



Coal Transitions: Research and Dialogue on the Future of Coal

Background

In many major emitting countries coal remains an important source of energy supply - up to 70% of total primary energy supply in China and South Africa, with dominant share of total electricity generation in many countries (40% in Germany, more than 70% in Australia, China, India, Poland and South Africa). The Nationally Determined Contributions (NDCs) submitted under the UNFCCC Paris Agreement imply significant reductions in the share of coal in primary energy by 2030. Holding the increase in global temperature to well below 2°C and pursuing efforts to limit it to 1.5°C would require even deeper reductions in coal use in the energy system by 2030 and 2050, even allowing for CCS technology.

Relevant research and advocacy efforts have so far focused, with a high degree of success in many places, on stopping new coal plants. **But early phase out of both coal production and consumption assets will also be necessary to stay well below 2°C.** This is a major economic, social and political challenge. Key issues include energy security, fiscal impacts, labour market implications and the need for a 'just transition'. Other key issues include the stability of policy frameworks to guide private and public decisions and societal and political acceptability of economic change.

The project

The "Coal Transitions" project is KR Foundation funded 2-year transdisciplinary, international effort to link and reinforce policy, research and advocacy efforts on coal transition in different countries. The project will link to other initiatives focusing on coal (e.g. on the investor side), but aims to fill the gap of international dialogue and lesson learning on coal transition. It will be carried out by a consortium of 8 organisations, led by IDDRI and Climate Strategies.¹ The project covers: **Australia, China, Germany, India, Poland and South Africa.** Other countries will also be covered in a report on how coal transitions have been managed in the past.

The project aims to:

- promote deeper understanding amongst relevant national and international stakeholders of the implications of global climate mitigation activities for the future of coal production and consumption;
- support societally acceptable transition away from coal, to marry coal phase out with economic renewal and a just transition in key countries;
- promote knowledge and acceptance new narratives on the future of coal, enabling conditions, and concrete steps for national coal phase out strategies;
- promote exchange, learning and more coordination on transition policies at international level.

A project **Advisory Group** will be created, to advise the project and facilitate dissemination and provide feedback on whether the project is achieving its aims. **Communication activities** will be based on clearly

¹ For more information on these organisations, see iddri.org and climatestrategies.org. Teresa Ribera, Michel Colombier (respectively Director and Scientific Director, IDDRI) and Henry Derwent (Senior Advisor, Climate Strategies) will provide leadership. Thomas Spencer, Henri Waisman (IDDRI), Andrzej Błachowicz and Germana Canzi (Climate Strategies) will jointly manage the project. Core project team: IBS, Poland (Piotr Lewandowski); DIW, Germany (Karsten Neuhoff, Franziska Holz); Tsinghua University, China (Fei Teng); Indian Institute of Management Ahmedabad, India (PR Shukla, Amit Garg); Australian National University (Frank Jotzo); University of Cape Town (Jesse Burton, Harald Winkler, Tara Caetano).

written reports and briefings, with concise summaries for policy makers. Targets will include specialised reporters globally, and national level press.

Expected project outputs

- 1) **Sept 2016 – May 2018: Stakeholder workshops & International Roundtable on the Future of Coal.** At the start and middle of the project, the project will convene national and international stakeholders of the coal sector (policy-makers, researchers, unionists, investors and industry). This will test results, share experiences and create among policy makers and industry a sense of shared international challenges and effort on coal phase out. First meeting to be held in Paris in September 2016, while the second will be in India or in China. Side events at COPs are also envisaged. At the end of the project, there will be an International Roundtable on the Future of Coal, where results of the project and future recommendations will be discussed and publicised.
- 2) **By January 2017 (roughly): Report on lessons from past experiences of coal transition.** This will include a review of historical examples of national transitions away from coal. It will analyse how socio-economic impacts were managed. It will identify lessons derived from these past experiences and from the results of strategies applied to tackle these challenges.
- 3) **Feb – Dec 2017: National reports.** These will analyse the social, human, labour, economic, fiscal and industrial relations dimensions implied by the transition away from coal and the policy options to manage the transition in each country, addressing social, economic, fiscal and industrial policy issues. These will also be discussed in national level stakeholder events.

Reports will also cover country-specific issues such as:

- India: challenges of avoiding coal lock-in in a fast growing emerging economy
 - China: risk of investment bubble and stranded assets in the coal sector
 - Germany: challenges of regional lock-in to a coal-based regional economy
 - Australia: policies to control investment and retire coal assets early
 - South Africa: Coal to liquids, industrial development and a just transition
 - Poland: socially viable public policy mix to foster the reallocation of the labour force out of the coal sector.
- 4) **By July 2017: Report on global implications of coal transition (investment, trade, global markets, and stranded assets).** This will analyse global-scale implications and potential unanticipated impacts of coal transition, notably on coal prices, trade flows, investment patterns or employment. This information will inform the national case studies to identify potentially unforeseen socio-economic or fiscal impacts. It will also identify and quantify issues such as stranded assets and investment shifts associated with coal transition.
 - 5) **By September 2017: report on Energy system pathways and the future of coal under NDC and 2°C compatible scenarios.** This will define in each of the six project countries, energy system and coal sector pathways to 2050 under two scenarios: 'Paris contributions' (NDCs) and <2°C compatible deep decarbonisation. These national pathways will describe the possible evolution of the coal sector in these countries' economies under different policy settings, consistent with national climate policy and development goals. Uncertainties will also be detailed (such as CCS). They will provide comparable information about coal production and use, import and export flows in each country. They will also provide a foundation for subsequent policy analysis and revealing potential policy inconsistencies (e.g. continued investment in coal power or mining capacity).
 - 6) **By May 2018 – Final report on international policy implications and key principles for the global coal transition.** This will lay out key recommendations and lessons for policy approaches to coal phase out and the enabling conditions under which they could work eg. identifying specific coordination needs between countries. It would also highlight specific lessons and enabling conditions emerging from the country case studies and lessons from past experience. This analysis is designed to be used by decision-makers, coal industries and other stakeholders managing or undergoing restructuring and to promote a just transition to a low carbon economy.