

Phasing out coal in the EU's power system by 2030

A policy action plan

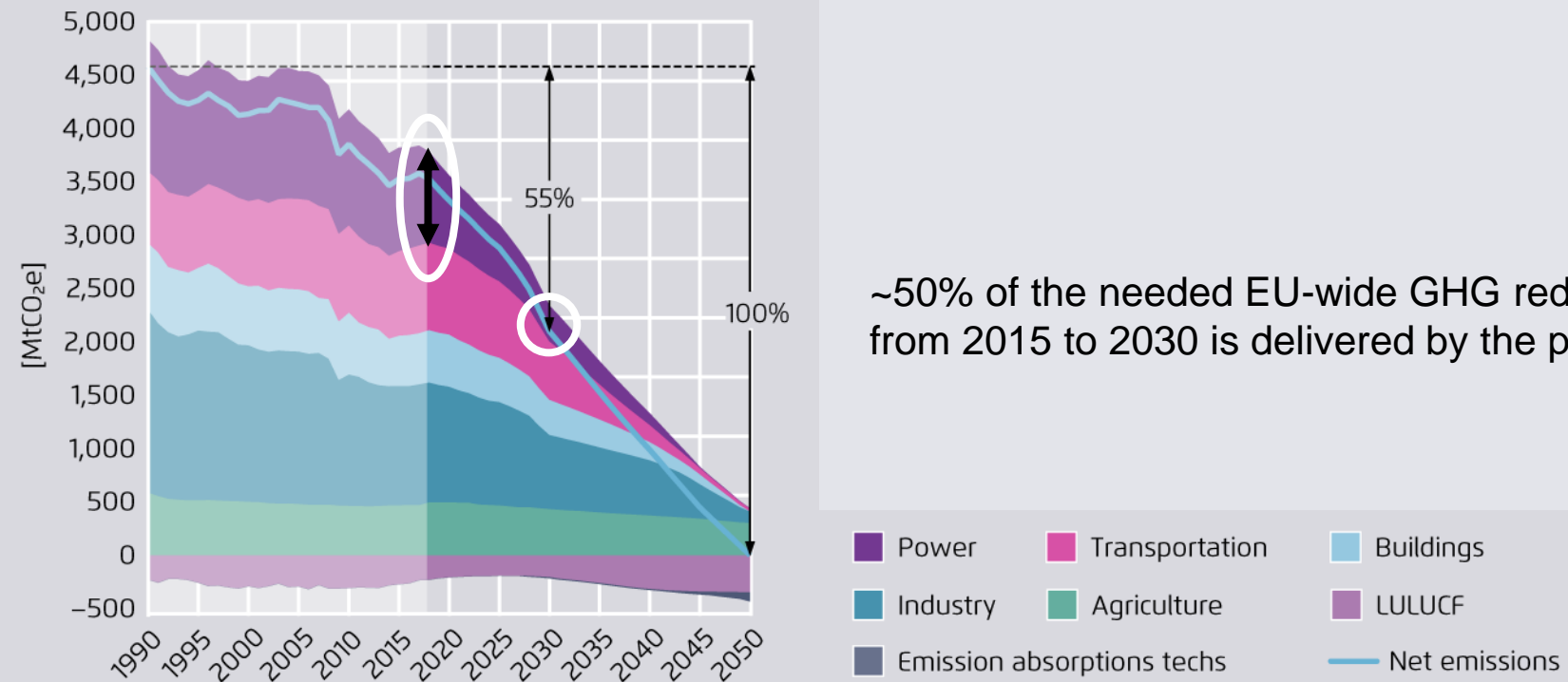
Christian Redl

BERLIN, 19 OCTOBER 2021



The EU's 55% emission reduction target requires a coal phase-out in the EU power system by 2030

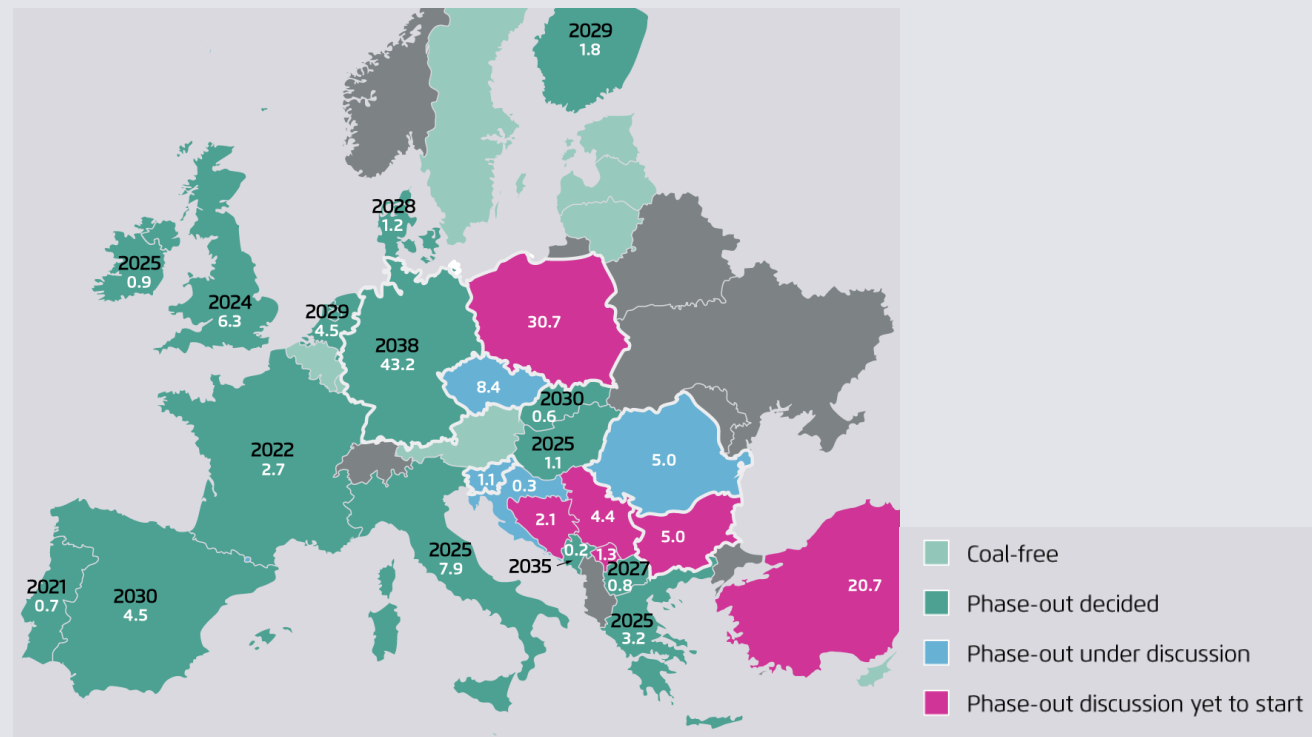
Sectoral emission reductions to reach a climate-neutral Europe by 2050



McKinsey (2020)

21 member states have already decided to phase out coal-based power generation before 2030. The “Coal-6” have not yet set a date for phasing out coal by latest 2030

Coal phase-out dates and remaining coal capacities in [GW]

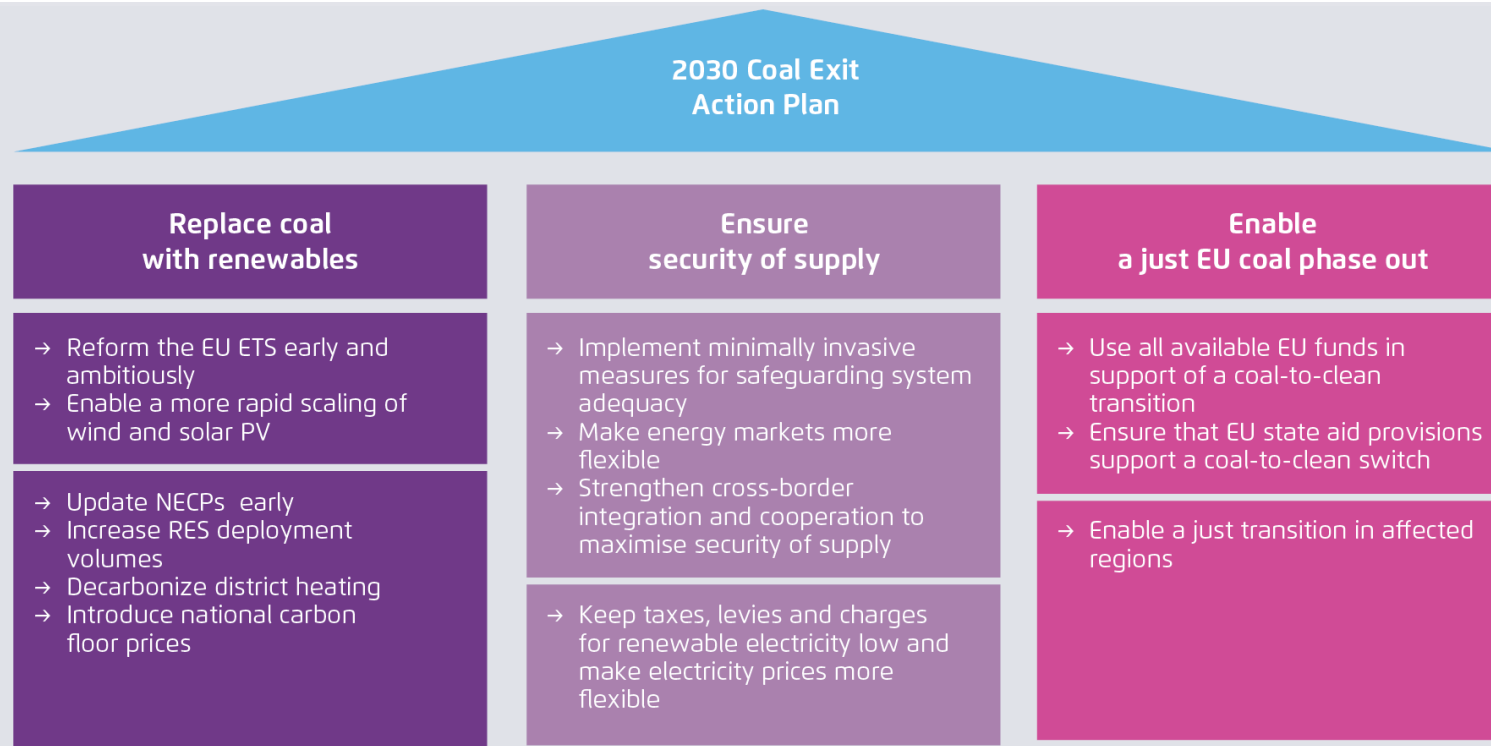


Europe Beyond Coal (2021)

Coal-6: Bulgaria, the Czech Republic, Germany, Poland, Romania and Slovenia

Action Plan for a 2030 coal exit: A policy mix of interrelated national and EU-level elements to phase-out coal, scale up renewables & enable a just transition

Policy elements of the coal phase-out action plan

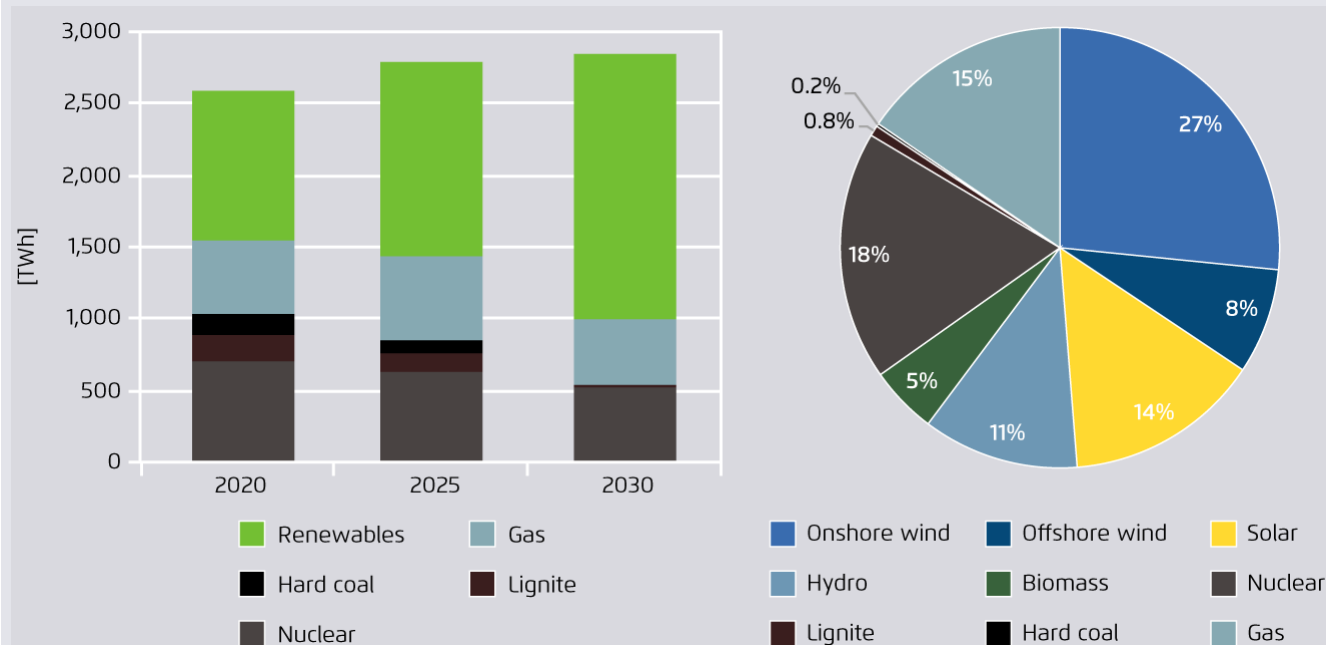


Agora Energiewende (2021)

Pillar 1: Replace coal with renewables

A coal-to-clean switch is required: Coal should overwhelmingly be replaced by solar PV and wind energy

Net generation in the EU's 2030 power system: 2/3 renewables in the mix



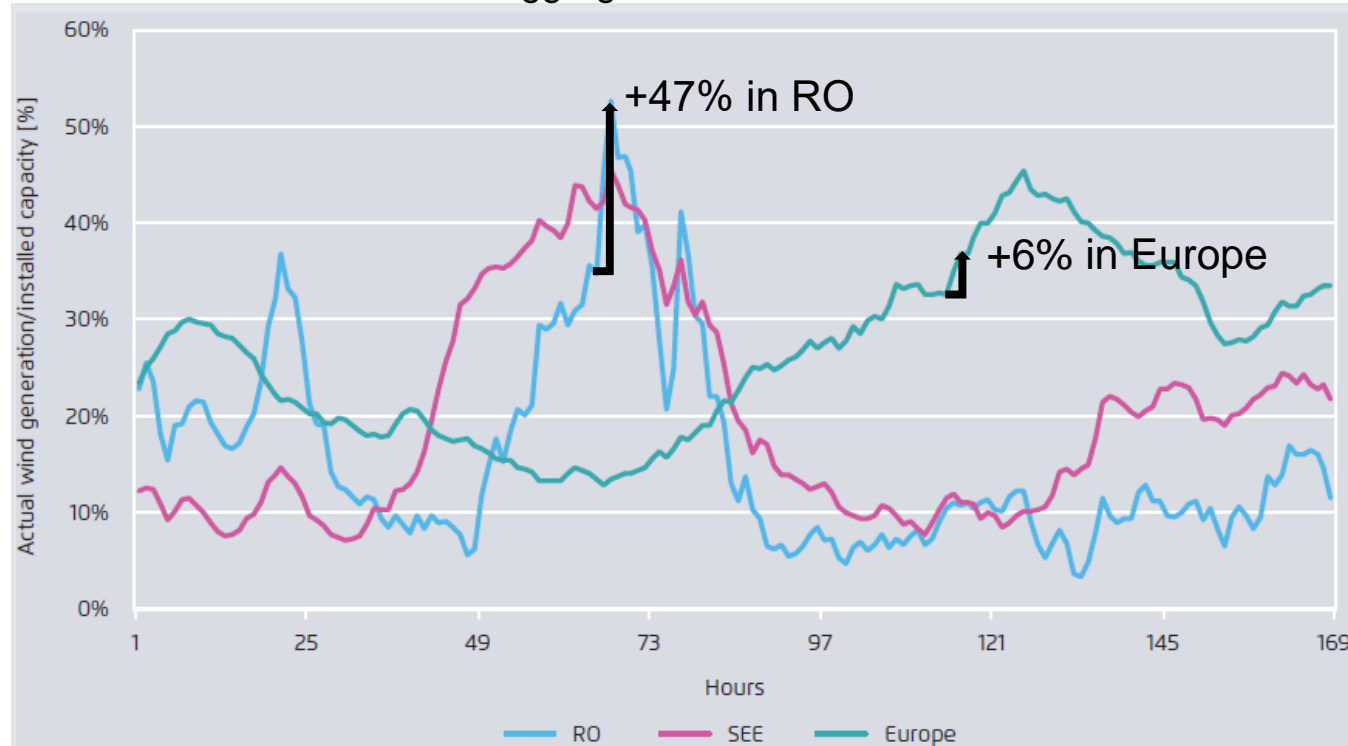
enervis (2021)

- Reform EU ETS early & ambitiously to provide firm carbon price supporting coal phase-out
 - Sustained prices above 65 EUR/t CO₂ are needed for full market-driven coal phase-out
 - Introduce national carbon floor prices
- EU State Aid rules to support coal-to-clean / RES deployment
- Update National Energy and Climate Plans
- Enable rapid scaling of PV and wind through increased auction volumes and eliminating planning and permitting barriers
- More flexible power markets (“faster & larger”)
 - Shorter intraday gate closure times, more intraday auctions, 15min day-ahead products
- Decarbonize district heating

Pillar 2: Ensure security of supply

Security of supply through flexible generation, short- and long-term storage, flexible demand & cross-border integration

Time series of onshore wind power generation in a simulation for the first week of 2030 at different levels of aggregation



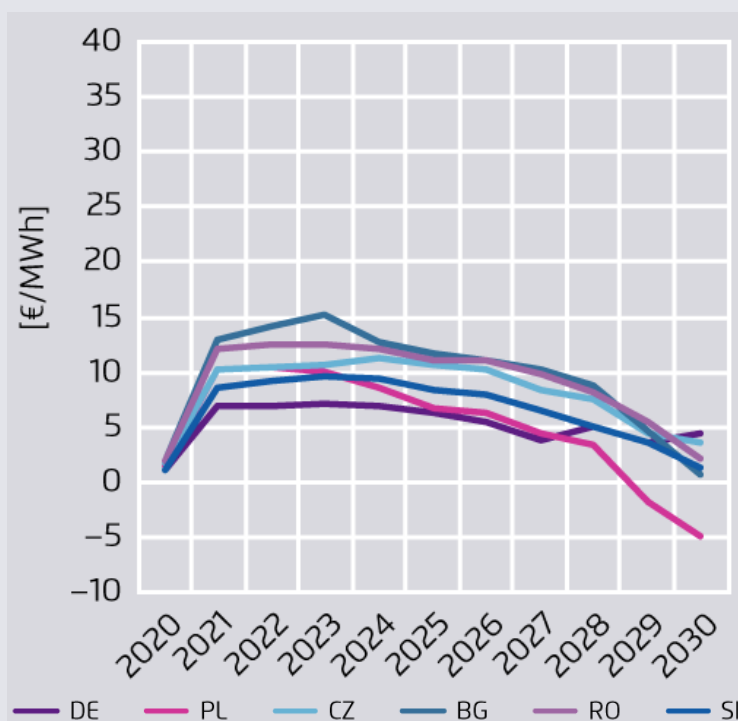
REKK (2019)

- Energy transition needs flexible mix of resources. Safeguarding system adequacy is not only about how much capacity, but also about what kind of capacity
- Coal phase-out requires additional 15 GW of gas plants for security of supply. Nevertheless gas generation needs to fall 15% by 2030
- Strong cross-border system integration
- In case of national resource adequacy concerns, Member States should
 - i) improve scarcity pricing in energy and balancing markets (“ORDC”)
 - ii) apply strategic reserves, and
 - iii) introduce capacity mechanisms only where wholesale prices and strategic reserves don’t provide sufficient adequacy

Pillar 3: Enable a just coal phase-out

Additional consumer costs of 0.5 ct/kWh to be balanced through reforms of taxes, levies and surcharges shifting burden from clean electricity to fossil fuels

Wholesale base prices differences (55% vs 40% scenario) in Coal-6 countries

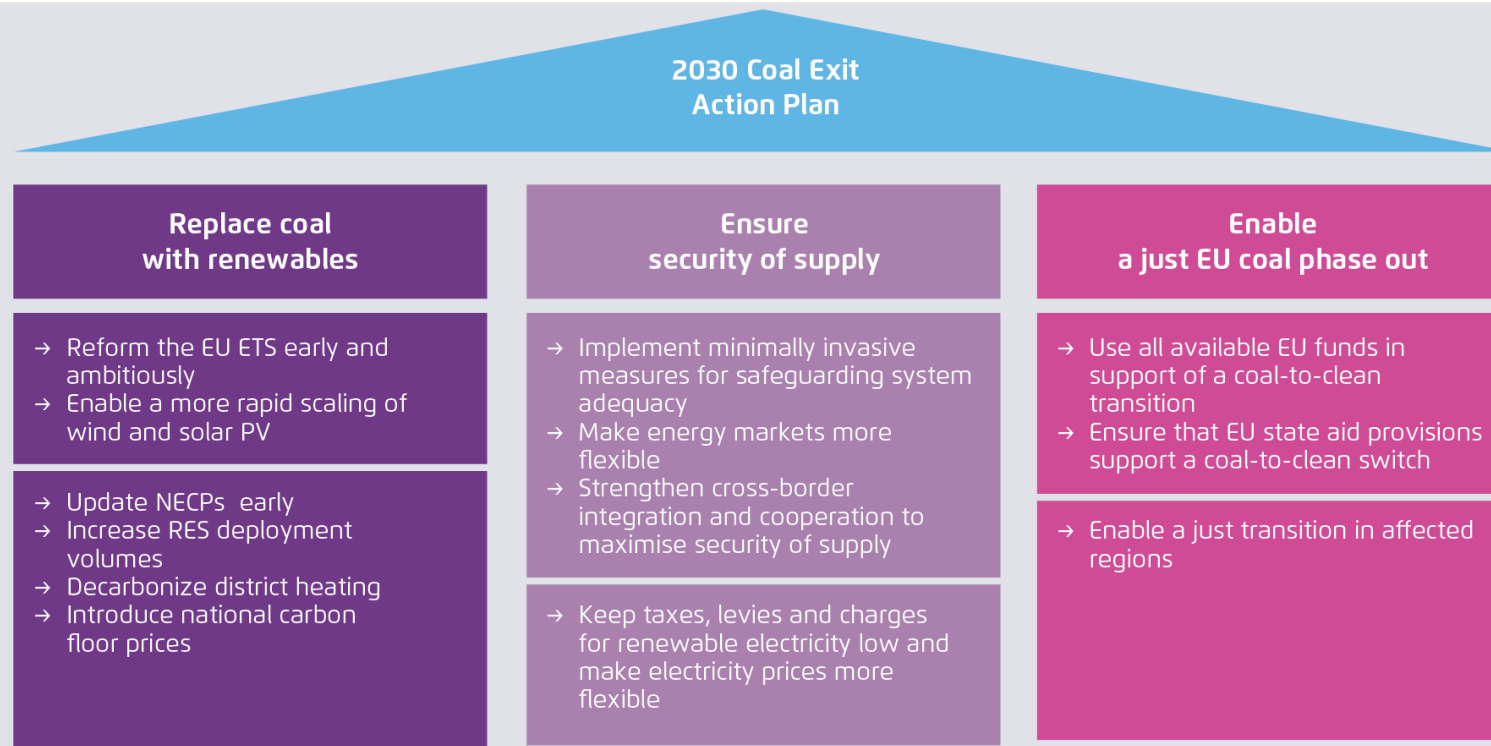


enervis (2021)

- Phasing out coal is a profound structural change. Accelerated coal phase-out speeds up employment impacts of energy transition
- Use available EU funds in support of a coal-to-clean transition in affected regions
- Use unallocated funding under the Recovery and Resilience Facility and other EU programmes (structural and cohesion funding)
- Develop shared vision and concrete plans for a just transition in regions still depending on coal mining and coal use
- EU State Aid provisions to support coal-to-clean switch; Selective support for closure of coal production sites, solely in the context of a 2030 coal phase-out commitment

Action Plan for a 2030 coal exit: A policy mix of interrelated national and EU-level elements to phase-out coal, scale up renewables & enable a just transition

Policy elements of the coal phase-out action plan



Agora Energiewende (2021)

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**Thank you for
your attention!**

Questions or Comments? Feel free to contact me:

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