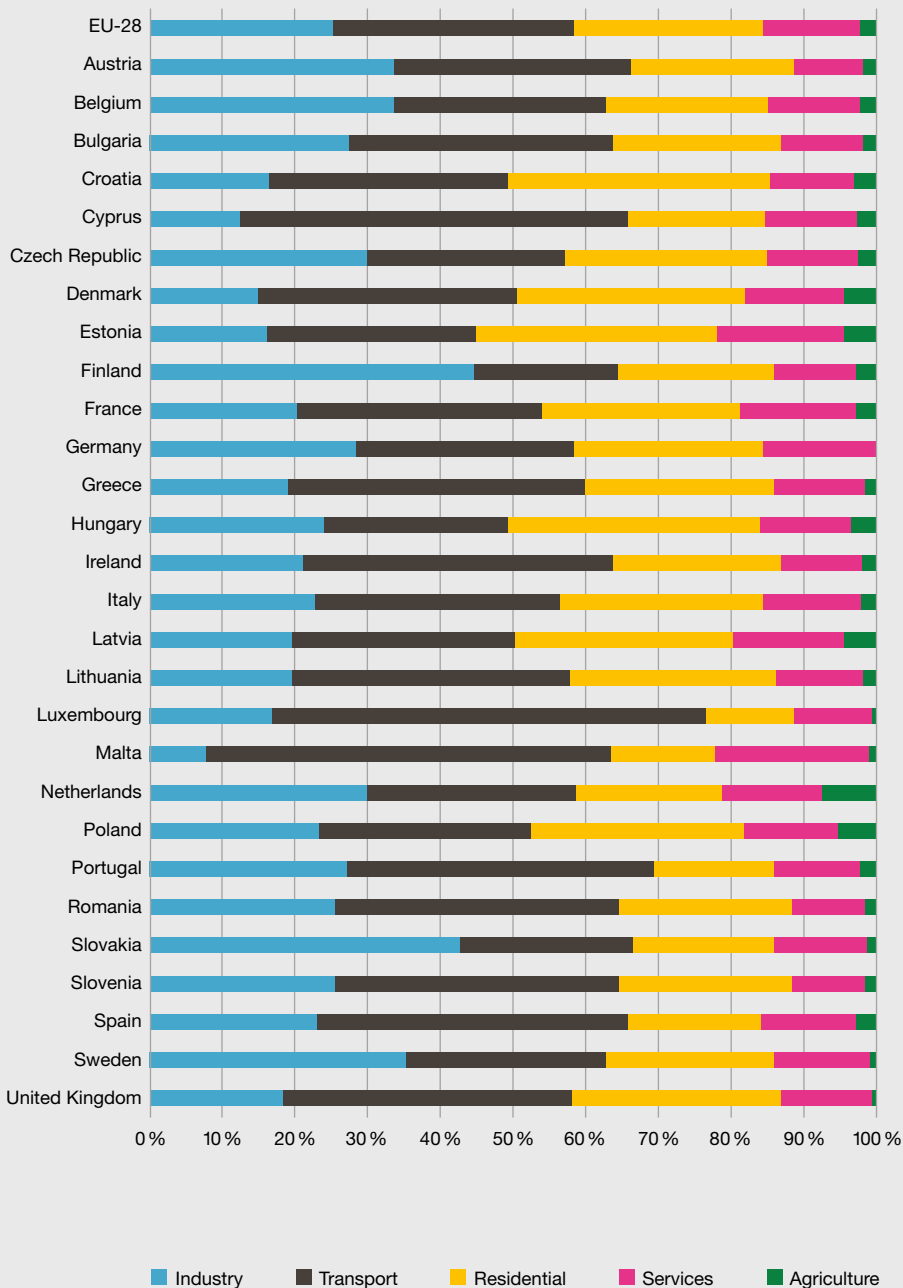
Direct use
 442
Stock changes
 1,705
Non-energy use
 4,094
Consumption of the energy branch & distribution losses
 4,502
Exports
 24,262

Total final consumption of energy source listed by sector (in %)



This flow chart only illustrates the main transformation sectors. As the EU energy balance sums up the energy balances of all 28 Member States, imports and exports include intra-EU-foreign trade as well as energy flows in/out of the EU28. Values ≤ 5 PJ are not shown in the flow chart.

Total Final Energy Consumption by Sector 2016



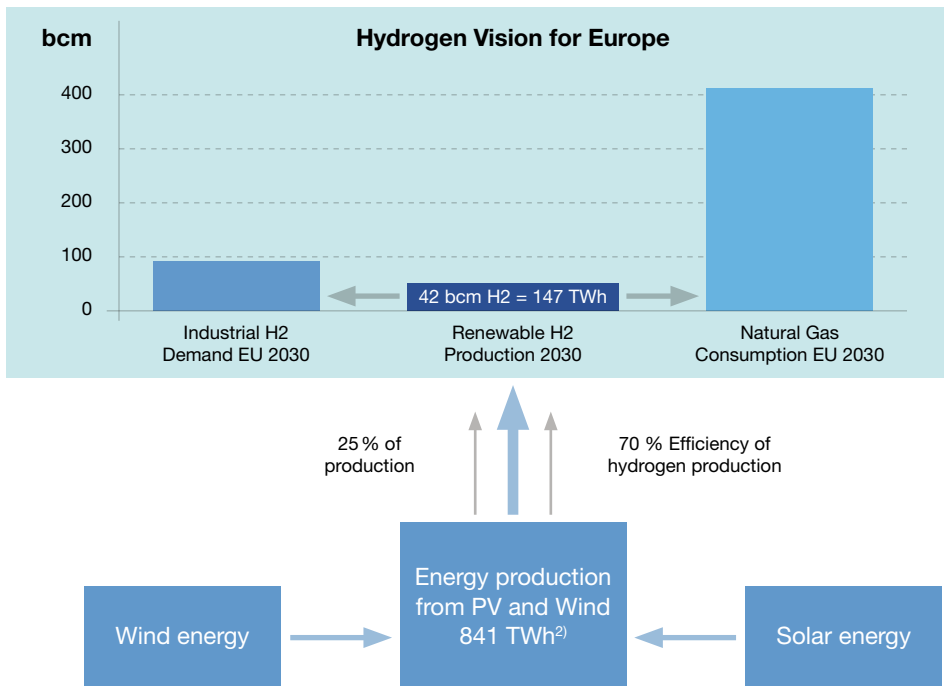
Renewable Hydrogen for Europe

A vision to meet future challenges

In 2016, the hydrogen consumption in the EU28 was estimated around 78 bcm¹⁾, mainly resulting from industrial demand. While model data suggest an increase in industrial hydrogen demand until 2030, the overall natural gas consumption in the EU28 might slightly decline in the same period²⁾ to 4,318 TWh (~406 bcm).

By utilizing 25 % of EU-wide PV- and wind power generation²⁾ for production of renewable hydrogen via electrolysis³⁾ in 2030

- 45 % of industrial hydrogen demand of 94 bcm⁴⁾ could be covered or
- 10 % of the natural gas consumption (volume) and the energy content of 13 bcm of fossil methane could be substituted by injection of renewable hydrogen into the gas grid.



bcm = billion cubic meters

1) Töpler et al. 2017

2) Data derived from PRIMES 2016 Model

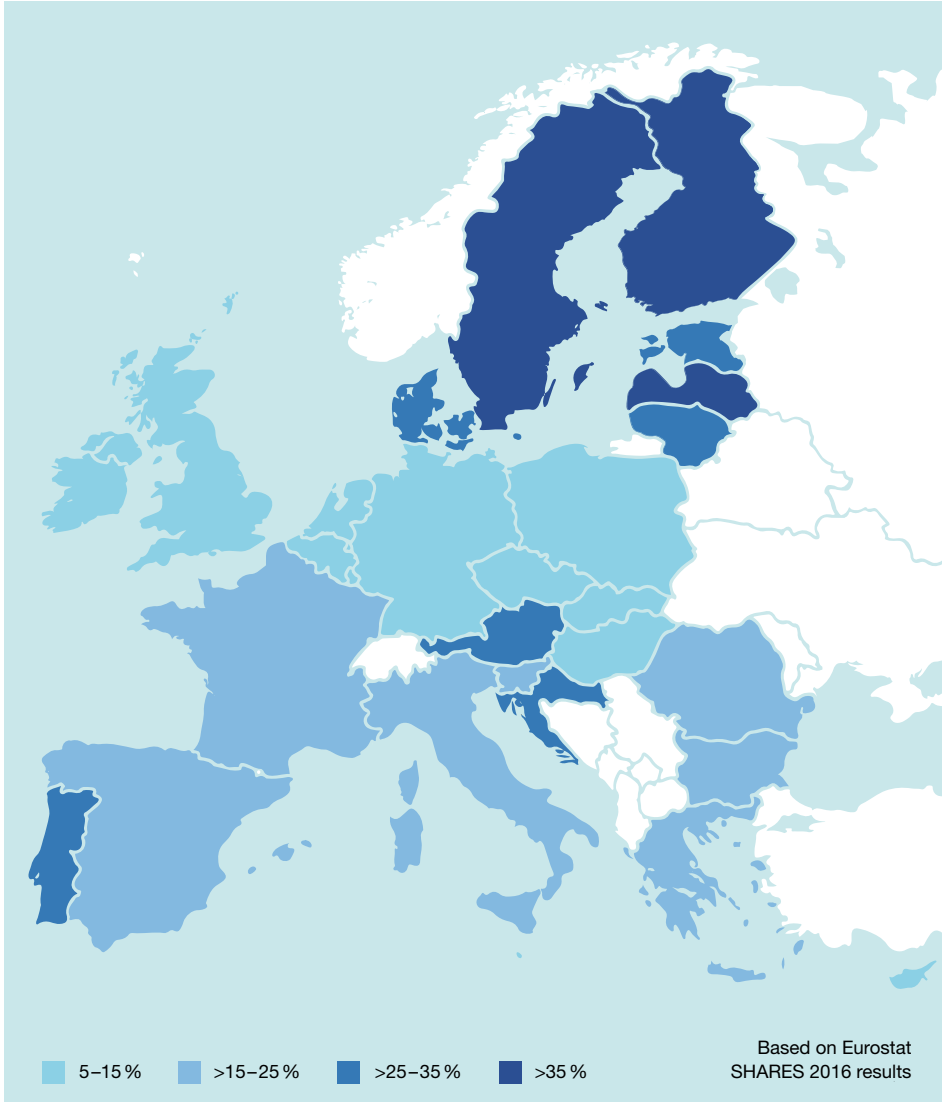
3) Assumption of 70% efficiency of hydrogen production

4) CertifHy Project 2015

Renewable Energy Share by Member State

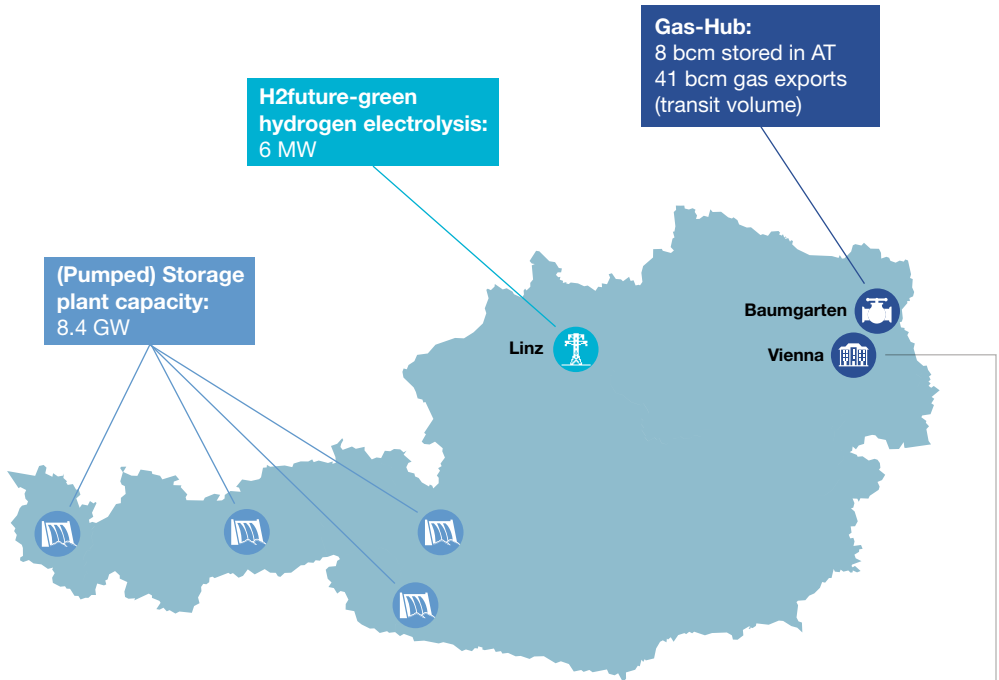
Fostering renewables to fulfil the Paris Agreement commitments

In 2016 the overall share of renewable energy in the EU energy mix reached 17%. The EU is on track to meet its 20% target in 2020 and is committed to reach 32% in 2030.



International Energy Hub Austria

A place for dialogue, synergy and creative solutions in Europe



www.seforall.org



IAEA
International Atomic Energy Agency
Atoms for Peace and Development

www.iaea.org



UNIDO
UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

www.unido.org



www.opec.org



www.energy-community.org



www.reeep.org



International Institute for
Applied Systems Analysis
IIASA
www.iiasa.ac.at

www.iiasa.ac.at



www.ofid.org

Imprint:

Owner, Publisher and responsible for content:
Federal Ministry for Sustainability and Tourism,
Directorate-General VI Energy and Mining
Stubenring 1, 1010 Vienna



Concept and graphical artwork: Feinschliff GmbH
Printed according to the guideline
"Printed Products" of the Austrian Ecolabel,
Druckwerkstatt GmbH, UW 1206
Cover photo and icon illustrations: iStock
Vienna, September 2018