WORLD BANK CARBON FINANCE UNIT
CARBON PARTNERSHIP FACILITY
2013 ANNUAL MEETING

POLICY MRV AND POTENTIAL CREDITING OF CLIMATE FRIENDLY ECONOMIC/FISCAL POLICIES

Outline

- Rationale for conceptual Policy MRV work program
- A big picture of fuel/carbon pricing
- Why is ex ante estimation not good enough?
- Elements of future analytical work
- From Policy MRV to crediting.

Rationale for Policy MRV work program

Quantify GHG emission reductions from

climate friendly fiscal/economic policies such as:

- Removing fossil fuel subsidies/taxing fossil fuels
- Taxing carbon/ETS

To enable:

- Reporting of climate benefits
- Evaluating policies in a comprehensive way
- Intensifying communication between fiscal policy and climate policy community
- Facilitating potential international support through results-based climate finance
- **Carbon crediting.**

Policy MRV work program

- Broadening the base: new CADF participants
- Identification of interested implementing countries: PMR, WB development policy loans, IMF programs
- Development of policy MRV methodology and information on UNFCCC process
- Since March 2013: one full-time modeling specialist reinforcing the team

Global picture of fossil fuel pricing

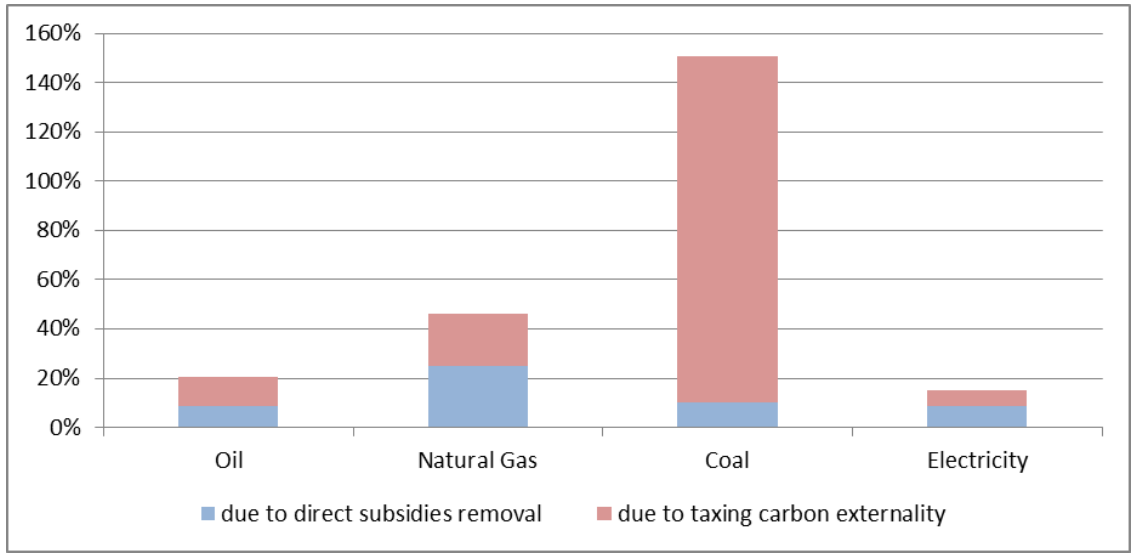
- Direct subsidies: $500bn p.a.
- Exemptions from existing taxes: $300bn p.a.
- Not taxing externalities*: $1,100bn p.a.

*at assumed carbon price of $25/t and taking into account other externalities **2.5 % global GDP**

8 % global gov't revenues

Emission reduction potential: 4.5bn t p.a. (source: IMF 2013)

Price effects through direct subsidy removal and carbon taxing (own calculation)



Some stylized experiences in reforming fossil fuel pricing

(source IMF 2013, list of countries not complete)

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- Impact on income distribution
- Concerns on competiveness in short run
- Lack of political consensus and administrative capacity constraints

Brazil 

Chile 

Mexico 

Peru 

Ghana 

Uganda 

S. Africa 

Niger 

Nigeria 

Turkey 

Poland 

Armenia 

Indonesia 

Philippines 

- Compensation schemes for low income households
- Step-wise phase in for trade exposed sectors
- Broad political support and capacity building

Bridging to climate policy and potentially generating carbon revenues to make a difference?

Some stylized experiences with (designing) carbon taxation and ETS

- New for most countries – risk
- MRV creates new requirements – cost

European Union 

Australia 

New Zealand 

China 

S. Korea 

Chile 

S. Africa 

- Piloting and step-wise phasing-in;
- Paying down MRV cost.

Results-based finance/carbon crediting to facilitate implementation?

An Illustration through a basic framework model

- ***Strategy:*** "simple" top-down economic model, with meta-analysis approach
- ***Mode:*** stochastic (ex-ante) & deterministic (ex-post)

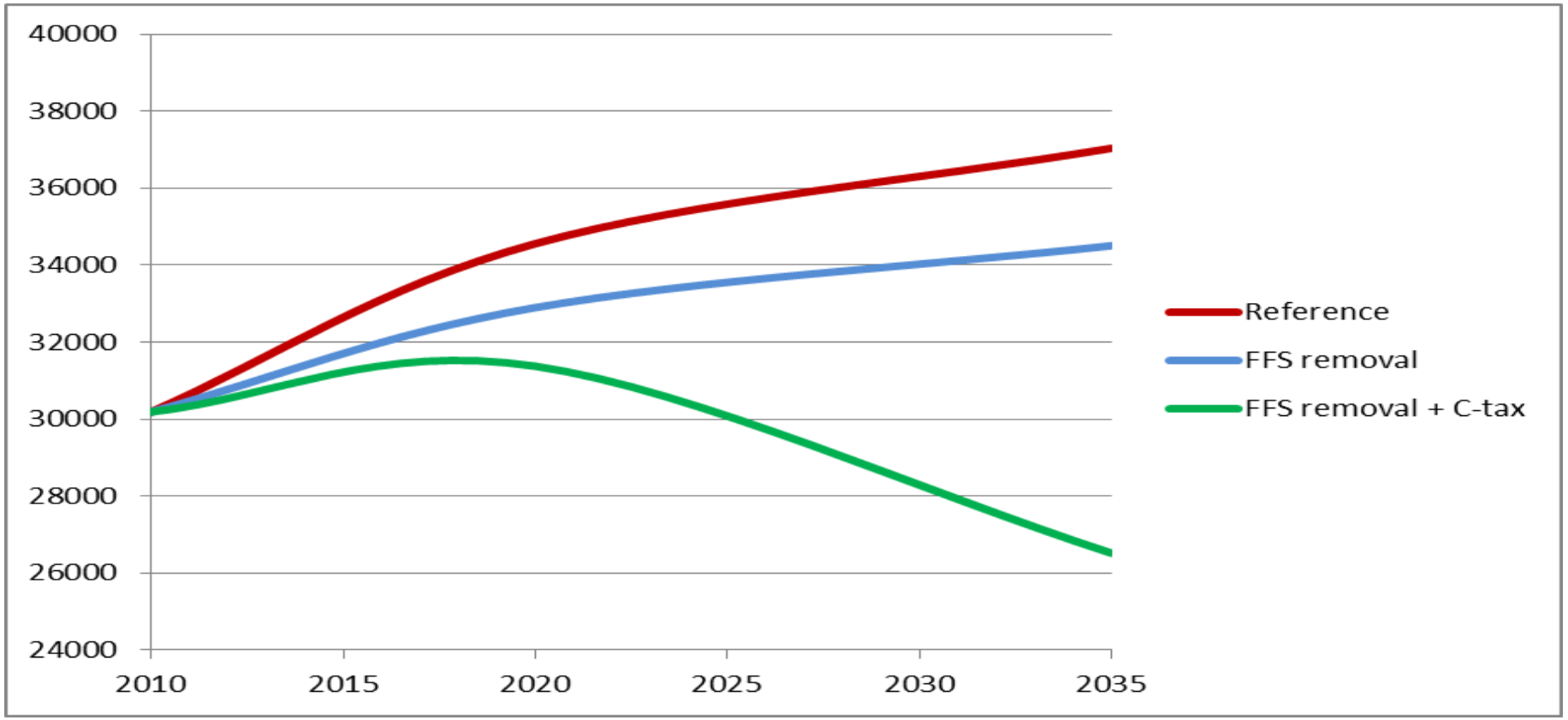
- ***Coverage:*** global, with country modules
- ***Sector:*** energy-related, split by fuel and electricity
- ***Fuels/energy:*** oil, natural gas, coal, power
- ***Gas:*** CO_2
- ***Time horizon:*** 2010-2035

- ***Scenarios:*** 2 (reference & one alternative)
- ***Calibration:*** largely IEA's database and scenarios

Demo Simulation Set Up

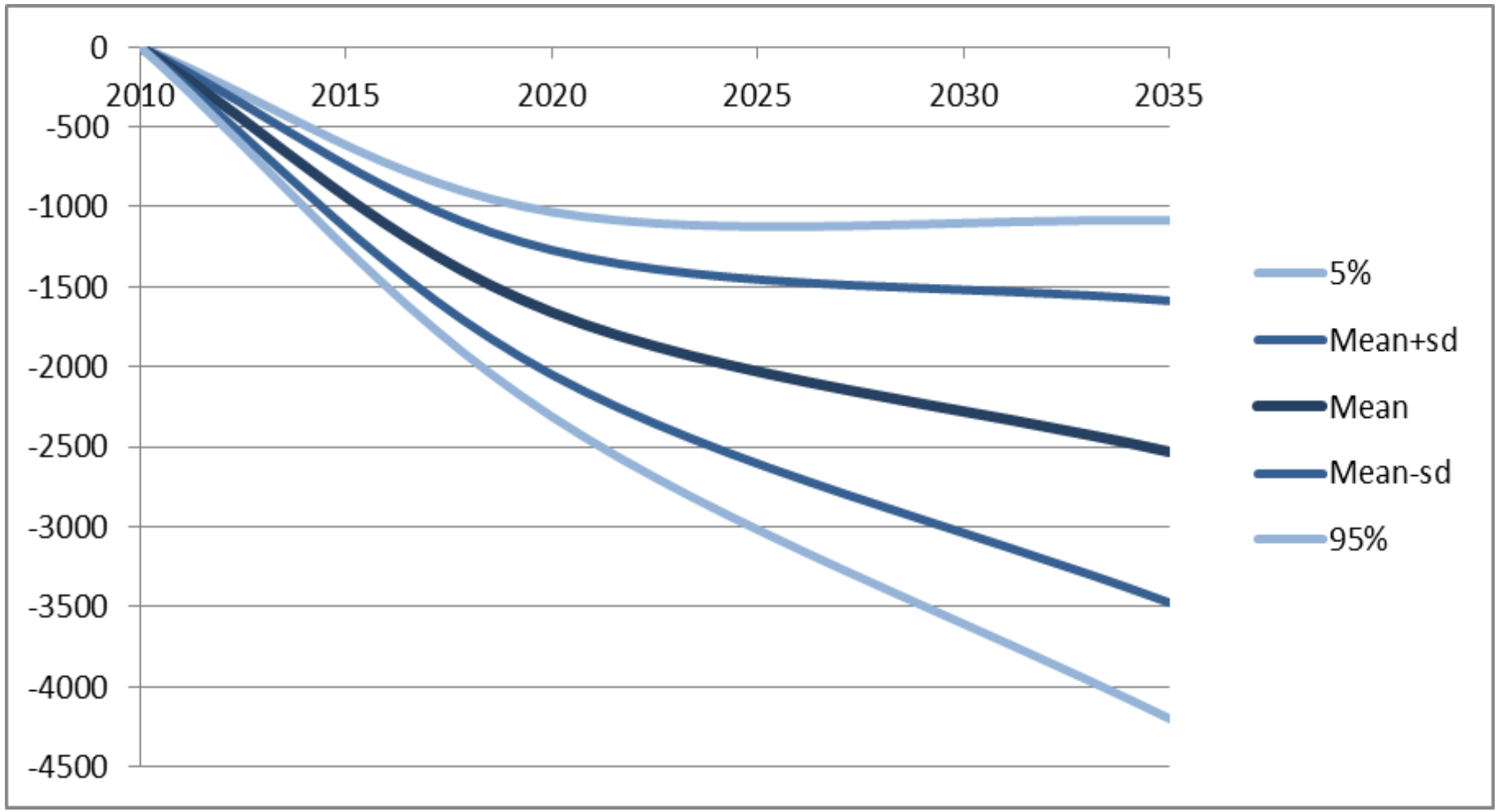
- ***Alternative Policy scenario:***
  - Complete removal of fossil fuel subsidies, through liberalization of domestic fuel prices in 2010
  - Introduction of a rising carbon tax over time $25 in 2010 to $36 in real terms
- ***Reference case:***
  - Assumes no additional effort from today, i.e. includes Copenhagen pledges (on real price terms)
- ***Focus regions:*** Global
- ***Run:*** 50,000 iterations

Global: CO_2 emissions

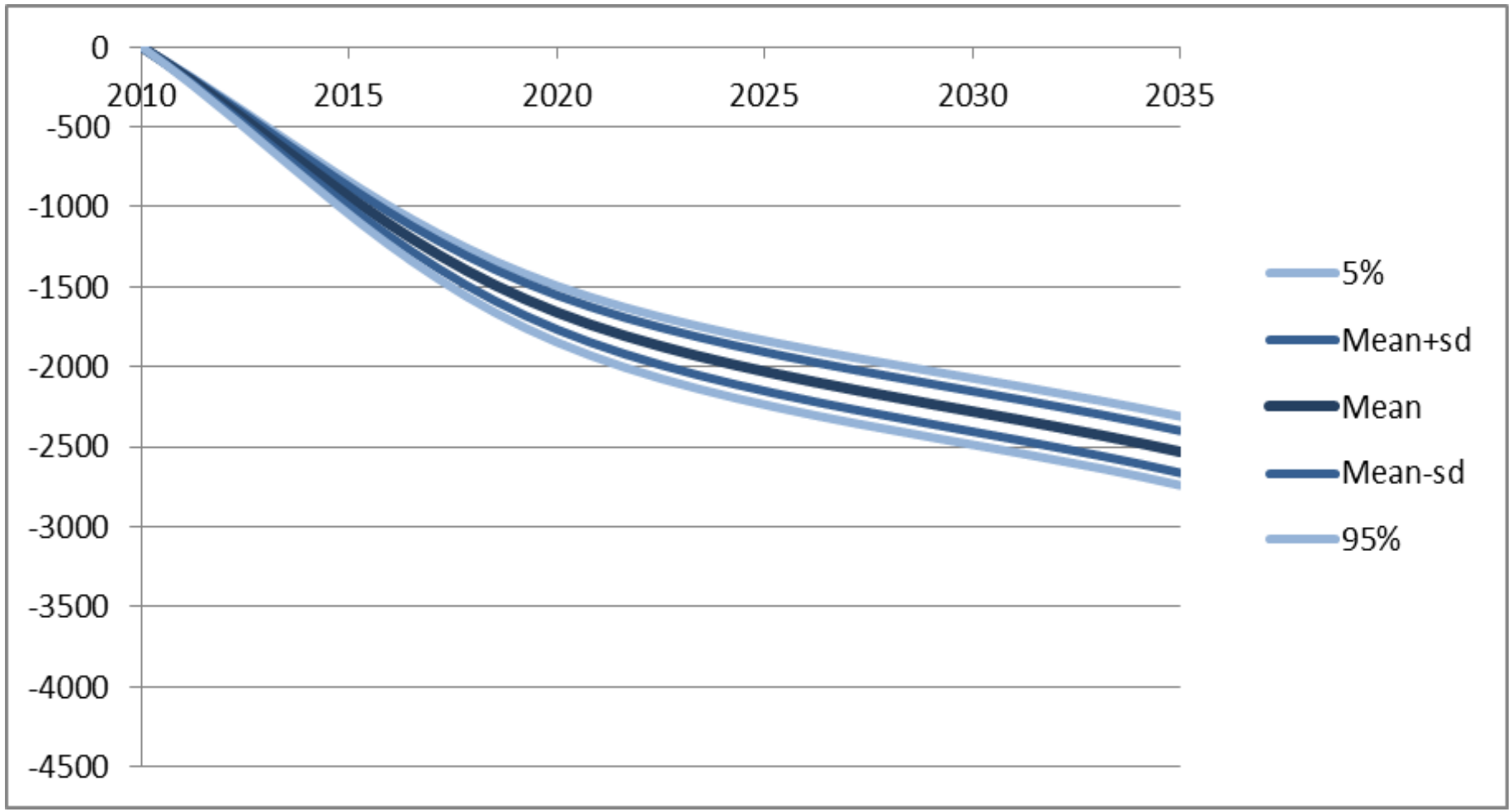


- Reference sees CO_2 growing to 34.6 Gt by 2020, 37.1 Gt by2035
- ↓ From FFS removal: 1.7 Gt in 2020; 2.5 Gt in 2035
- ↓ from FFS removal + carbon tax: 3.2 Gt in 2020; 10.4 Gt in 2035
- DO WE BELIEVE IN THIS (ex ante simulation) STORY?

Global: CO_2 reduction—FFSR only (free run)



Global: CO_2 reduction—FFSR only (certain oil price elasticity & fuel prices determined)



- Range (90%) ↓ to 2.4 - 2.7 Gt—and can be further narrowed down
- MRV of indicators (as they evolve) → model update → more precise accounting of CO2 reduction

Elements of future analytical work

- Focus on already existing policies
- Methodology to determine GHG emission reductions from climate friendly economic/fiscal policy ex post
- Tailor made, case specific models
- Plausibility testing ("theory enhancement") of explanatory power of models (attribution)
- Leakage analysis (related to model boundary)
- Operational blueprints to implement monitoring and verification
- Conceptual blueprints for results-based climate finance support or carbon crediting of potential incremental policy efforts

Economic policies as New Market Mechanism programs

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Crediting clean economic policy programs:

- Removing fossil fuel subsidies/fuel taxation;
- Carbon taxation/emissions trading systems.

Broad segments of the economy

Net global emission reductions

Crediting or cap-and-trade

Cost efficiency

Economic rationale

Challenges to credit clean economic policy and possible ways forward

- Supply potential >> potential demand:
  - Appropriate sizing of crediting component
  - Results-based finance could be used to complement crediting
- Crediting having sufficient impact to incentivize action:
  - Start with existing/decided policies and credit for increase in ambition
- GHG accounting methodologies missing/uncertainties:
  - Policy MRV work program
  - Conservativeness: low range numbers as basis for crediting