



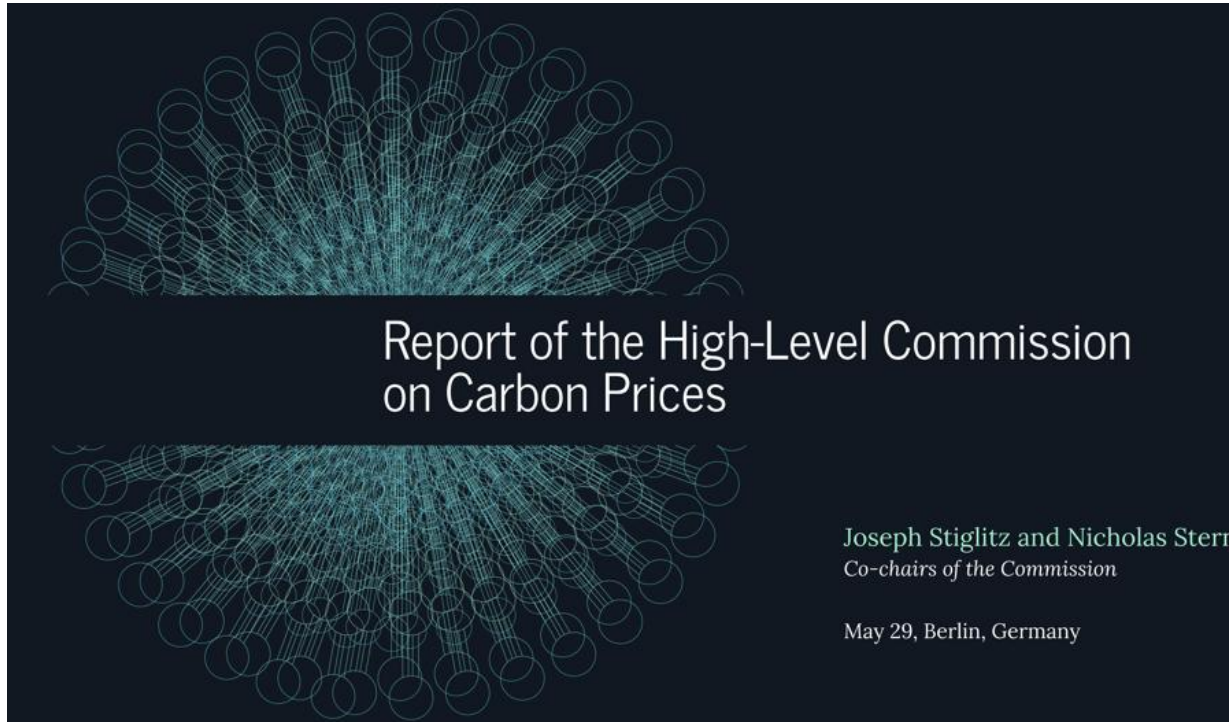
POTSDAM INSTITUTE FOR  
CLIMATE IMPACT RESEARCH

# Carbon Pricing Leadership Coalition: Report of the High-Level Commission on Carbon Prices

Prof. Dr. Ottmar Edenhofer

Carbon Market Platform,  
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# Report of the High-Level Commission on Carbon Prices



J. Stiglitz



N. Stern

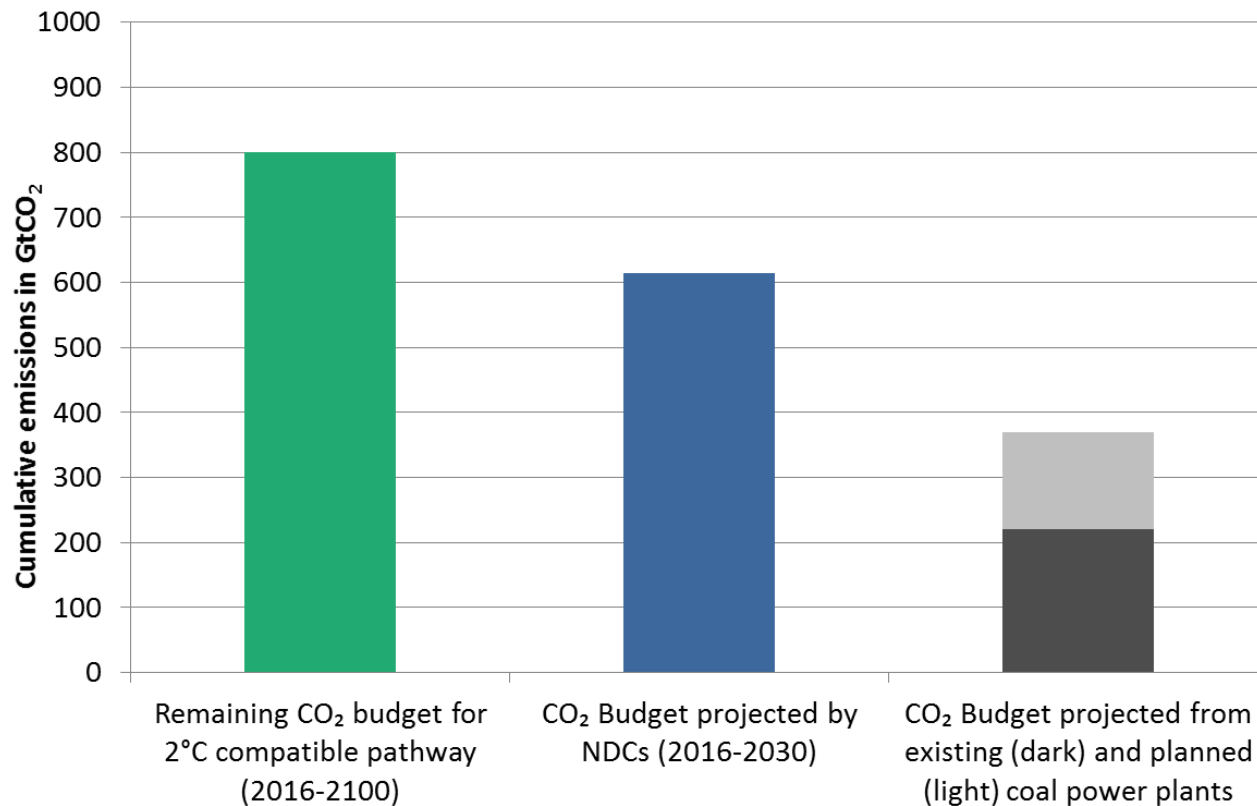


# Key conclusions of the report

- 1. Tackling climate change is an urgent and fundamental challenge.**
2. A well-designed carbon price is an indispensable part of a strategy to reduce emissions in an efficient way.
3. Achieving the Paris Objectives will require all countries to implement climate policy packages.
4. The Commission explored multiple lines of evidence on the level of carbon pricing that would be consistent with the Paris Agreement.
5. Explicit carbon-pricing instruments can raise revenue efficiently because they help overcome a key market failure: the climate externality
6. Carbon pricing by itself may not be sufficient to induce change at the pace and on the scale required for the Paris Target to be met

# The 2° C budget does not leave any leeway

Cheap and abundant coal is the driver of a „re-carbonisation“ of the energy system in some parts of the world

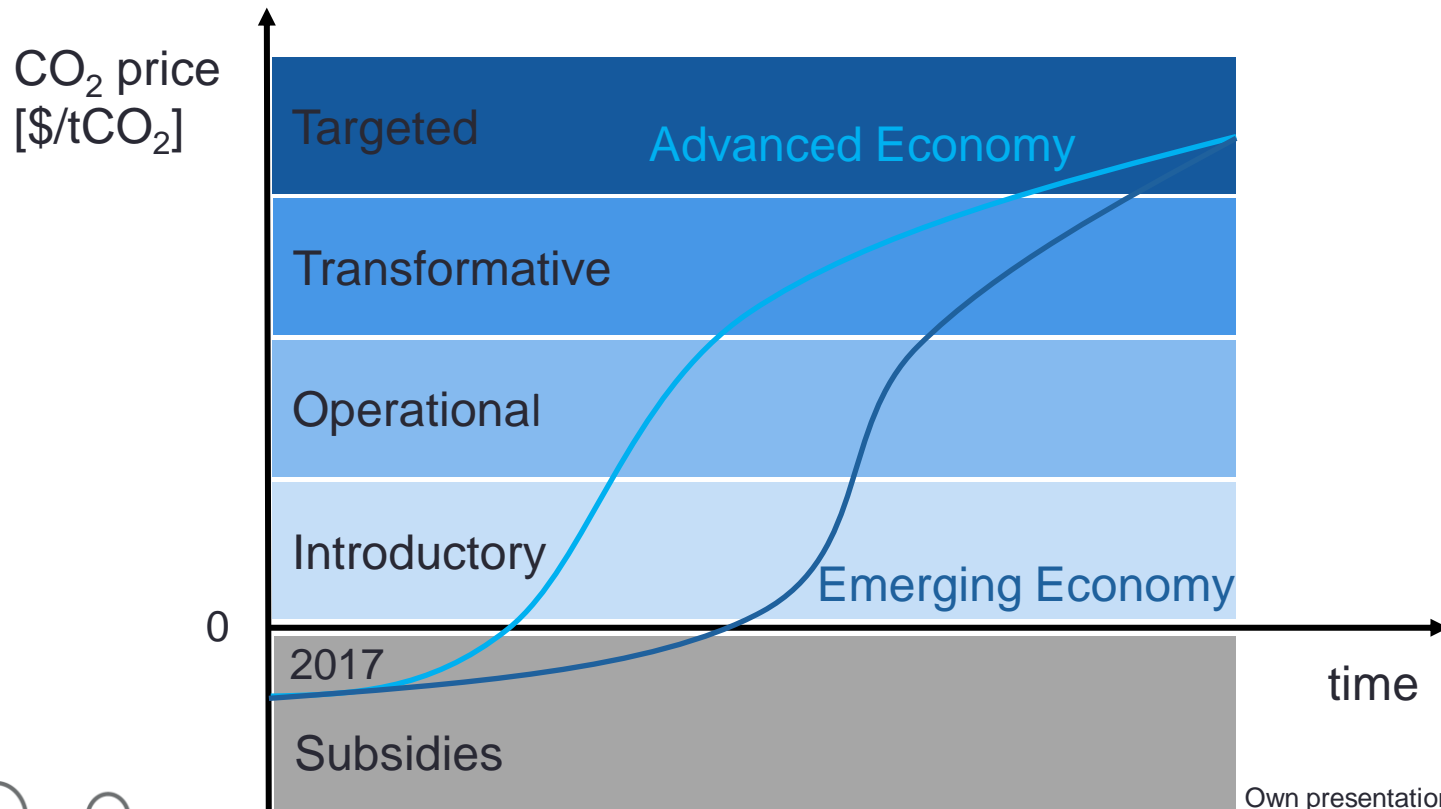


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# From negative to positive carbon prices

Phasing out fossil fuel subsidies and carbon pricing (with taxes or emission trading systems) is essential



Own presentation; based on @CDP

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# Climate Policy Packages

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- **Tackle government and market failures other than GHG externalities**
  - Spillovers, learning and R&D, information, capital markets, networks, and unpriced benefits and co-benefits of climate action
  - Prevent excessive distributional or adjustment costs of carbon pricing
- **Country Policy Design: National and Local Circumstances**
  - Reflect countries income levels as well as benefits and co-benefits
  - Balance between explicit and implicit carbon pricing
- **Dynamic and Adaptive Climate Policy Designs**
  - Requires long-term credibility and predictability of policy signals
  - Include some degree of flexibility to experiment, monitor and revise policy
- **International Cooperation for Consistency of Actions across Countries**
  - Financial transfers, carbon-price-based agreements, and public guarantees for LCR project
  - Larger role for the (MDBs) in fostering and financing sustainable investments



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# Approach #1: Technological Roadmaps

- Decarbonization strategies can be informed by sectoral targets and milestones at different points in time, expressed using various sector-specific indicators

Year	Carbon-Price Corridor (US\$/tCO <sub>2</sub> )
2020	24-39
2025	30-60
2030	30-100

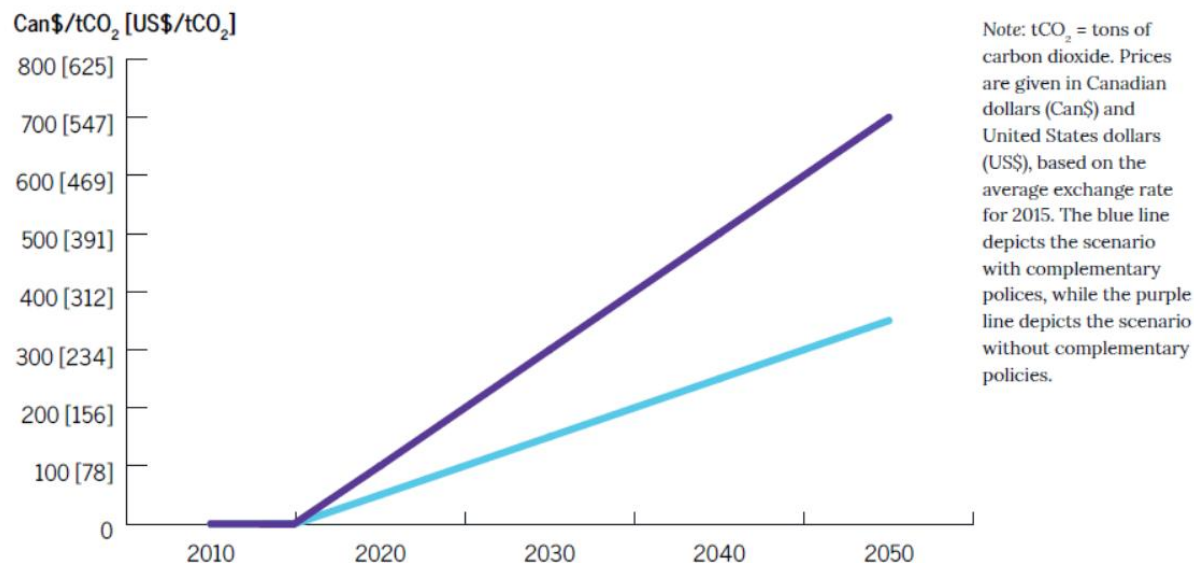
- Industry-forecast aligns with most techno-economic models in the short run
- Focus on the power sector

# Approach #2: Analysis of National Mitigation Pathways

- National-scale studies and modelling exercises can provide estimates of the shadow or explicit price of carbon for a given economy

Example: Canada

Figure 1: Use of Carbon Price to Trigger Transition Toward Deep Decarbonization in Canada

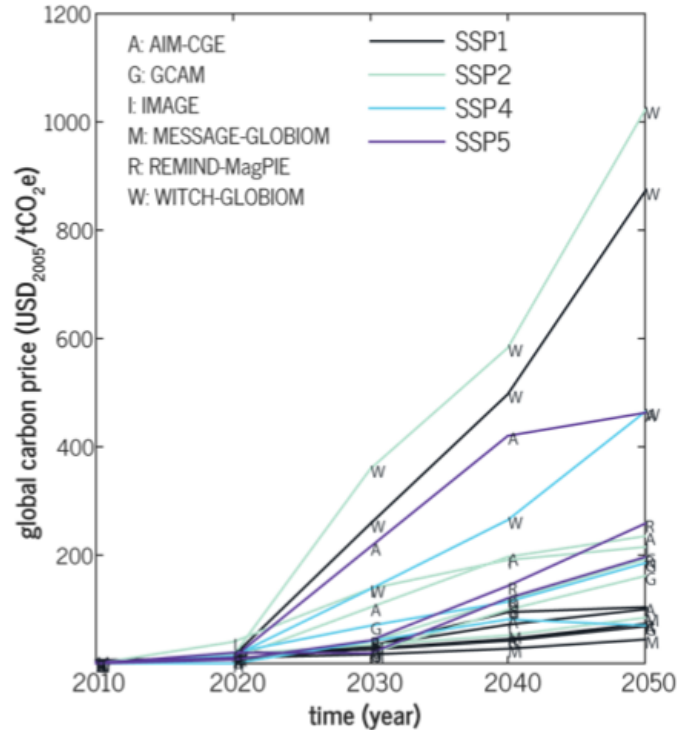


- Simulations suggest that the carbon prices needed to achieve deep decarbonization depend on the presence of other policies

# Approach #3: Global Integrated Assessment Models (IAMs)

- Produce global scenarios of future socioeconomic and technological development consistent with different global temperature targets

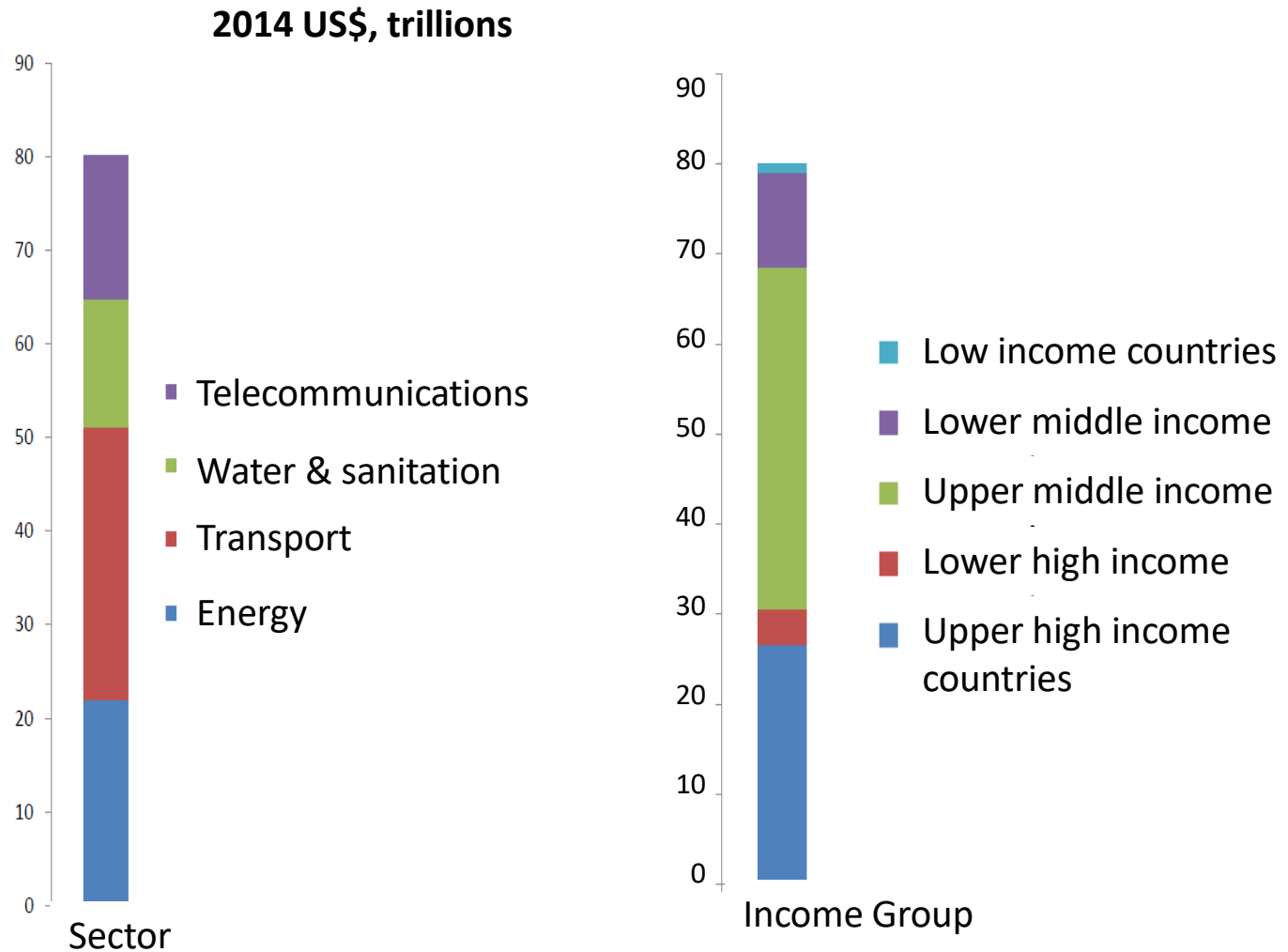
Figure 2: Carbon-Price Trajectories Limiting Warming in 21<sup>st</sup> Century below 2°C



# Key conclusions of the report

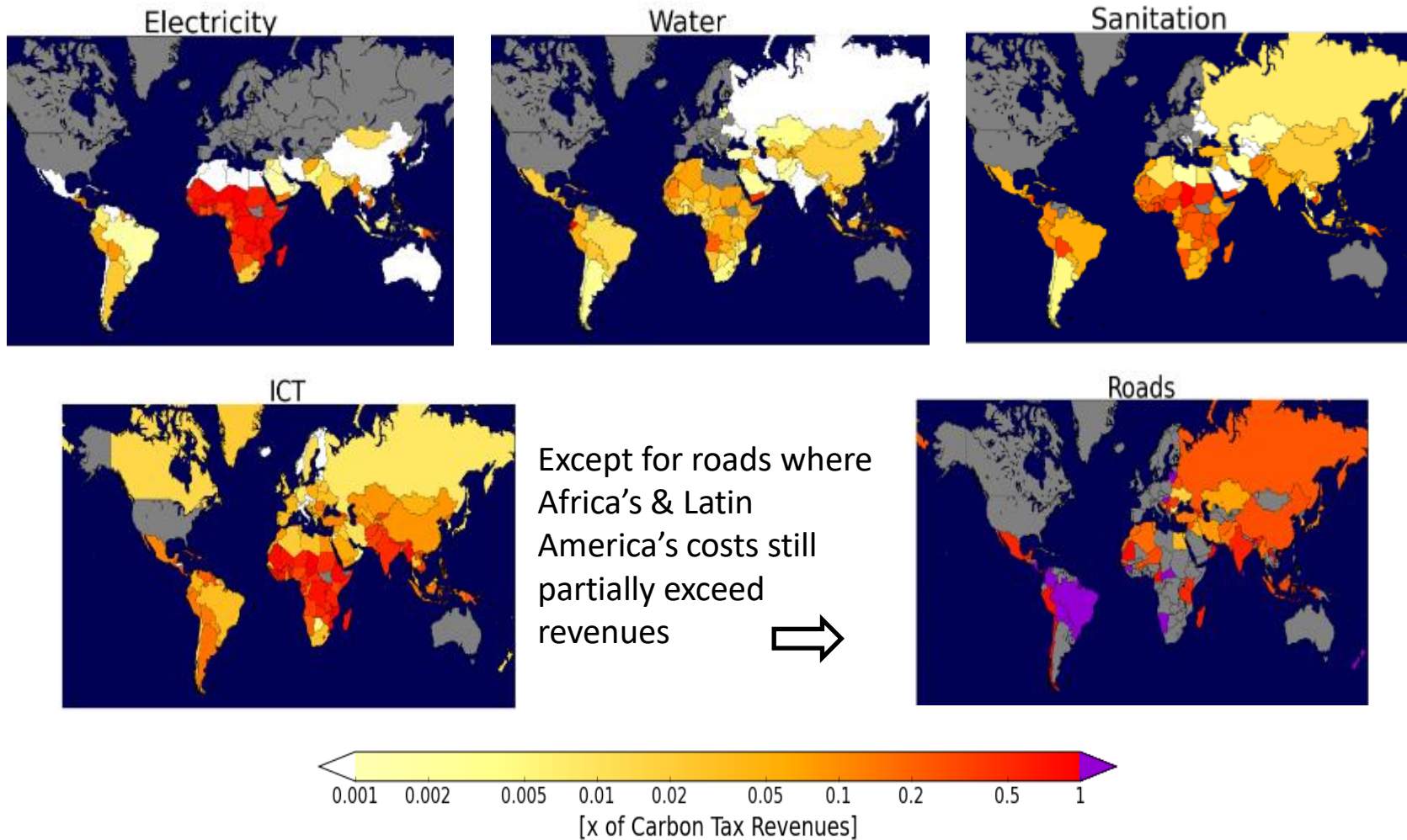
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# Projected cumulative infrastructure demand, 2015-2030



Source: Bhattacharya, Chattopadhyay, and Nagrah (forthcoming)

# Carbon pricing revenues are sufficient to finance universal access to infrastructure



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# Complementary policies

- **Using Complementary Infrastructure and Planning Approaches**
  - **Combination of policies** is likely to be more dynamically efficient
  - **Support investments** in public transportation infrastructure and urban planning
- **Tackle Other Market Failures and Distributional Impacts**
  - **Efficiency standards** and investment incentives can be introduced where carbon pricing would be difficult to implement or just inefficient
  - **Revenue neutral feebates** can influence investment and purchase decisions in the early stages of the transition and gradually improve political acceptability
  - **Climate related financial disclosures** encourage green investment and reduce financial sector risk

# Summary of the Report



- Carbon price necessary to implement the Paris Agreement based on the analysis of different approaches:  
**40-80 \$/t CO<sub>2</sub> until 2020 and 50-100 \$/t CO<sub>2</sub> until 2030**
- This assumes that the carbon price is complemented by measures and policies
- Relevance of the revenue side: Use for the reduction of other taxes, investments in clean infrastructure, etc.