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EU Energy Roadmap 2050: Energy targets and their impact on the energy mix

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THE PURPOSE

- **The energy policy should combine, at once:**
  - **competitiveness for European economy (often perceived as a burden, the energy policy should actually reduce costs, create new market opportunities and contribute to employment),**
  - **energy security and**
  - **environmental concerns (air quality + climate change).**

- **Is all of this possible?**

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CONTENT OF THE PRESENTATION

- **Three aspects:**
  - **Existing EU approaches**
  - **Compare with alternative approaches**
  - **3 examples of alternative approaches**
- **Draw a conclusion as to the way ahead**

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Existing approaches – current strategy

European Strategy for Energy and Climate Change

- 20% GHG emissions in 2020
  (30% if there is an international climate agreement)
- 20% share of renewables by 2020
- 20% more energy efficiency by 2020 (not binding)

- A Roadmap for moving to a competitive low carbon economy in 2050 – issued by EC 8 March 2011

- International agreement – 1st committment period of the Kyoto protocol ends December 2012

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Existing approaches - short term decisions

- 20% energy efficiency binding or not?
- 20% or 25 or 30% CO2 reduction on a unilateral basis?
- Targets for 2030, 2040 and 2050 CO2 reduction?
- scenario for near “carbon free” society in 2050?
- The architecture of the international agreement on climate change?

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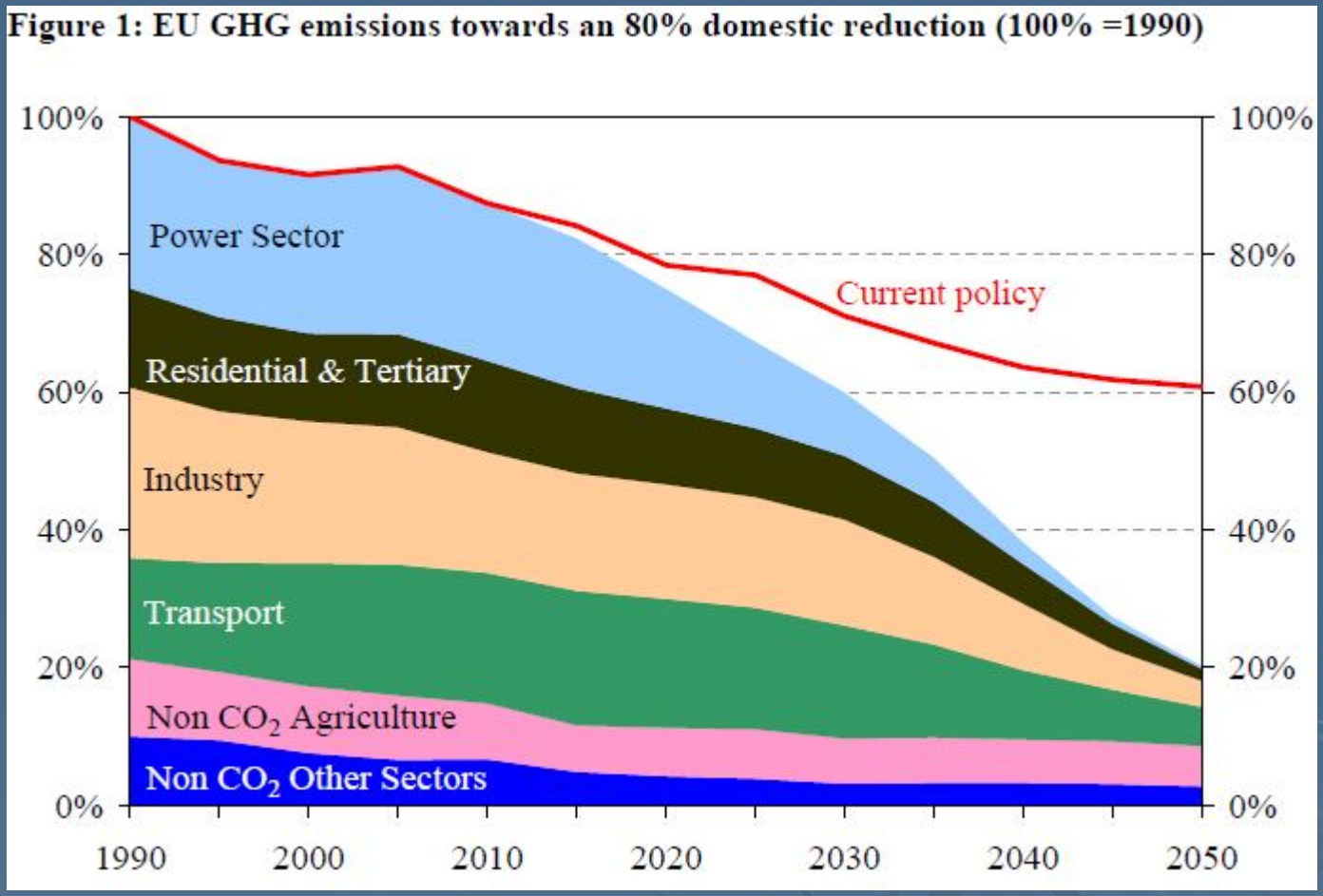
Scenario for near "carbon free" society in 2050 CO2 emissions by 2050



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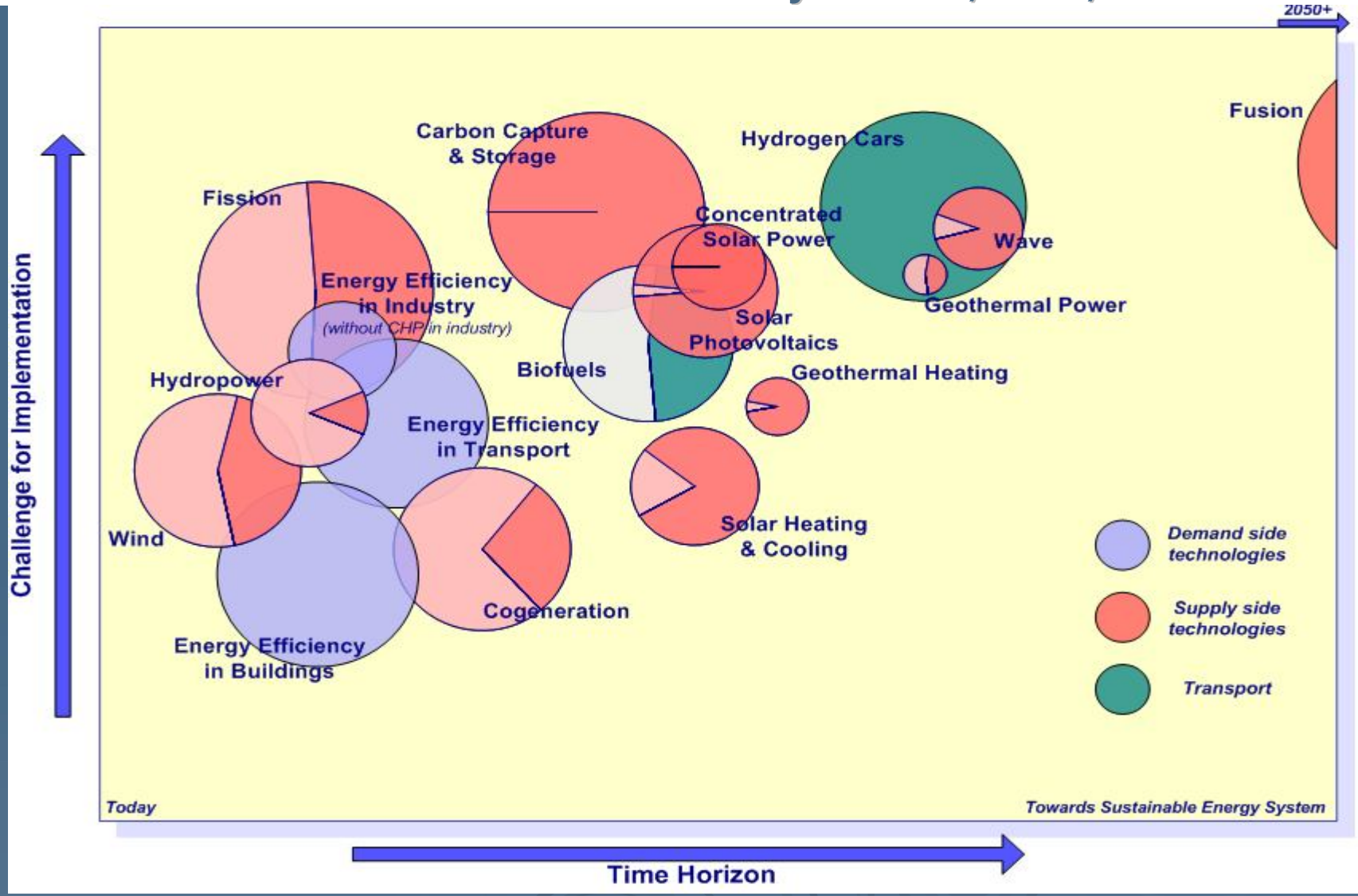
Potential of Technologies for the roadmap for moving to a low carbon economy in 2020, 2030, 2040 and 2050



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Alternative approach – Enabling criteria

Ensure:

1 - Availability of clean, affordable technology: Need to invest in research and development (EU Budget post 2013; FP8; structural funds; strong governance of 3% objective; SET plan)

2 - Adequate architecture of the international agreement to fight climate change (the EU with little more than 10% of global emissions will not be able to tackle climate change on its own. Risks of ambitious EU actions and impacts of these actions on the EUs competitive sectors in the context of fragmented global action on climate)

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Alternative approaches- elaboration of solutions

Complex problems require complex solutions

Existing solutions are too simplistic (e.g. country-economy wide targets used alone are too general; the division of the world into developed and developing countries as in the Kyoto Protocol is out-dated)

More complex, but consistent, feasible solutions are required

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Alternative approaches- Expert studies and policy opinions:

A number of academic studies have been produced some of which have generated concrete projects:

1. "Perform, Achieve, Trade" (PAT) scheme
2. "Practical global climate policy" – Harvard Project
3. Sectoral approaches
4. TOAs – Technology-oriented agreements
5. Harmonized domestic carbon taxes
6. Hybrid international trading programme

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Example 1: India PAT scheme

Perform, Achieve, Trade

Trading mechanism for high energy consuming industries

To incentivize industrial sectors to implement energy efficiency measures and to comply with consumption targets set by the regulator

Sector-wide energy consumption targets have been identified based on reported emissions data for each sector

When industrial units achieve and surpass the target, they can sell their excess in the form of Energy Savings Certificates (ESCerts); if industrial units fail to achieve their targets they must purchase the appropriate number of ESCerts to “meet” their energy savings

India (India PAT scheme is the first nationwide effort in the world)

Other countries:
US (Connecticut, Pennsylvania, Nevada),
Australia (New South Wales)

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Example 2
Practical Global Climate Policy

- The largest emitters and economies might pledge specific actions and policy commitments.
- These can take any form (cap-and-trade, taxes, series of technology standards, etc.), in an initial agreement.
- These commitments would be non-binding and there would be no “minimum” commitment necessary to participate.

(Pizer, William A. "Pizer Proposal: Practical Global Climate Policy." Policy Brief, Harvard Project on International Climate Agreements, Belfer Center for Science and International Affairs, Harvard Kennedy School, September 5, 2007.)

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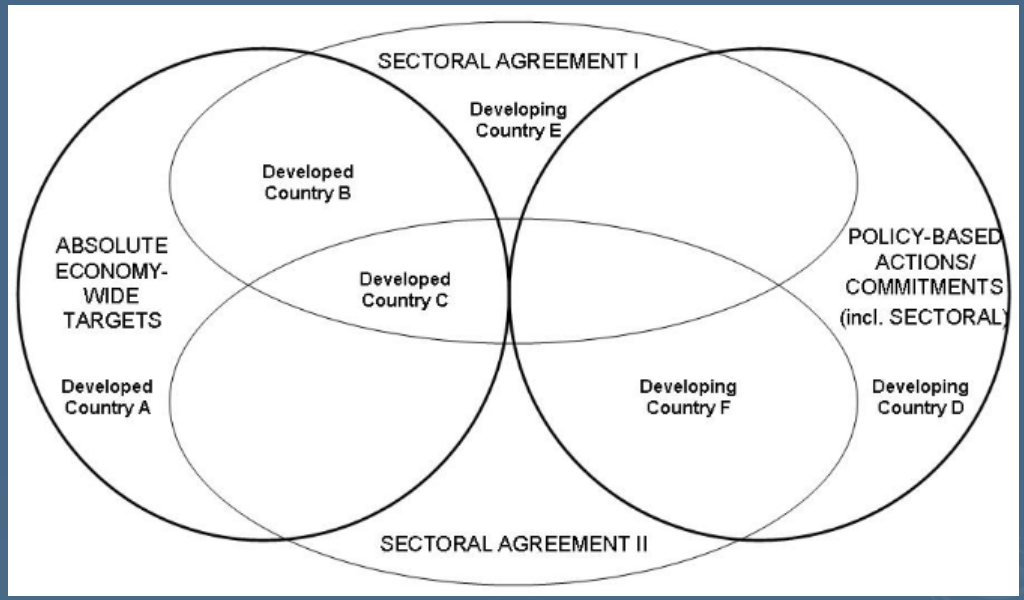
Example 3 - Sectoral Approach

"A flexible **multi-track post-2012 Framework**, including:

- Absolute **economy-wide targets**;

- **Policy-base actions/ commitments** (sectoral or economy-wide)

- **Sectoral agreements**".



Source: Pew Center on Global Climate Change

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Conclusion – The way ahead

Key points:

- **There are a number of innovative solutions that combine competitiveness, energy security and environmental concerns**
- **Some of the solutions mentioned in the presentation have been put into effect. Others have not yet, but represent considerable potential**

Recommendation:

Set up an informal working group drawn from EPP members in ENVI and ITRE to pool our ideas and come up with an EPP policy line for the end of the year