

EURACOAL

European Association
for Coal and Lignite



Changes in EU climate and energy policy

*at a conference on the
EU's just energy transition process and global trends
accompanying the*

*International Mining, Power and Metallurgical Fair
"KATOWICE 2019"*

International Congress Centre
Katowice
Poland

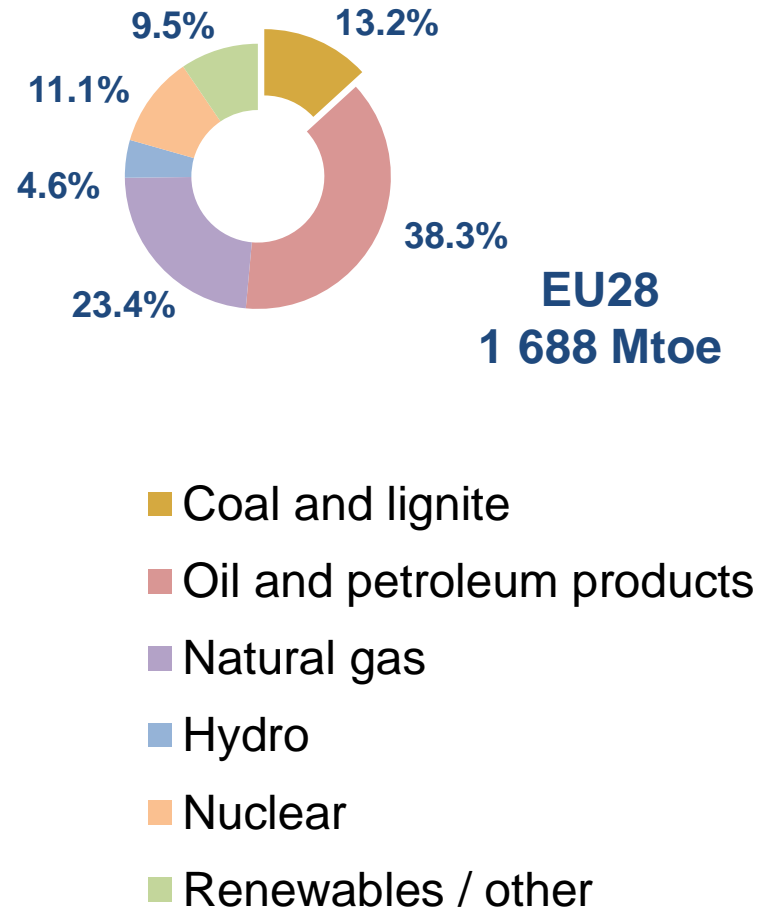
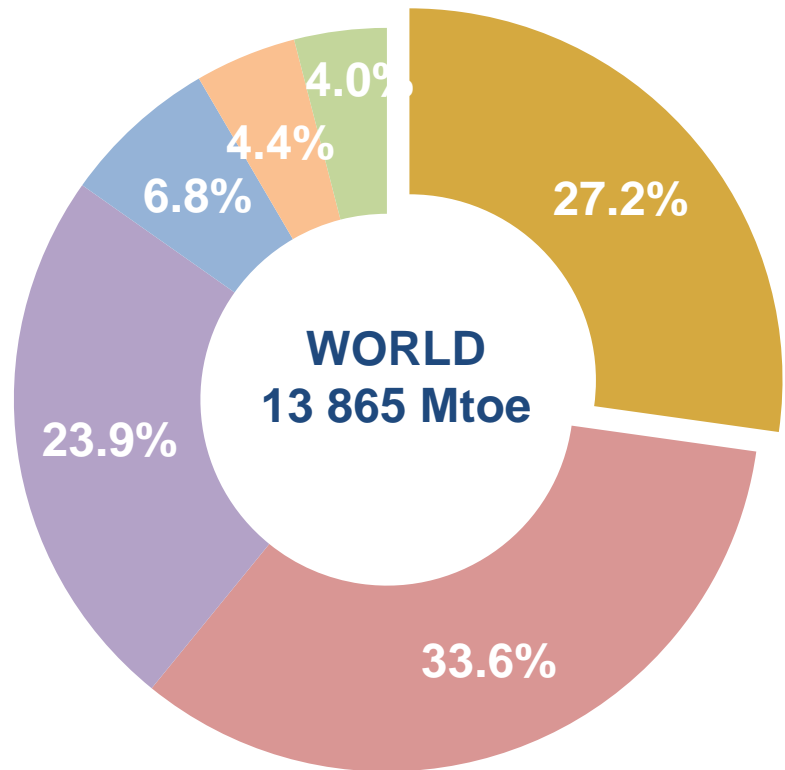
Brian Ricketts
Secretary General
10 September 2019

EURACOAL: 27 members from 15 countries

- DEBRIV – Deutsche Braunkohlen-Industrie-Verein (DEU)
- GVSt – Gesamtverband Steinkohle (DEU)
- MMI – Mini Maritza Istok (BGR) - observer
- PGG – Polska Grupa Górnicza S.A. (POL)
- PPC – Public Power Corporation (GRC)
- PPWB – Confederation of Polish Lignite Producers (POL)
- ZSDNP – Czech Confederation of Coal and Oil Producers (CZE)
- CARBUNIÓN – Federation of Spanish Coal Producers (ESP)
- BAZ – Borsod-Abaúj-Zemplén County Government (HUN)
- GIPH – Górnicza Izba Przemysłowo-Handlowa (POL)
- PATROMIN – Asociația Patronală Minieră din Romania (ROU)
- VDKi – Verein der Kohlenimporteure (DEU)
- CPERI/CERTH – Chemical Process and Energy Resources Institute (GRC)
- DTEK (UKR)
- Donetsksteel (UKR)
- EPS – Electric Power Industry of Serbia (SRB)
- GIG – Central Mining Research Institute (POL)
- HBP – Hornonitrianske bane Prievidza (SVK)
- Lubelski Węgiel „Bogdanka” S.A. (POL)
- Premogovnik Velenje (SVN)
- RMU “Banovići” d.d. (BIH)
- TKI – Turkish Coal Enterprises (TUR)
- Finnish Coal Info (FIN)
- KOMAG Institute of Mining Technology (POL)
- Geocontrol S.A. (ESP)
- Subterra Ingeniería S.L. (ESP)
- DMT GmbH & Co. KG (DEU)



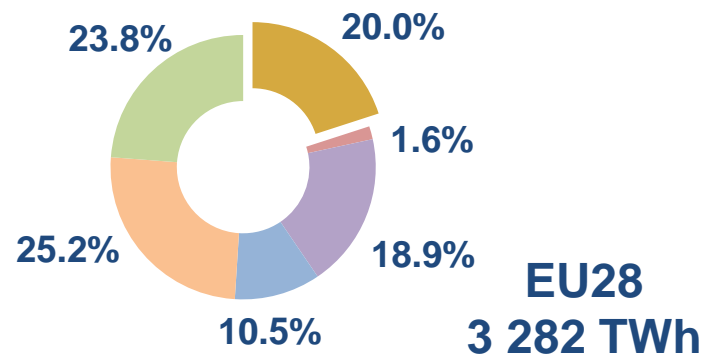
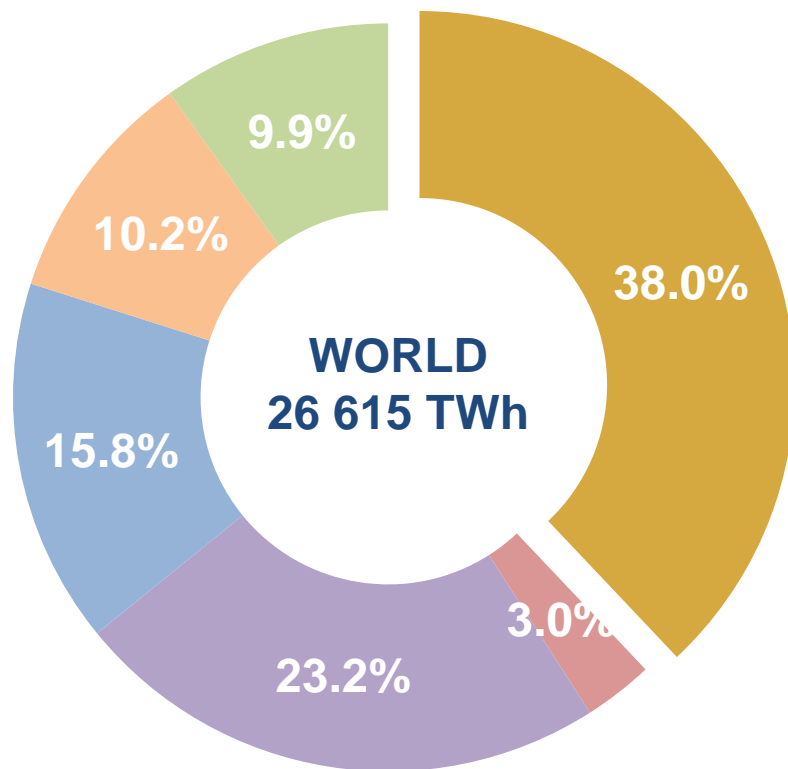
Coal in world and EU energy supply, 2018



Source: BP Statistical Review of World Energy 2019, BP plc, London, June

>96% from conventional sources in 2018. Coal use forecast to be flat to 2040.

Coal in world and EU electricity supply, 2018

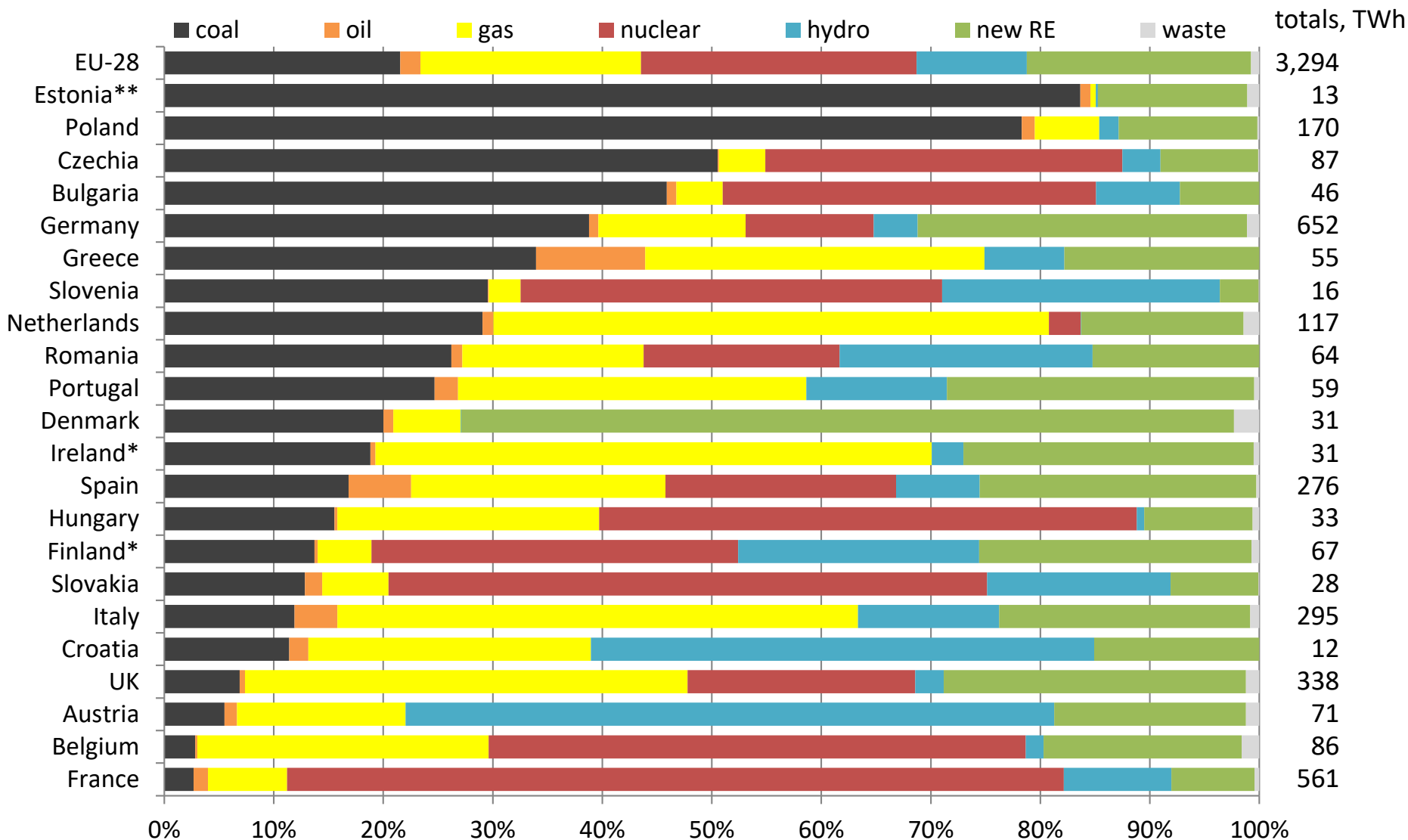


- Coal and lignite
- Oil and petroleum products
- Natural gas
- Hydro
- Nuclear
- Renewables / other

Source: BP Statistical Review of World Energy 2019, BP plc, London, June

38% of global electricity came from coal in 2018, *c.f.* just 20% in the EU.

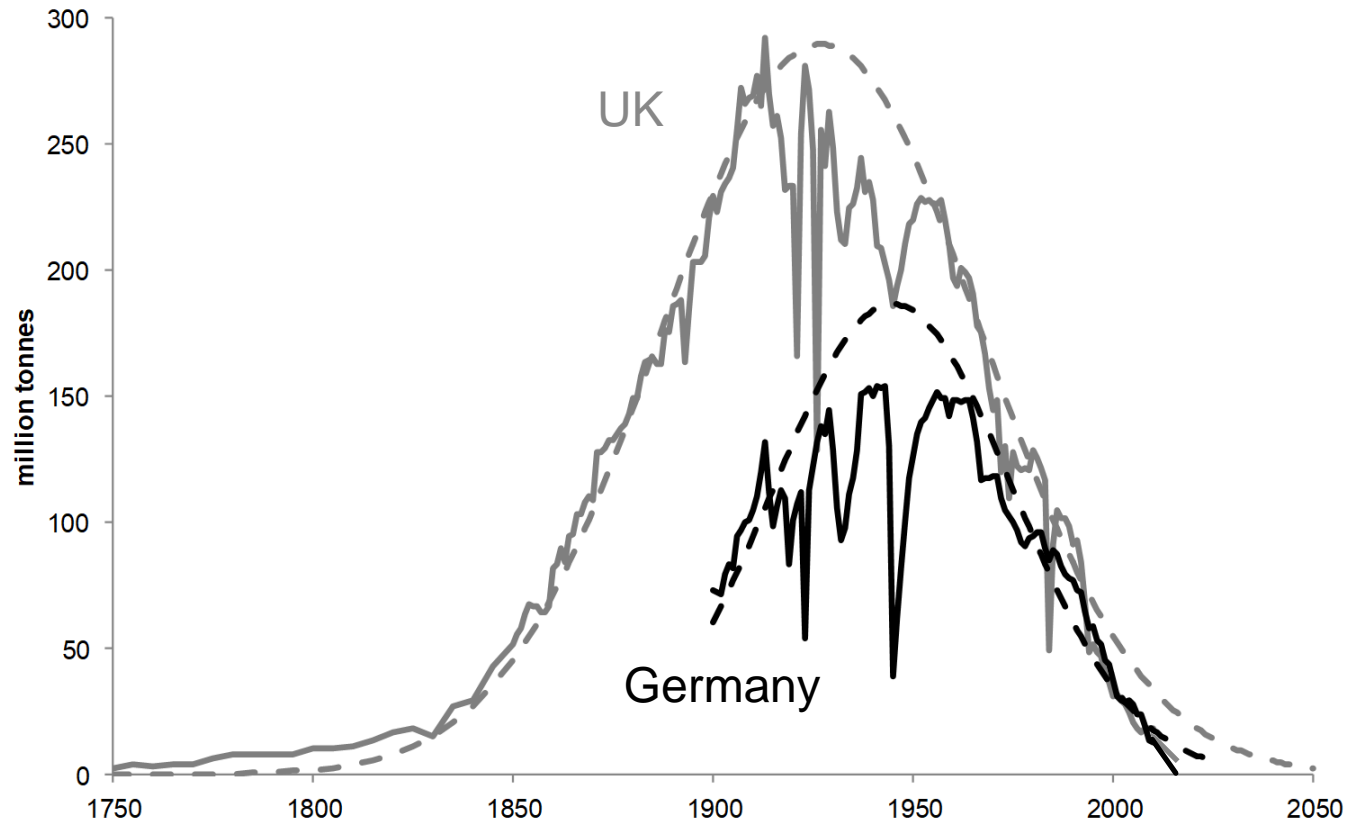
Energy mix for EU electricity generation, 2017



Source: Eurostat database nrg_bal_peh, last update 21.03.2019 (n.b. coal includes peat* and oil shale**)

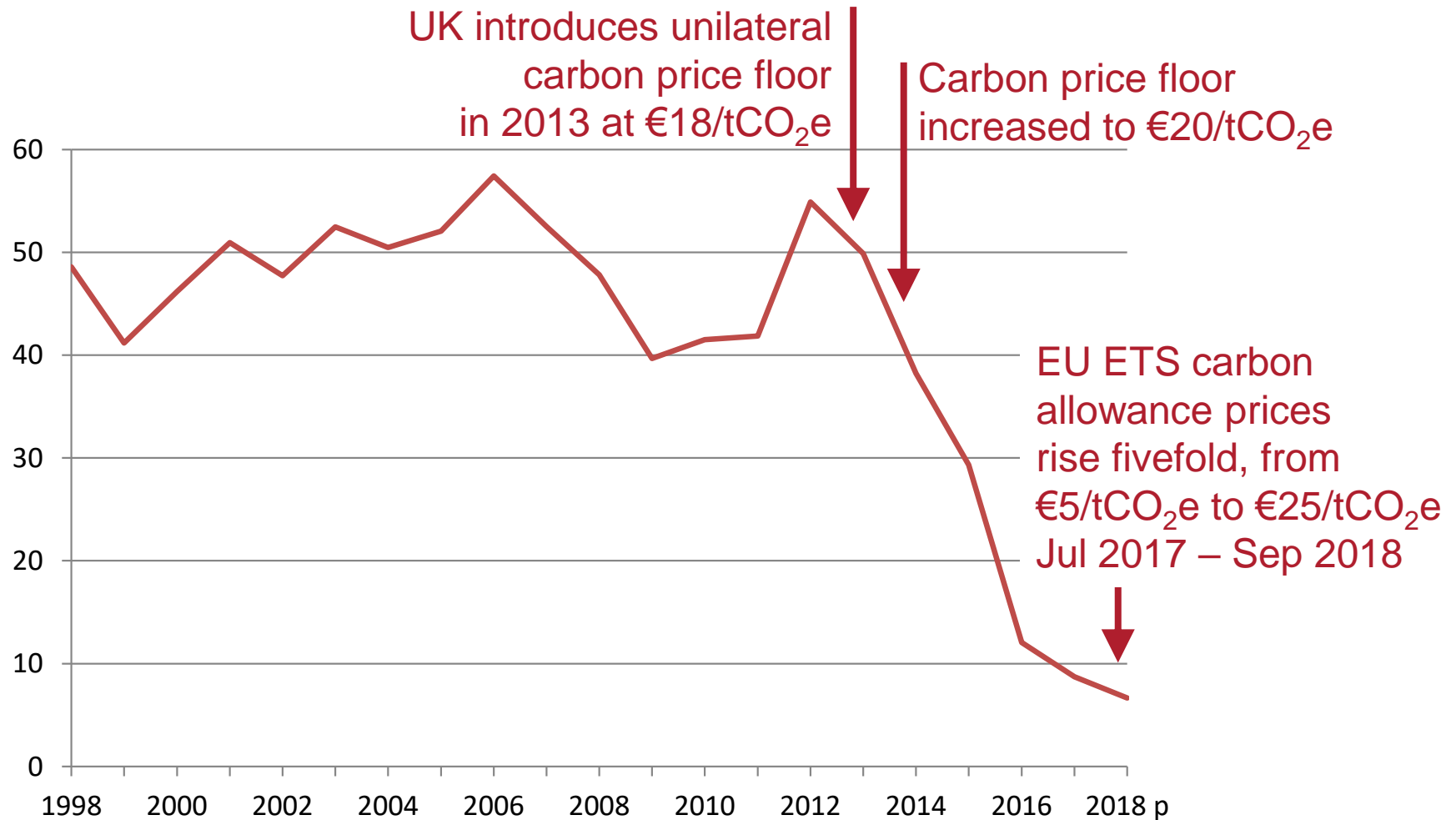
UK and German hard coal production to 2019

logistic distributions?



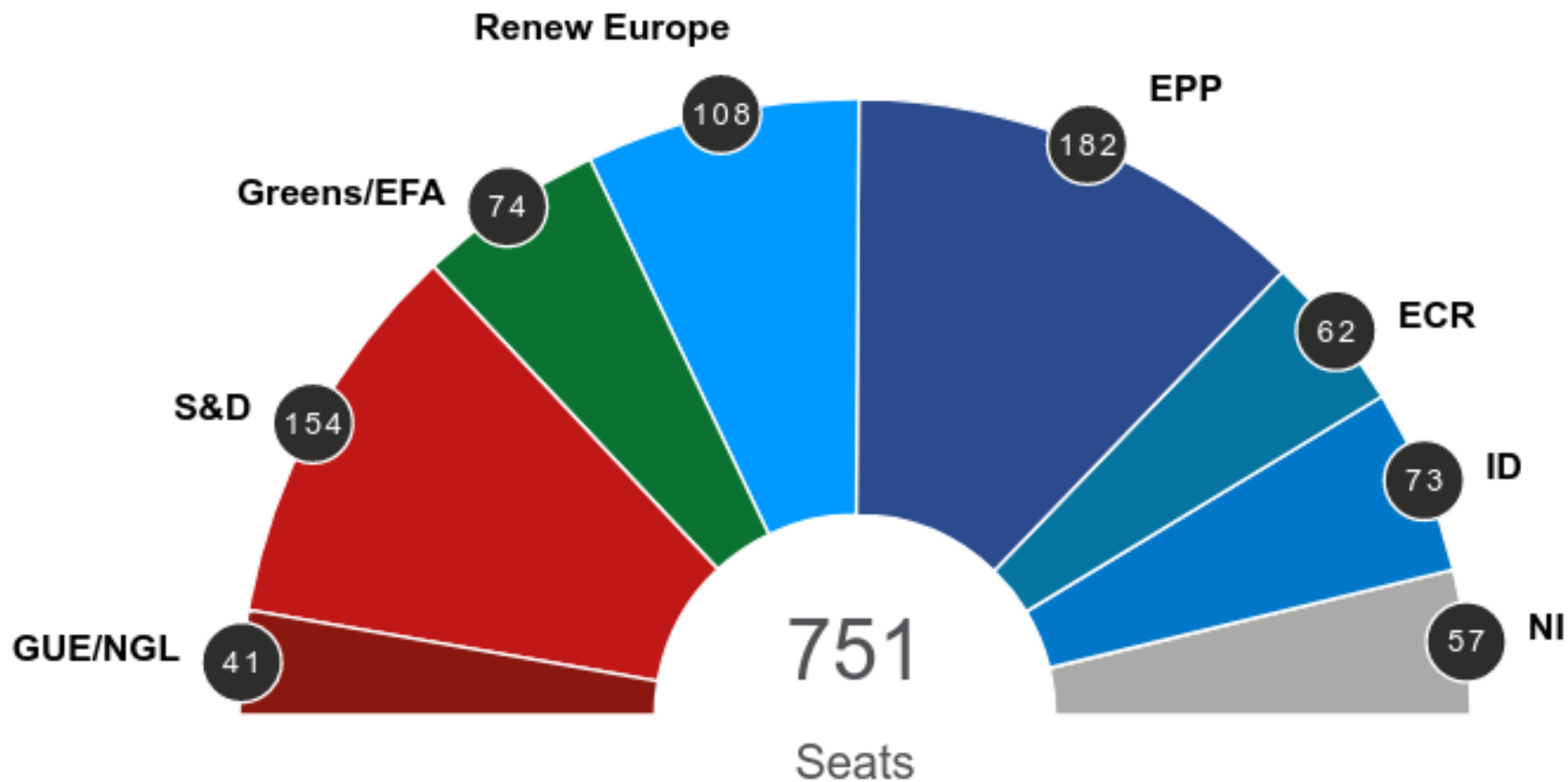
Hard coal production from deep mines in Europe is not cost competitive with open cut coal production in Russia and the USA.

Coal use for power generation in UK, 1998-2018



A carbon price (traded allowances or taxes) does not encourage CCS. It simply forces fuel switching from coal to natural gas.

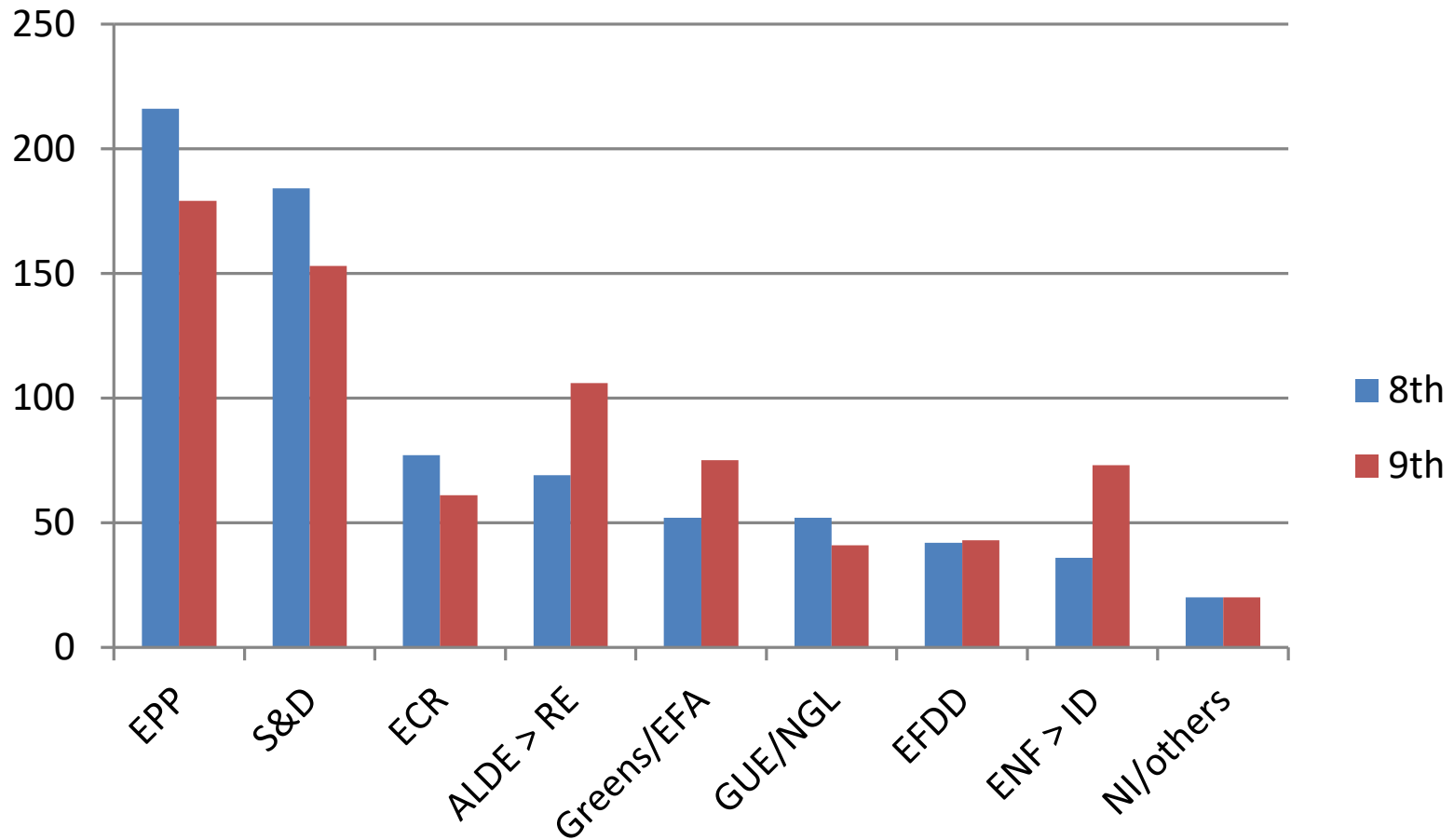
European election results, 23-26 May 2019



Source: European Parliament, last updated 2 July 2019 - 10:00

An end to the “Grand Coalition”: 3 or 4 groups needed for majority.

Comparison of 8th and 9th Parliaments



A swing to the Greens and to the right.

European Commission President-elect's mission

For the generation of my children, Europe is a unique aspiration. To match this aspiration with action, we must rediscover our unity and inner strength.

Changes in climate, technology and demography are transforming our societies and way of life.

Europe must lead the transition to a healthy planet and a new digital world. But it can only do so by bringing people together and upgrading our unique social market economy to fit today's new ambitions.

- **A European Green Deal**
- An economy that works for people
- A Europe fit for the digital age
- Protecting our European way of life
- A stronger Europe in the world
- A new push for European democracy



Ursula von der Leyen, European Parliament, 16 July 2019

Political Guidelines for next Commission 2019-24

European Green Deal (1)

- Within 100 days – so by Monday, 10 February 2020, Commission will propose a “Green Deal”
- A 50% GHG reduction target by 2030 (and perhaps 55% to encourage non-EU countries)
- Europe to be the first climate-neutral continent by 2050
- Extend EU ETS to cover maritime, traffic and construction (and reduce free allowances for airlines)
- A Carbon Border Tax to avoid carbon leakage
- Review the Energy Taxation Directive
- A world-beating industrial strategy with a Circular Economy Action Plan and clean technologies to decarbonise energy-intensive industries



Political Guidelines for next Commission 2019-24

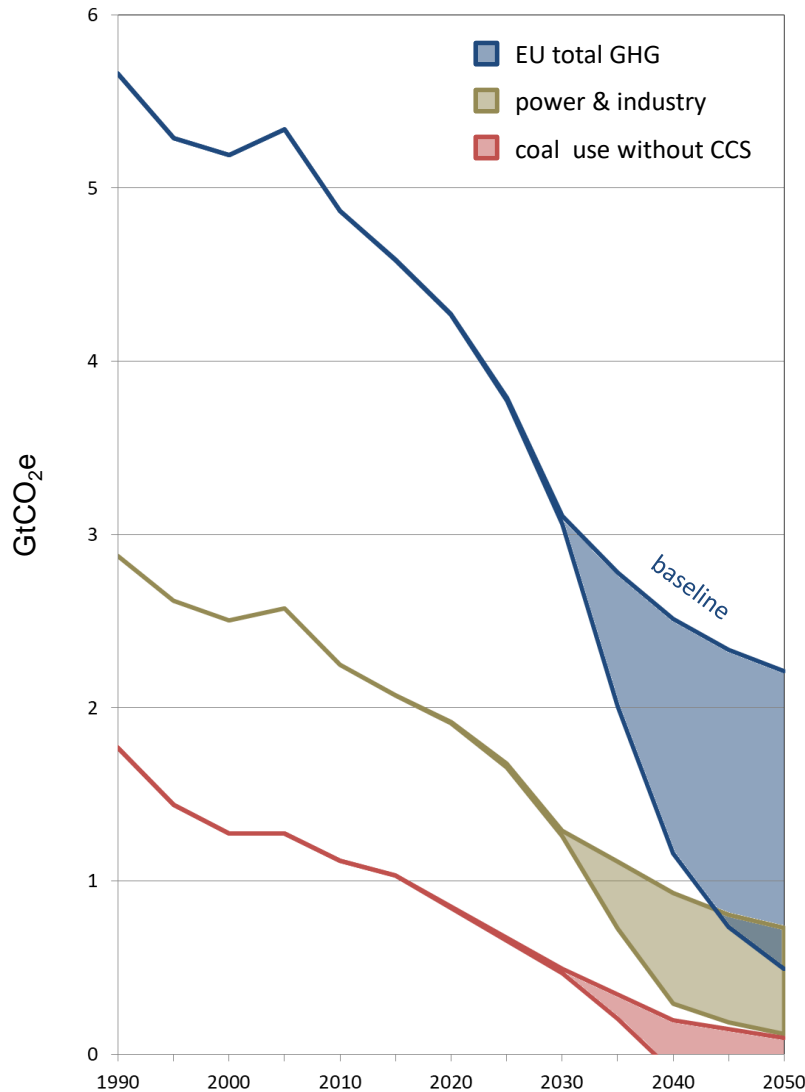
European Green Deal (2)

- A zero-pollution ambition (air and water quality, hazardous chemicals, industrial emissions, pesticides, endocrine disruptors and plastics)
- A Biodiversity Strategy for 2030
- A new “Farm to Fork Strategy” for sustainable food
- A European Climate Pact – bringing together regions, local communities, civil society, industry and schools
- A new Just Transition Fund so that nobody in any region is left behind
- A Sustainable Europe Investment Plan with €1 trillion over next decade and transforming the European Investment Bank into Europe’s climate bank, dedicating half of its lending to climate investment



EU vision for 2050 “A Clean Planet for All”

GHG emission reduction pathways in the EU, 1990 to 2050 showing the range of scenarios reported by the European Commission in its long-term strategic vision for a climate-neutral economy



EURACOAL Position Paper on “A Clean Planet for All” (COM(2018) 773)

Key Points

- The climate challenge requires global solutions with similar ambitions everywhere.
 - A carbon-neutral EU economy by 2050 is highly ambitious: the necessary technologies need to be developed and deployed, and carbon-leakage risks need to be clearly addressed.
 - Without large-scale energy storage, conventional thermal power generation will still be needed.
 - The extraction and use of coal is linked to over 200 000 high-quality, well-paid direct jobs, as well as indirect jobs at suppliers.
 - Coal contributes to affordable and competitive electricity prices and thereby to EU prosperity, reinforcing the EU as a place to do business.
- Coal's contribution tomorrow:**
- Coal is a partner for electricity generation from renewables: existing coal power plants respond flexibly to the ups and downs of wind and solar power.
 - Under the EU ETS, the coal sector will continue to reduce its emissions, cost-effectively. Accordingly, the EU emissions trading system should remain the only instrument used to drive down CO₂ emissions in the power sector.
- Coal's contribution the day after tomorrow:**
- EURACOAL supports a climate and energy policy based on accelerated technological progress through near-term research, innovation and entrepreneurship within a non-discriminatory, technology-neutral, competitive market place that delivers a wide portfolio of sustainable, low-carbon solutions which consumers are willing to pay for.
 - Coal's contribution to progress will be reliable and affordable electricity from power plants that are now cleaner than ever before. The coal sector is already pushing forward new energy storage options; new processes that supply clean hydrogen; and wastes and woody biomass, to be recycled into new products, without carbon emissions.



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The solution is a well-prepared transition with support for new technologies

CoalTech2051

A two-pronged strategic research agenda for coal R&D:

- focus on research activities that support EU policy objectives;
- plus research activities that promote the necessary global response to the ongoing coal use outside of the EU.



IEA
CLEAN COAL CENTRE



CERTH
CENTRE FOR
RESEARCH & TECHNOLOGY
HELLAS



GŁÓWNY
INSTYTUT
GÓRNICZWA

EURACOAL

European Association
for Coal and Lignite
AISBL



Research Fund
for Coal & Steel

The CoalTech2051 project has received funding from the Research Fund for Coal and Steel under grant agreement No. 794369.

Coal research with an international outlook

■ Health and safety

Monitoring, assessment, prevention and mitigation of rock burst and gas outburst hazards in coal mines (MapROC)



The Lagisza Power Plant in Poland features a 460 MWe Amec Foster Wheeler supercritical, vertical-tube CFB boiler.



Physical modelling of stresses around a roadway in an underground coal mine

■ CCS: next steps towards global deployment

Coal combustion, clean and efficient coal technologies, CO₂ capture (FLEX FLORES)

With 46% (LHV) electrical efficiency, the 750 MW Lünen power plant in Germany is one of the most efficient coal-fired power plants in the world.

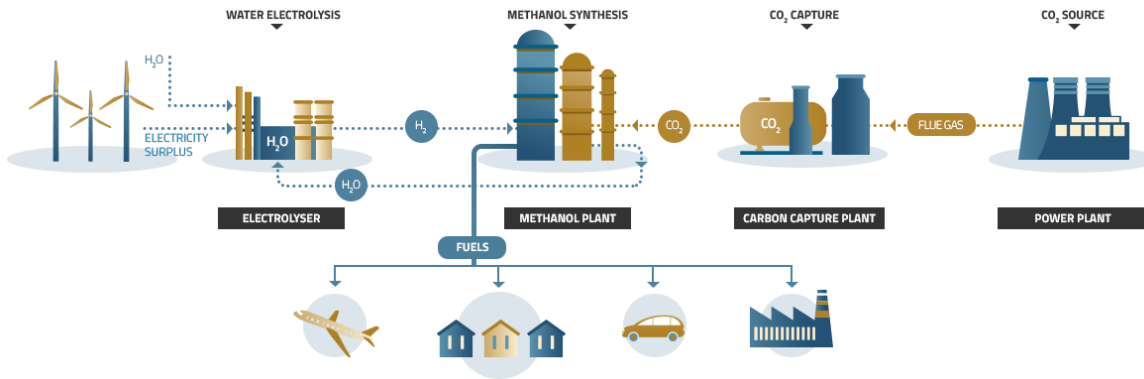


■ Clean coal technologies for lower emissions

Preparing for the commercial demonstration of coal power plants operating at 700°C (ENCIO, NIBALO725, DP700-PHASE 1)

Coal R&D in support of EU policy objectives

■ Coal gasification and the circular economy



Oxygen plant at the Vresová IGCC power plant in the Czech Republic

■ Carbon capture, use and storage (CCUS)



Tomato greenhouse heated using geothermal heat and energy from waste mine water

- Energy storage to back up RES
- Geothermal energy and other renewable energy projects at mine sites



Innovative products from lignite produced in Turkey

■ Integrated hydrogen production

■ Non-energy uses of coal and lignite

Delphi survey: www.coaltech2051.eu

CoalTech2051

THE FUTURE OF COAL

a project supported by the
European Union

LEGAL & PRIVACY

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DELPHI SURVEY I

Please complete our Delphi survey using the embedded form below (or follow this link to [Round I](#))

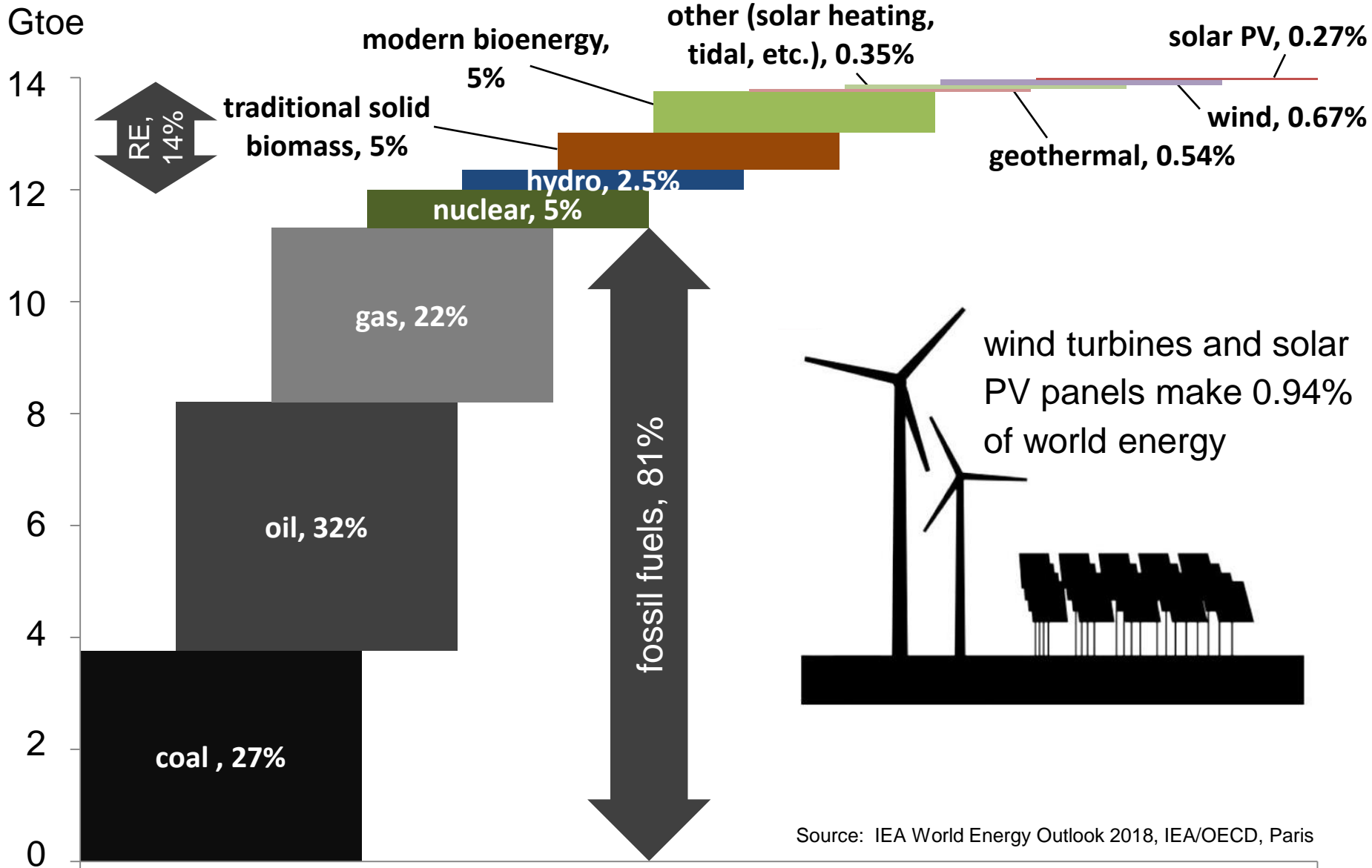
CoalTech2051 - Delphi survey (Round I)



Dear Expert,

This survey is part of the EU-funded CoalTech2051 project (<https://coaltech2051.eu>). The project aims to establish future research priorities for the RFCS Research Programme that are aligned with EU climate and energy policy.

Global energy mix, 2017



Source: IEA World Energy Outlook 2018, IEA/OECD, Paris

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Thank you!

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