German coal phase out agreement
– and how that relates to their energy transition plans and policies

Parallel Session 4-1: Challenges and opportunities from fossil energy to renewable energy;
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Public reactions to climate change vary

Coal Trends in the USA never-the-less plummet

Global temperatures keep rising

Coal Phase-out within most OECD countries is clearly visible

The share of coal is shrinking in OECD Americas and Europe. An uncoupling of coal consumption and GDP growth can be observed.

Coal consumption within OECD Asia Oceania and non-OECD is increasing.

Figure 8: OECD coal consumption and indicators (Index: 2010=100)

Each vertical line illustrates the historical highest-lowest value (top-bottom). The round point corresponds to 2015 level.

Many European countries have decided (green) or consider a coal phase-out by 2030 (blue) or by 2035/38 (violet)

Source: Europe beyond Coal (2019).

Source: Matthes (2019).
Germany: Long history starting with the European Coal and Steel Community in 1951 and coming to an end in 2018

- 150 million t hard coal production
- ~ 600,000 employees in hard mining

"German Economic miracle"

1951
Foundation of the ECSC & co-determination law

1956
Suez crisis & liberation of coal price

1957
Re-integration of Saarland
Foundation of Saarbergwerke AG

1958
Begin of the coal crisis

1964
Import coal cheaper than domestic coal

1968
1st oil crisis
- Begin of subsidies for domestic coal sale
- First structural policy program for Ruhr area & Foundation of RAG AG

1973
2nd oil crisis

1974/75
Begin of the steel crisis

1979
2nd oil crisis
- "Action program Ruhr"
  → End of "ground lock"

1980
189
Begin of "IBA Emscher Park"

1989
Reunification & EU influence in structural policy grows

~ 2000
Growth orientation of EU structural policy, focus on "lead markets", increased decentralization & participation

2007
Law to end hard coal subsidies & RAG foundation

2012
End of coal production in Saarland

2018
End of hard coal subsidies → end of production
Only Increasing Renewables is not sufficient - Development of coal and RES employment and electricity share in Germany

Source: Own calculations and illustration based on DIW et al. (2018).
The carbon lock-in of coal regions and actors originates from various sources

Source: Oei et al. (2019).
So who is in charge of managing a coal phase-out?
‘Commission on Growth, Structural Change and Employment’

Source: Agora Energiewende (2019).
Composition of the commission

Source: Agora Energiewende (2019).

Representatives from interest groups in the commission

- parliament (3)*
- trade unions (3)
- environmental (3)
- energy industry (4)
- business and industry (5)
- regions (7)
- administration (1)
- science (5)
The ‘coal commission‘s’ decision

- 12.5 GW of coal capacity will go offline by 2022, only 17GW remain by 2030 (of currently ~42 GW)
- Phase-out date 2038 with option of early phase-out by 2035
- A total of €40 billion in transition measures in German coal regions for next 20 years
- Costs and conditions for compensating utilities subject to negotiations with the government
- Confirming target of 65% renewable electricity production by 2030
Finding 1:
The upcoming coal phase out affects countries differently

Need to differentiate between countries:

- **that only mine coal (e.g. Colombia)**
  - employment
  - income from exports

- **those burning coal (e.g. UK and many countries in Europe)**
  - energy security
  - (employment)

- **those doing both (e.g. US, China, India, South-Africa, Germany)**
  - energy security
  - employment
  - (income from exports)
Finding 2: Political instruments need regional adjustments

- e.g. Colombia
  - Financial payments as compensation for a moratorium on new mines and export losses
  - Support for RES to meet rising energy demand, enable energy access & create jobs
  - Active & passive labour market instruments to enable a just transition

- e.g. Europe or US
  - Moratorium on new mines
  - Existing coal power plant fleets need to be closed
  - Support for RES to replace fossil capacities & create jobs
  - Active & passive labour market instruments to enable a just transition

- e.g. China or India
  - Moratorium on new mines; maybe linked with compensations
  - Moratorium for new plants to prevent (stranded) assets
  - Support for RES to meet rising energy demand, enable energy access & create jobs
  - Active labour market instruments to create new jobs
Finding 3: The energy system is just one element of a ‘just transition’
Kick-off of Discussions: Main Findings

We need to enable a timely CoalExit to meet climate targets

Different challenges prevail for countries and regions

Technical solutions are comparably easy & well researched

Crucial to prevent coal investments from emerging countries

Only possible if developed coal countries set a positive example
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International research platform coaltransitions.org - independent from funding institution or project duration.

We encourage academic scholars, research projects, or institutions to contact us if they want to be included on the website.

A just and timely coal transition is possible but needs political support

Main Finding

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Background: Policy Making, Stakeholder Engagement
Affiliation: EC Platform for Coal Regions in Transition

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Background: Economics
Affiliation: Institute for Structural Research, Poland
Selected References

Brauers, H. et al. Coal transition in Germany - Learning from past transitions to build phase-out pathways. (IDDRI and Climate Strategies, 2018).

Herpich, P., Brauers, H. & Oei, P.-Y. An historical case study on previous coal transitions in Germany. (IDDRI and Climate Strategies, 2018).


