Session 3: Aligning Climate Change and Sustainable Development Objectives

Francisco de la Chesnaye

"Developing Visions for a LCS through Sustainable Development", June 15, Tokyo

Some questions for discussion

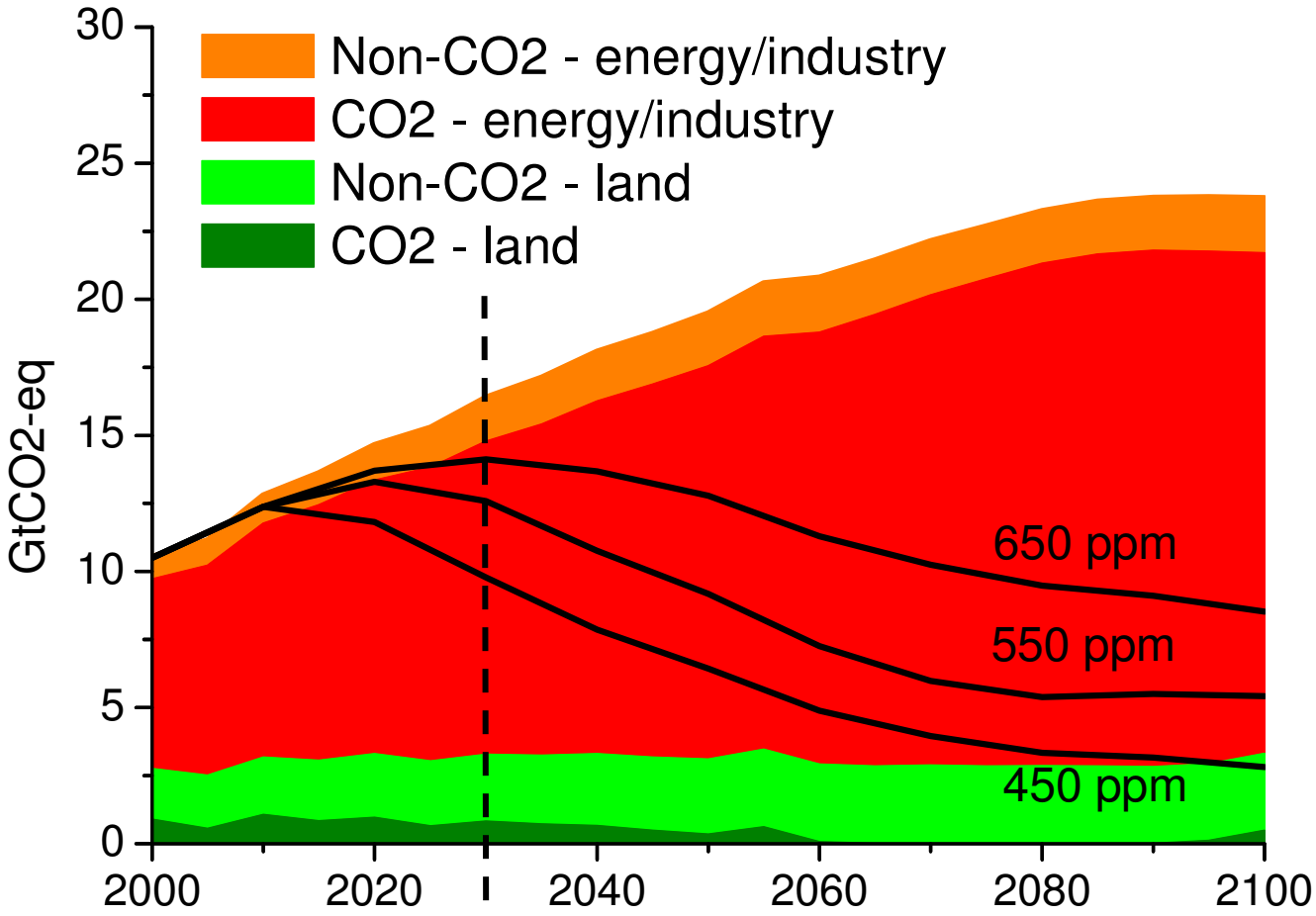
- What does “Low Carbon” mean, (lower carbon, lowest carbon, no carbon) in the context of development ?
- What are we committed to over the next 30+ years in terms of:
  - Climate change (consider impacts, vulnerability and adaptation)
  - Current and near-term installed capacity, primarily in the power generation and transportation infrastructures, and resulting emissions
  - Other international policy priorities
- What are win-win strategies across all these policies that also work at the local, national, and international levels

SD measures influencing emissions

- Improve access to reliable and affordable energy services (stress on decentralised and renewable energy systems, modern biomass technologies, cleaner liquid and solid fuels, energy efficiency, etc.)
- Changing unsustainable production and consumption patterns
  - Establish and support cleaner production programmes and centres
  - Incentives for investment in cleaner production and eco-efficency
  - Develop production and consumption policies… reducing environmental and health impacts…
- Promote an integrated approach to policy making at the national, regional and local levels
- Sectors that are most significant to both CC and SD as: Water, Energy, Health, Food, Ecosystems (Biodiversity and forestry), Human settlements, & Disaster preparedness

Source: IPCC WG3, CCT on CC & SD by L. Srivastava and T. Heller

Low stabilization targets cut into land use related emissions



Courtesy Tom Kram, MNP

Table 2.3: **Energy-Related CO_2 Emissions** (million tonnes)

	OECD		Transition economies		Developing countries		World	
	2002	**2030**	**2002**	**2030**	**2002**	**2030**	**2002**	**2030**
Power sector	4 793	6 191	1 270	1 639	3 354	8 941	9 417	16 771
Industry	1 723	1 949	400	618	1 954	3 000	4 076	5 567
Transport	3 384	4 856	285	531	1 245	3 353	4 914	8 739
Residential and services	1 801	1 950	378	538	1 068	1 930	3 248	4 417
Other*	745	888	111	176	605	1 142	1 924	2 720
Total	**12 446**	**15 833**	**2 444**	**3 501**	**8 226**	**18 365**	**23 579**	**38 214**

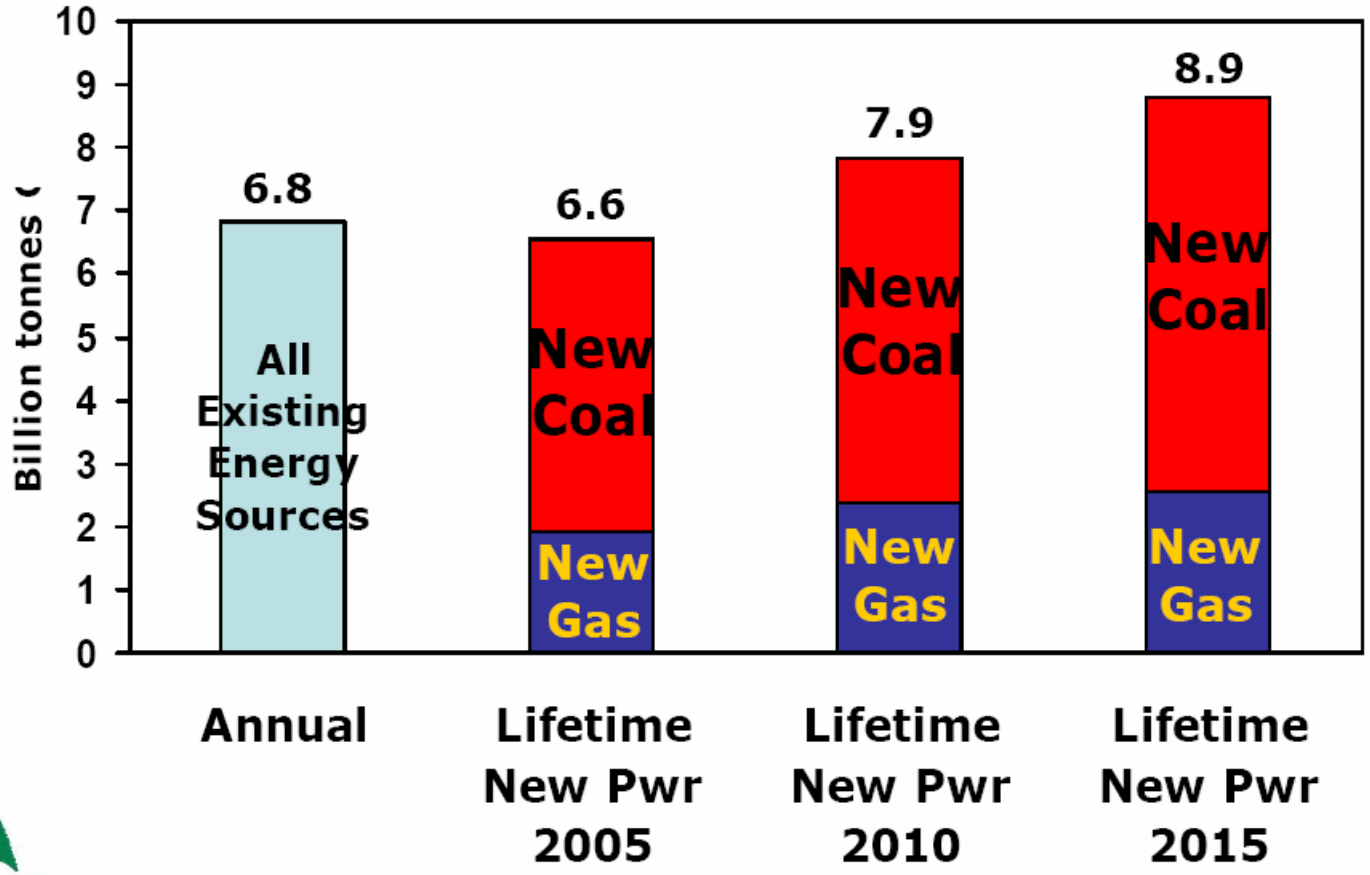
* Includes international marine bunkers (for the world totals only), other transformation and non-energy use.

62% ↑

Source: IEA, WEO 2004

Annual Carbon Commitment

Lifetime Emissions of Annual New Fossil Investment



Source: new fossil capacity, IEA, WEO 2004

Source: D. Hawkins, NRDC

What will Drive Energy (Development & Climate) Futures?

1. **Economic Growth**

2. **Population**

3. **National/ Regional Circumstances**
   - Energy Resource Endowment
   - Structure of Economy
   - National/Regional Governance
   - Geopolitics

4. **Global Governance**
   - Trade Regime
   - Mobility/Migration
   - Climate Change

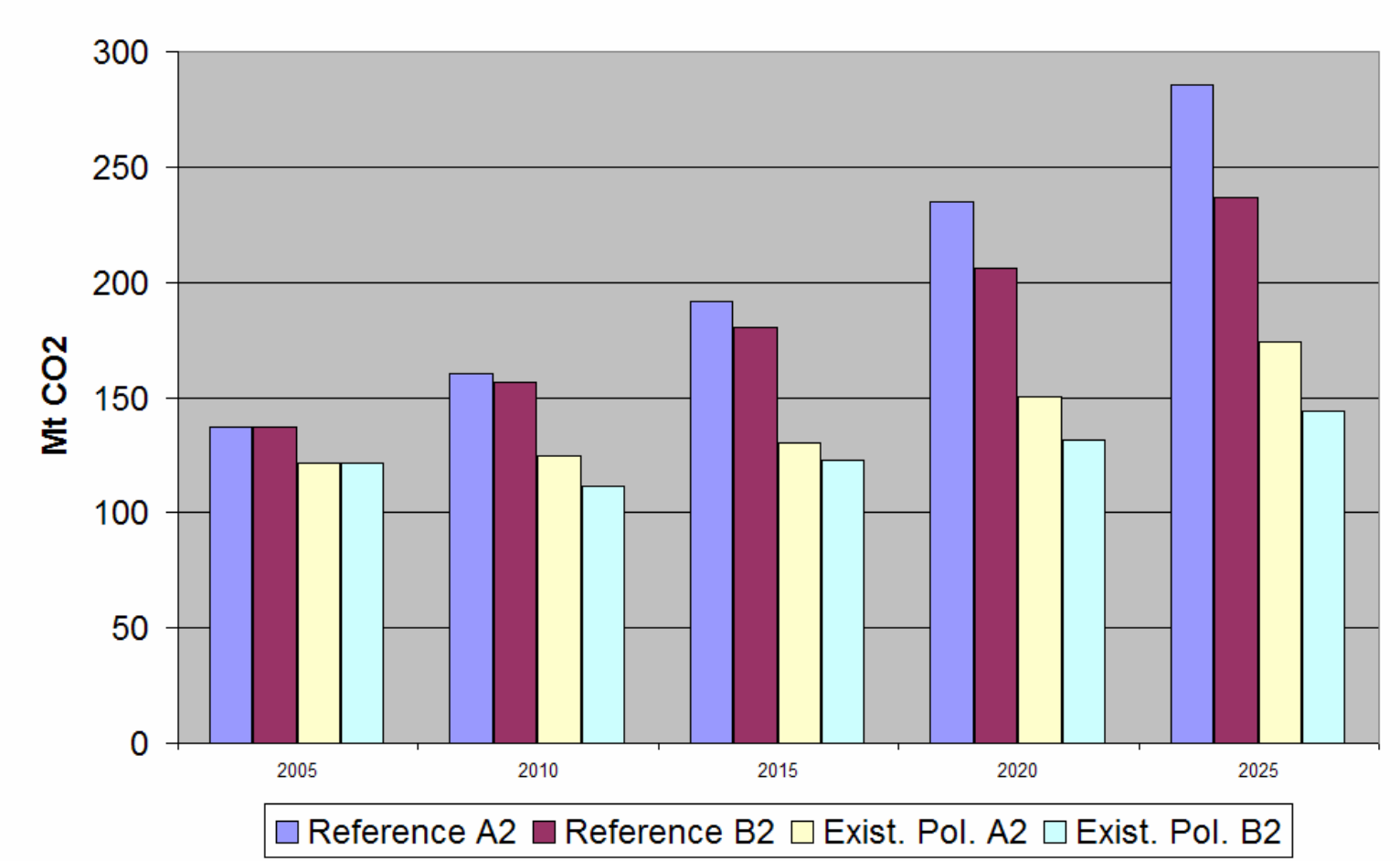
Adapted from P.R. Shukla

Example of Multiple Policy Challenges: Expanding the use of modern liquid biofuels across the world

- Links between biofuels and international commodities markets (eg ethanol x sugar, biodiesel x castor oil, palm oil, soybeans): effects of price subsidies, WTO rounds, large scale bioenergy programs on international prices of feedstocks and final products.

Courtesy Emilio L. La Rovere

CO_2 Emissions in Transportation Sector



Courtesy Emilio L. La Rovere

Some questions for discussion

- What does “Low Carbon” mean, (lower carbon, lowest carbon, no carbon) in the context of development ?
- What are we committed to over the next 30+ years in terms of:
  - Climate change (consider impacts, vulnerability and adaptation)
  - Current and near-term installed capacity, primarily in the power generation and transportation infrastructures, and resultant emissions
  - Other international policy priorities
- What are win-win strategies across all these policies that also work at the local, national, and international levels