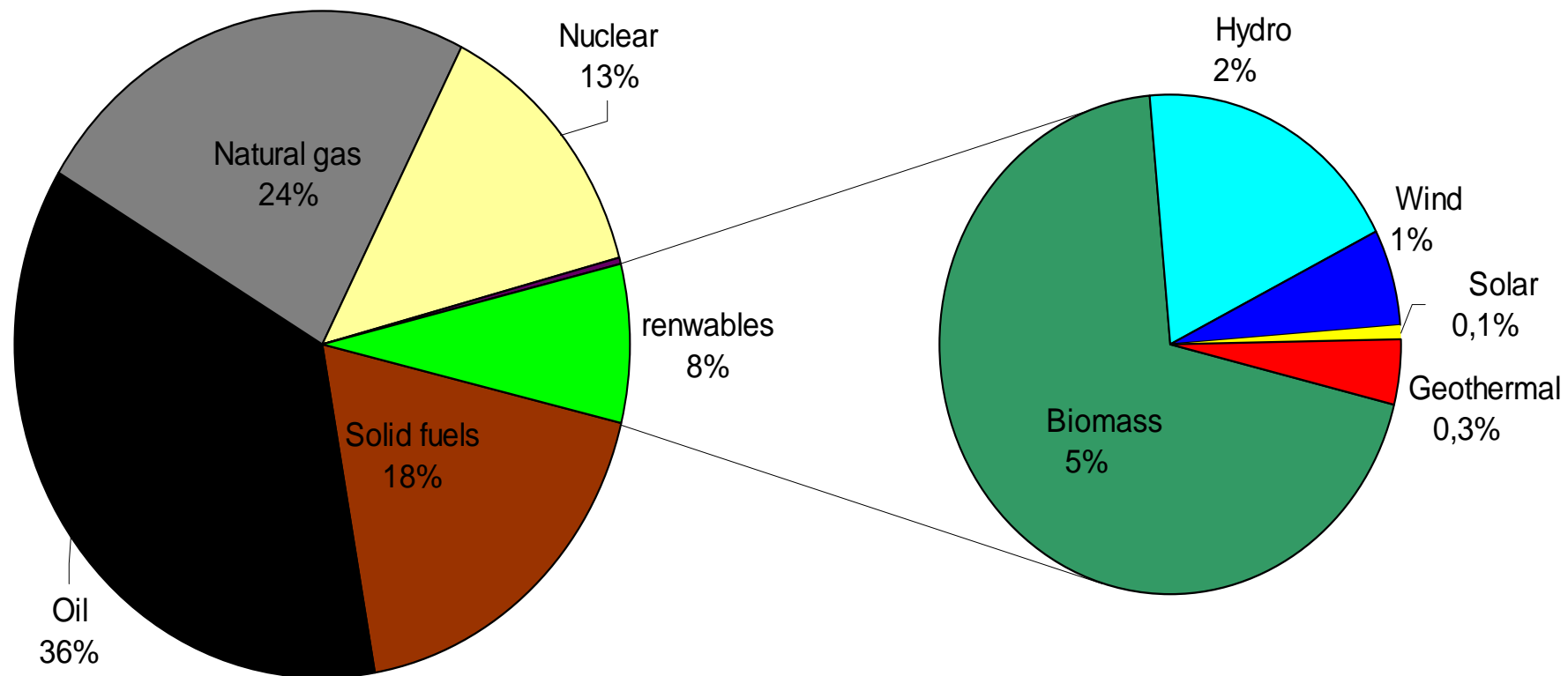




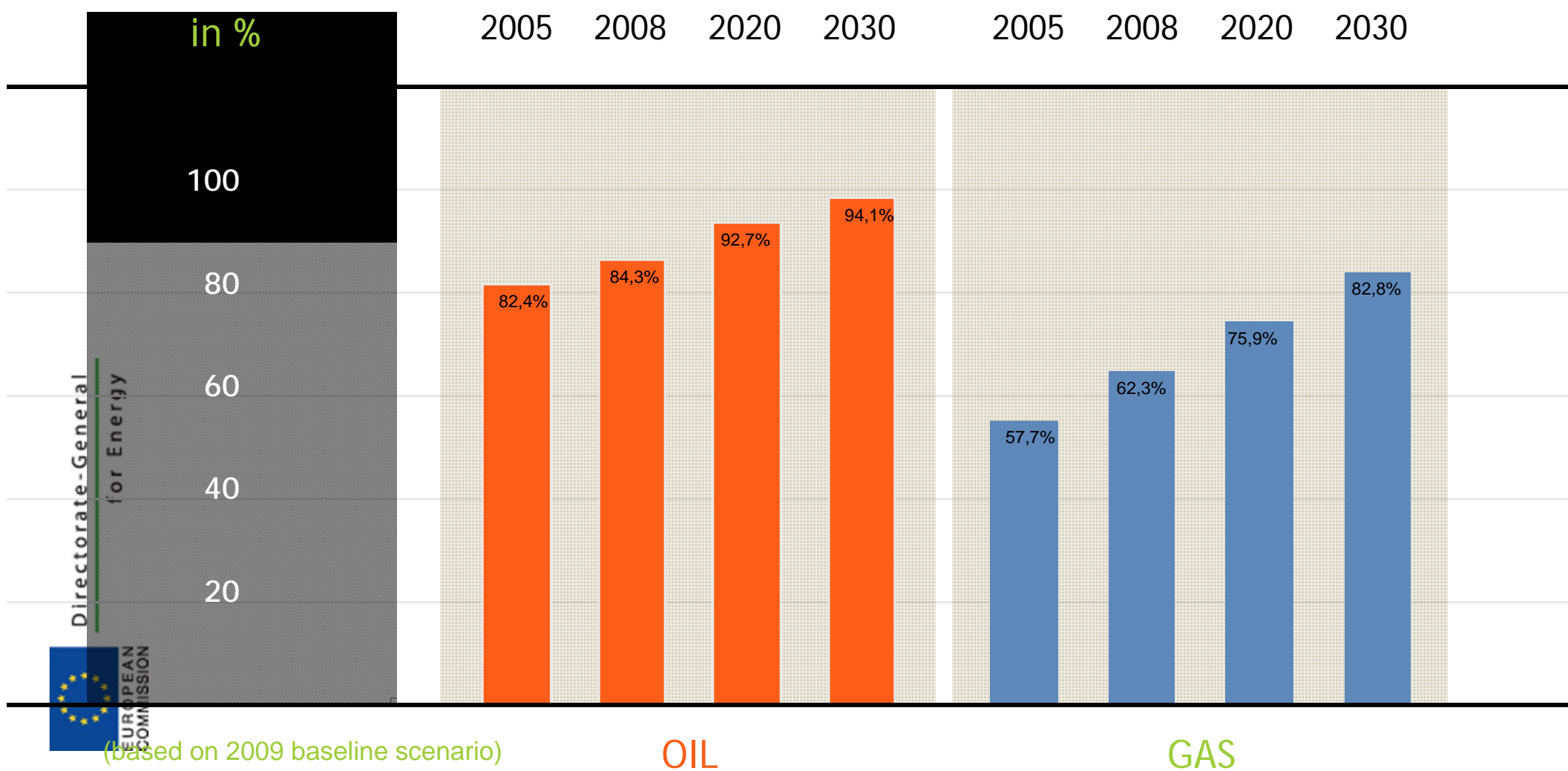
# Implementing 20% renewables - the EU story

**Hans van Steen**  
**Head of Unit, European Commission, DG Energy C1**

# The starting point: the EU energy mix:



# ● EU-27 Import dependence



# ● Policy background

## ❖ Renewable energy promotion since 1997

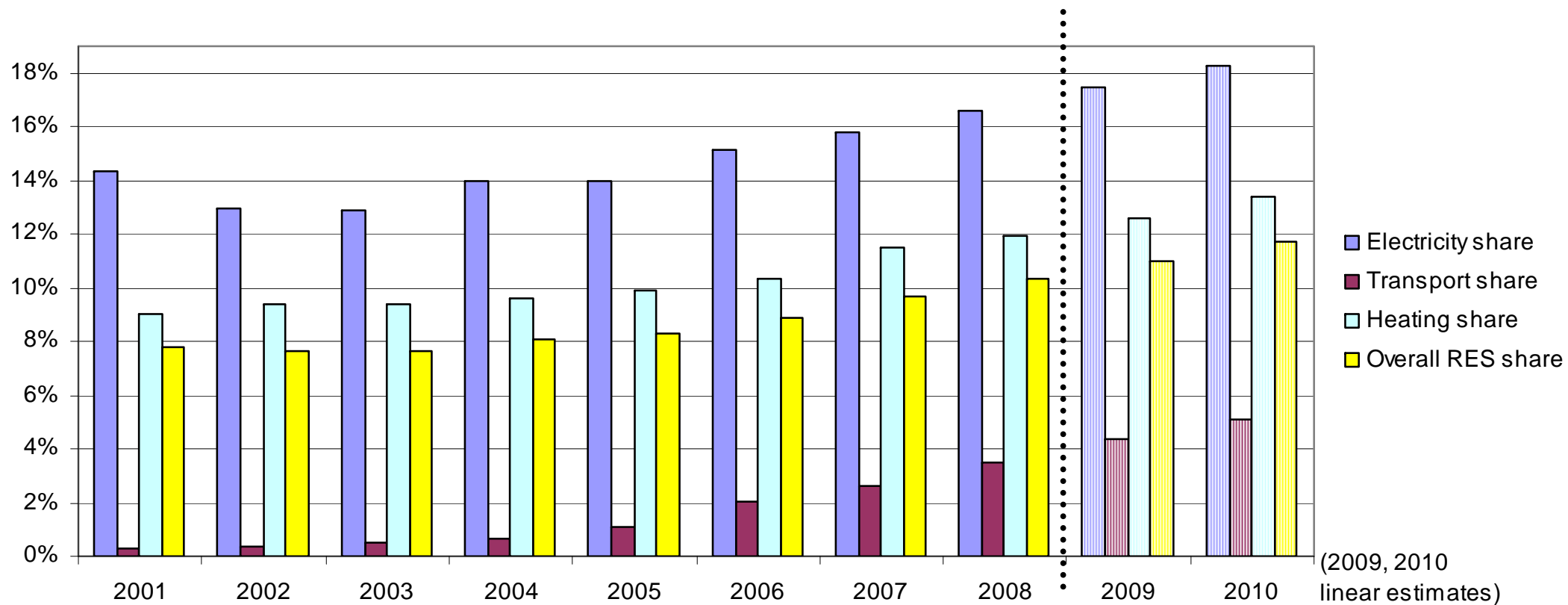
- **sustainability** – world leadership in halting climate change
- **security of supply** – oil & gas supply concerns, price volatility
- **competitiveness** – world-leading innovative industrial sector

### ➤ EU legislation

- National targets for 2010 for renewable electricity (2001)
- National targets for 2010 for renewable energy in transport (2003)



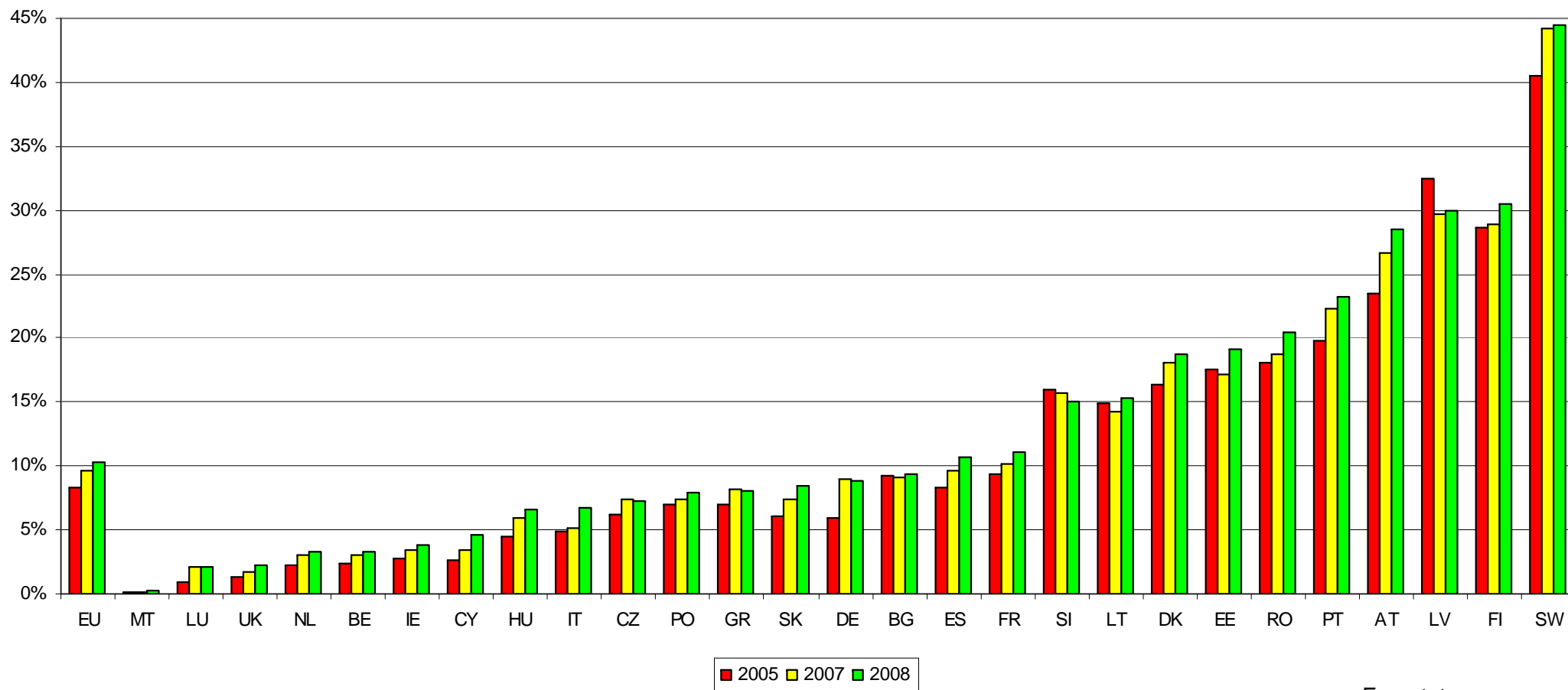
# Renewable energy growth by sector 2001-2010



# Progress to date...

## EU renewable energy shares

2005-2007-2008



Eurostat

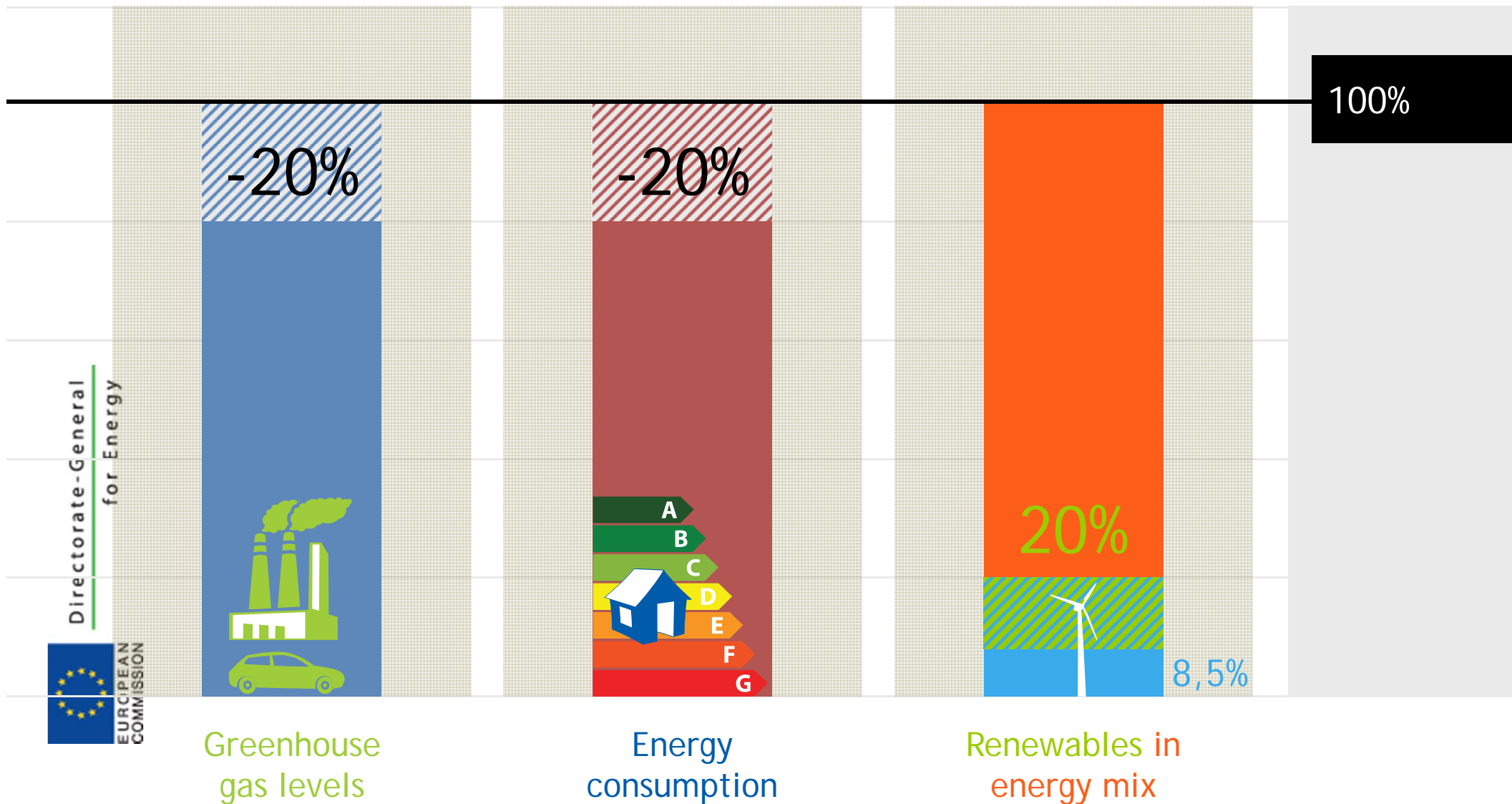
# Progress towards the 2010 targets - patchy

General  
Energy

		AT	BE	BU	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	IT
Electricity	recent growth	😊	😐	😊	😐	😊	😐	😐	😐	😐	😊	😐	😊	😊	😞
	progress made	😞	😊	😐	😞	😐	😊	😞	😞	😞	😊	😞	😊	😊	😞
transport	recent growth	😊	😐	😞	😊	😞	😞	😞	😊	😊	😞	😞	😊	😐	😊
	progress made	😊	😞	😞	😐	😞	😞	😞	😐	😊	😊	😞	😊	😞	😐
		LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK	
Electricity	recent growth	😞	😊	😞	😞	😞	😊	😊	😐	😊	😊	😊	😊	😐	
	progress made	😞	😐	😞	😞	😊	😐	😐	😞	😞	😞	😐	😊	😞	
transport	recent growth	😐	😐	😐	😞	😞	😊	😐	😊	😊	😐	😐	😐	😊	
	progress made	😞	😊	😐	😞	😐	😊	😐	😐	😊	😞	😞	😊	😐	

# ● The 20-20-20 EU policy

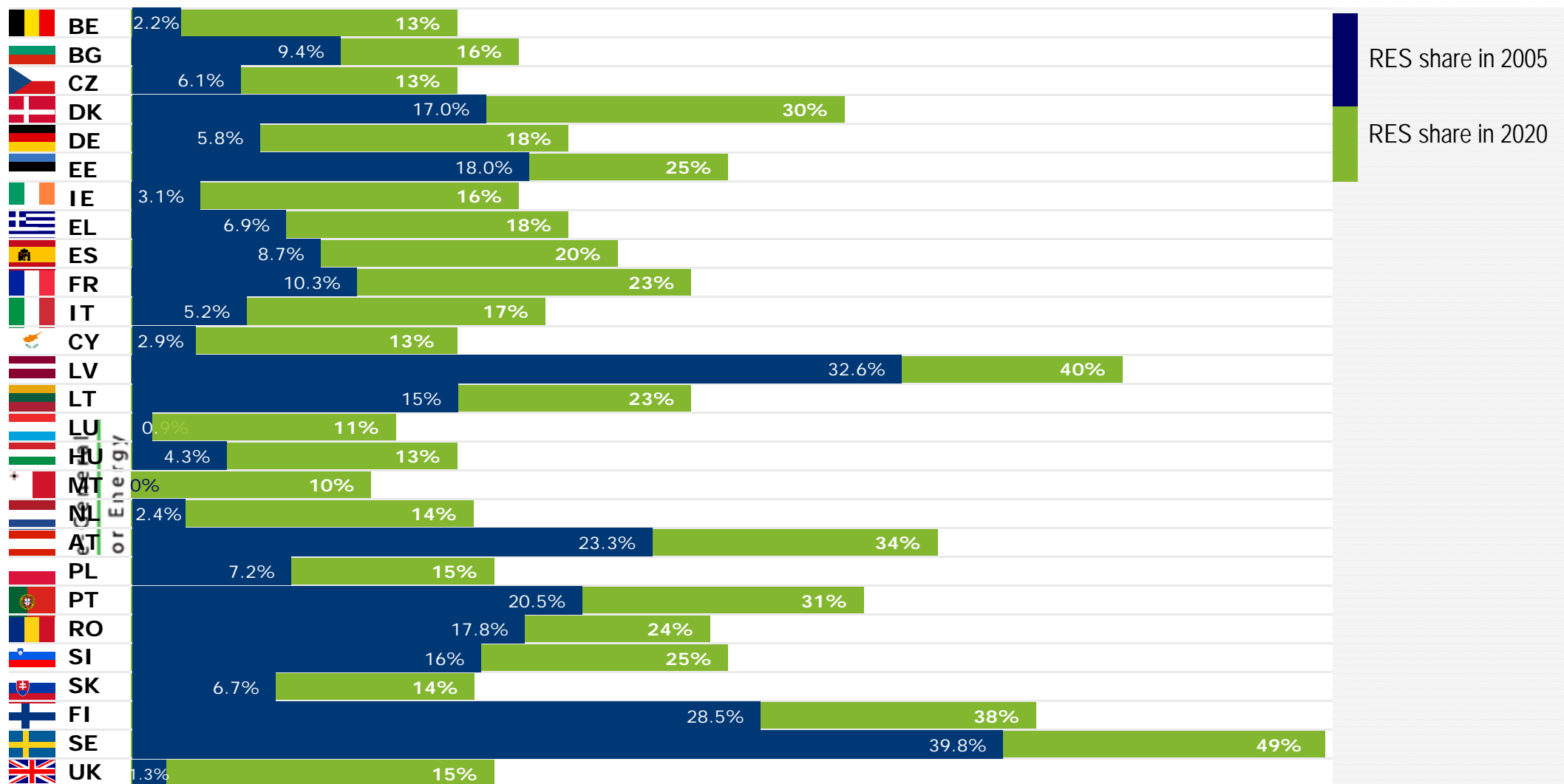
By 2020



# ● The renewables Directive

- Mandatory national targets (overall + renewables in transport)
- National Renewable Energy Action Plans, NREAPs
- Flexibility between Member States
- Reduction of administrative and regulatory barriers, grid issues, etc
- Sustainability regime for biofuels

# Member States' targets

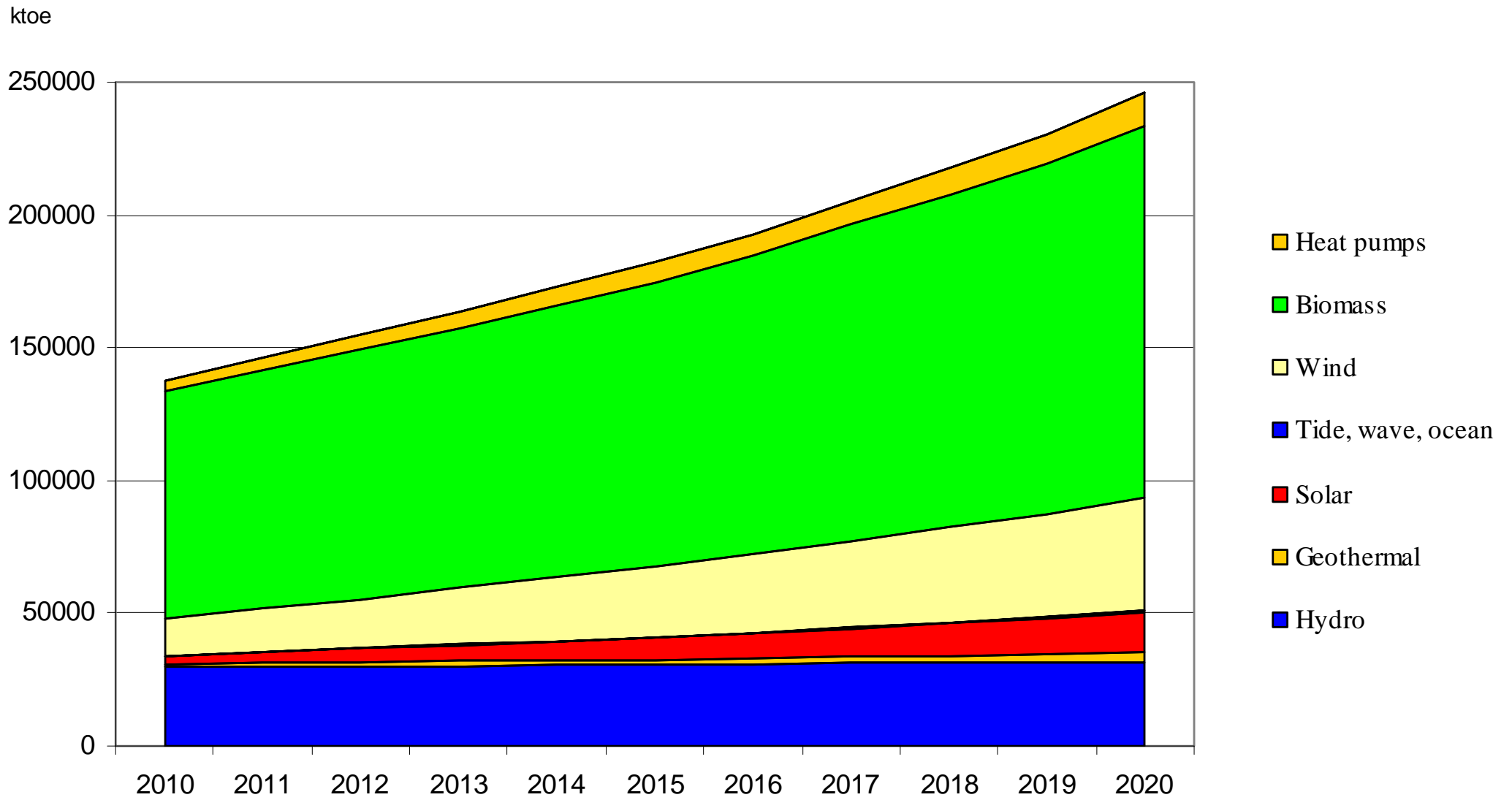


Based on 2005 starting point, recent progress and a balanced sharing of the effort, weighted by GDP/capita

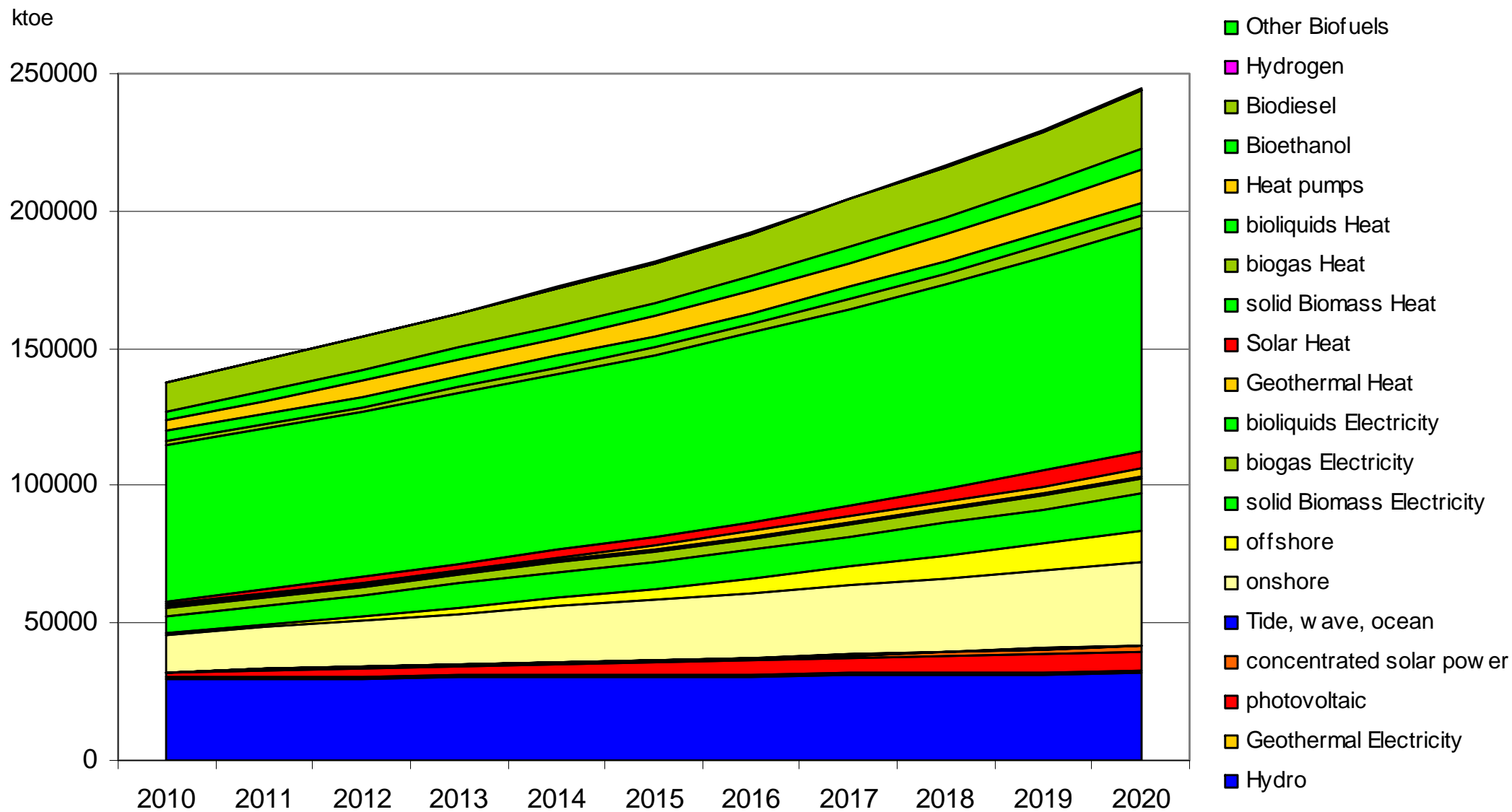
# ● National Renewable Energy Action Plans

- ❖ 10 year renewables roadmaps, setting out:
  - ✓ national sectoral targets and trajectories
  - ✓ planned statistical transfers between Member States
  - ✓ contribution of each RE technology
  - ✓ adequate measures to achieve the overall target
  - ✓ support schemes for each type of renewable energy
  - ✓ measures to remove administrative barriers, etc

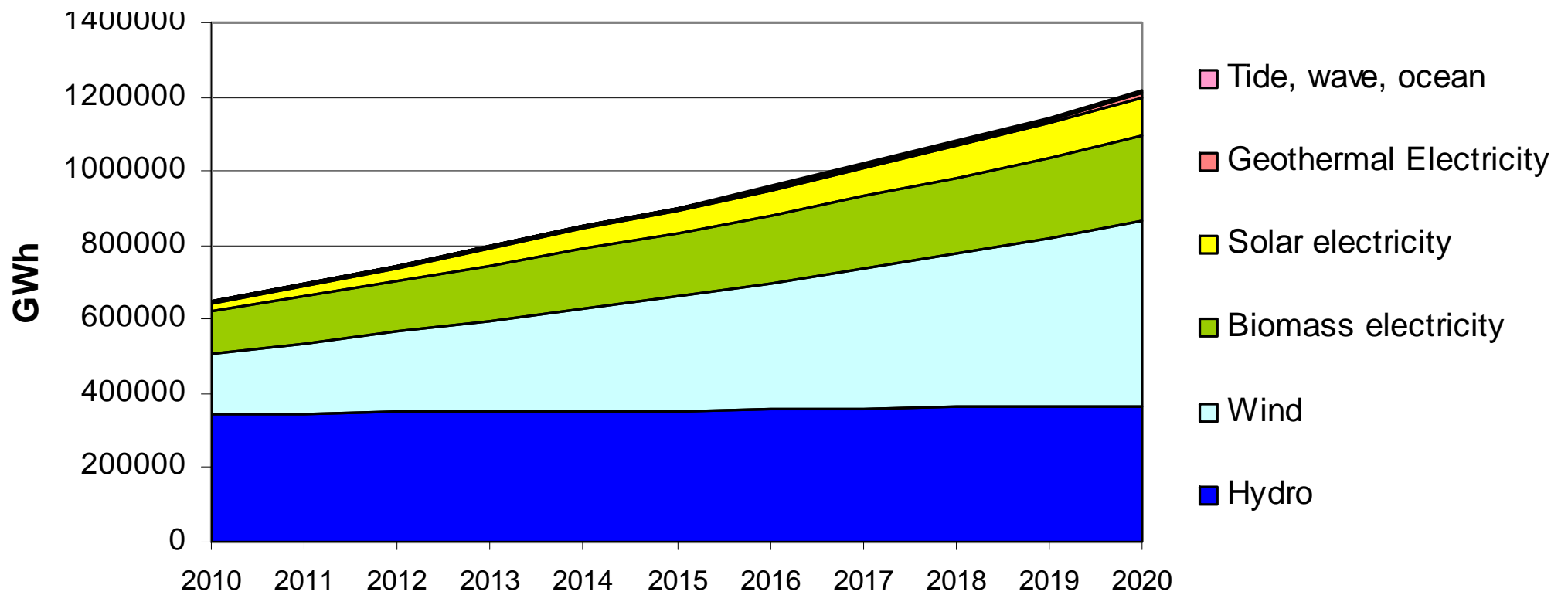
# Technology Results from the National Renewable Energy Action Plans



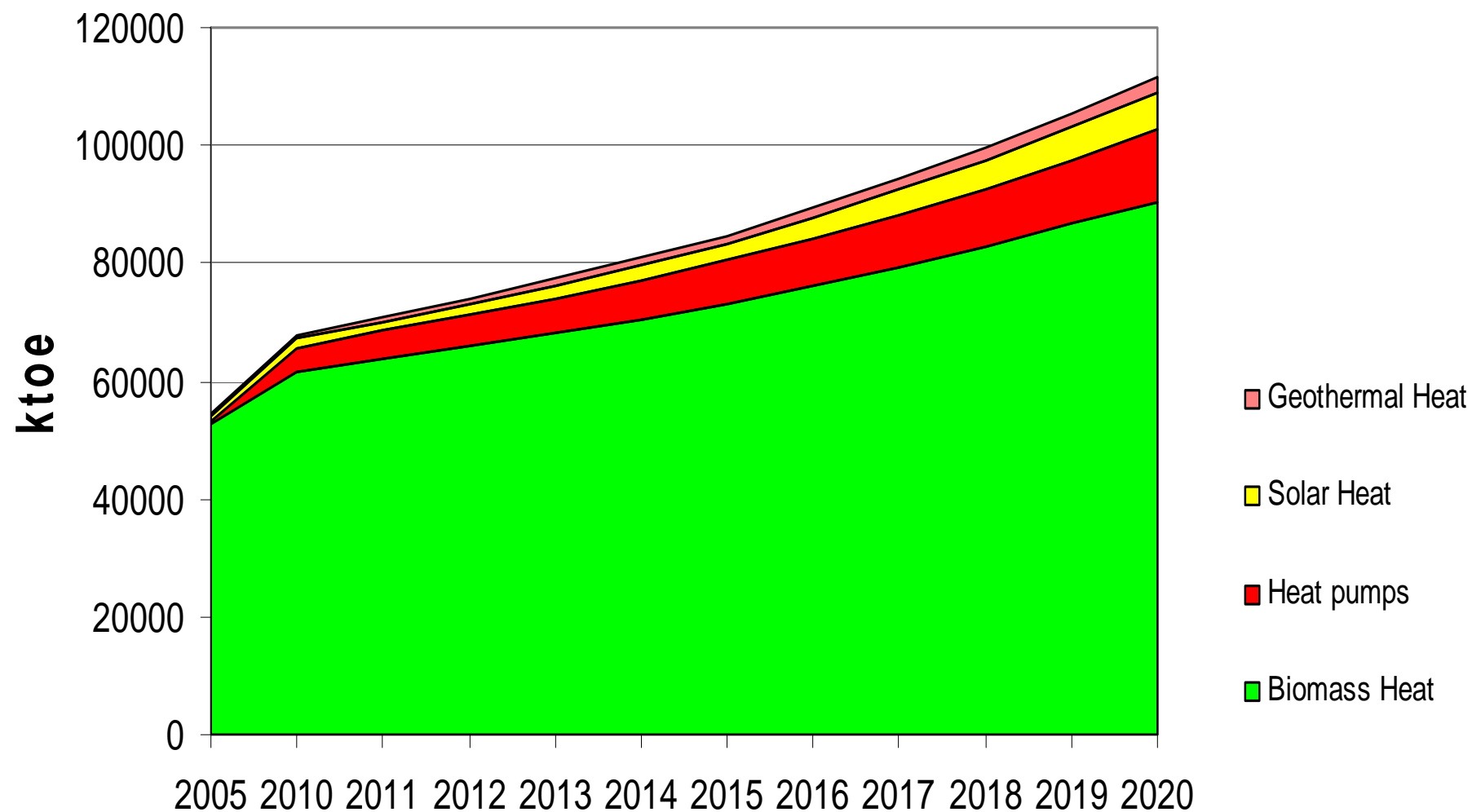
# ● Technology breakdown - detail



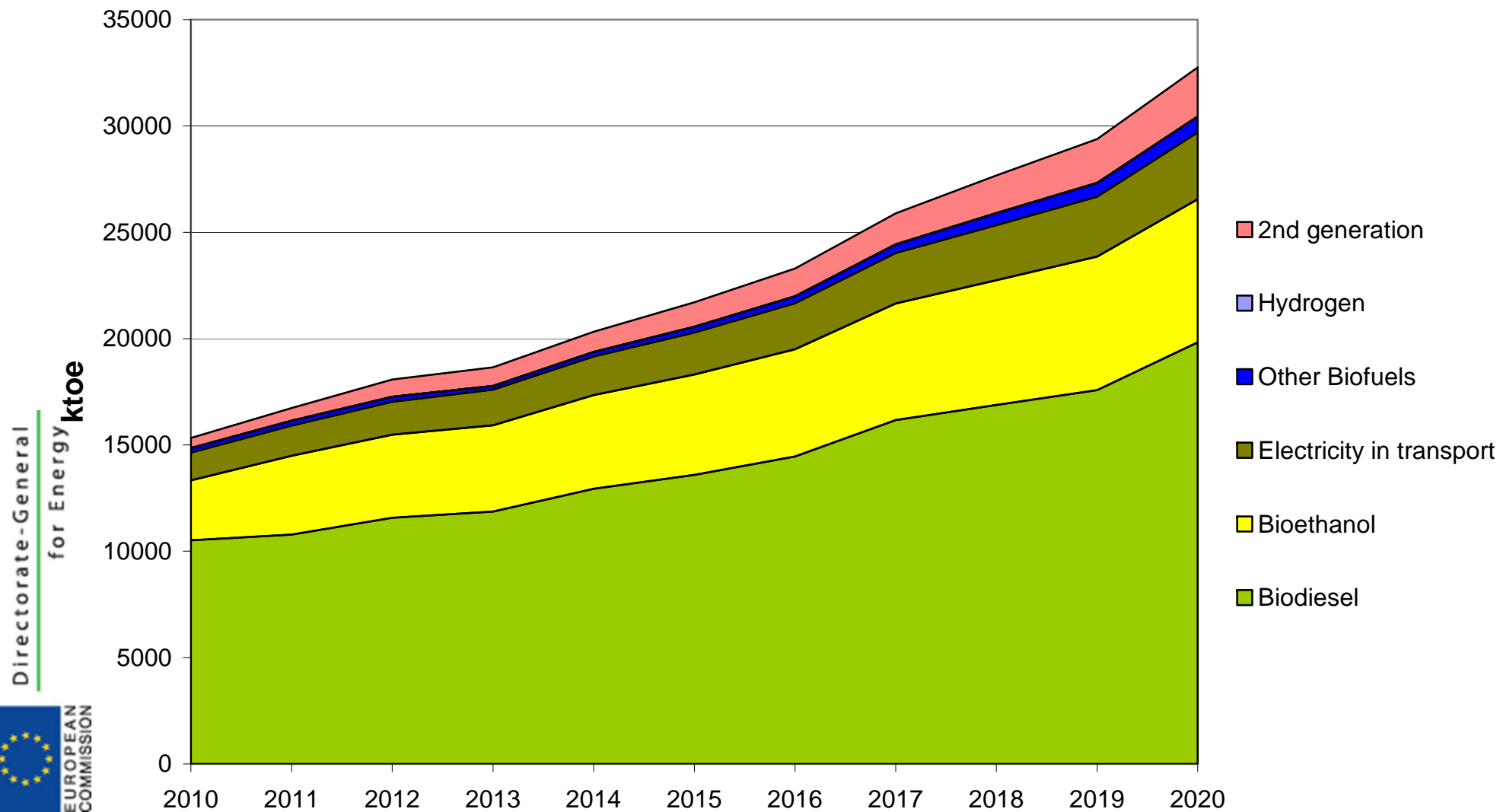
# ● Technology breakdown - electricity



# ● Technology breakdown – heating/cooling



# Technology breakdown – transport



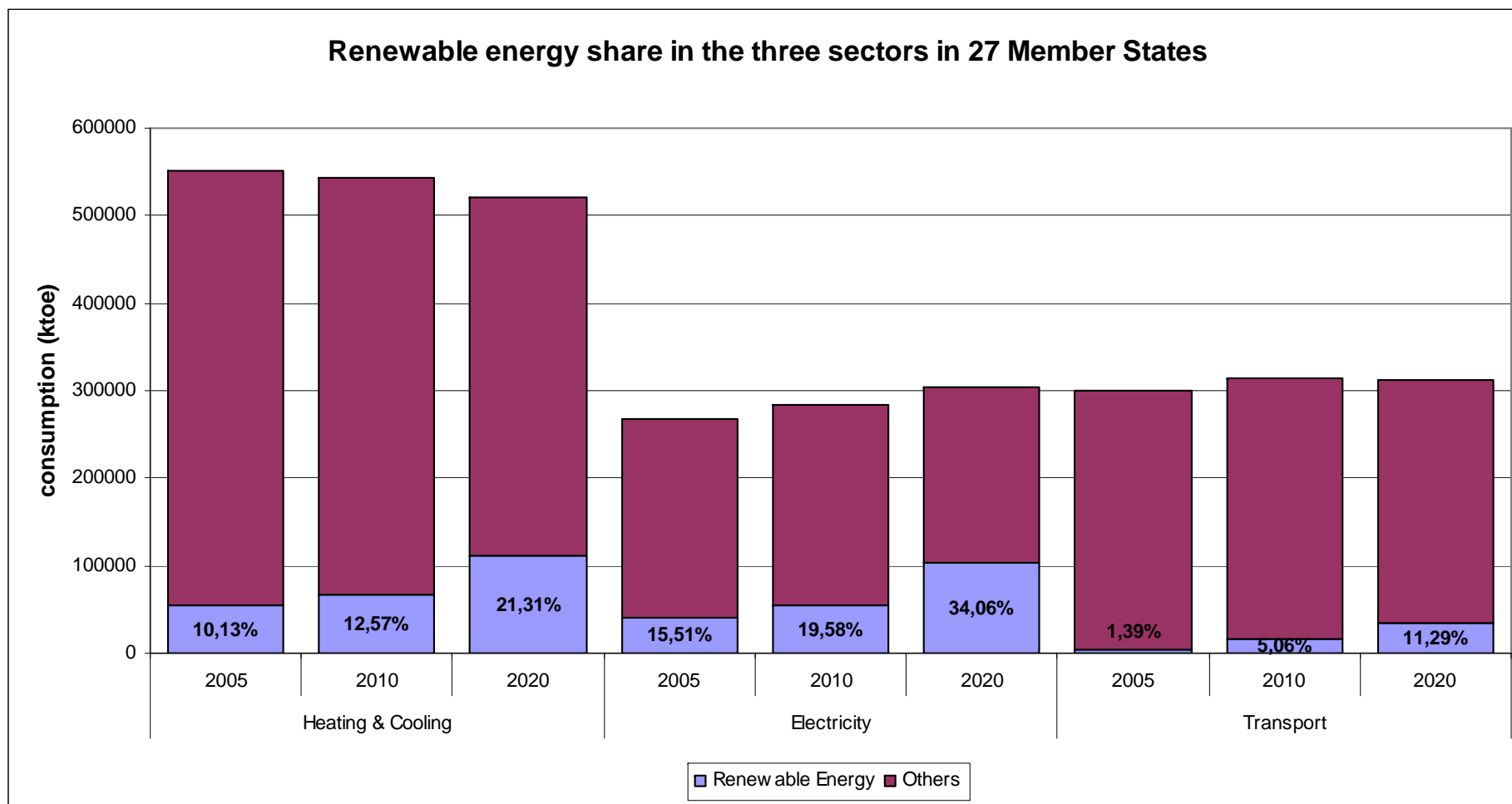
Directorate-General  
for Energy



## ● National Renewable Energy Action Plans indicate:

- Planned growth to 2020 leading to 20.6% by 2020
- Majority of MS will reach the targets by domestic production, 2 MS partly rely on cooperation mechanisms
- Total renewable energy consumption will double from 99 Mtoe (2005) to 245 Mtoe (2020)
- Combined EU renewable energy shares in the 3 sectors in 2020 (projections):
  - Electricity from renewable sources – 34%
  - Heating & cooling from renewable sources– 21.5%
  - Transport from renewable sources– 11%

# EU renewable energy share in the three sectors:



## ● **Some highlights from the NREAPs:**

- RES-E: continued attention to infrastructure issues
- Administrative issues and planning: continued attention to improvements and spatial planning
- Biomass: continued effort on biomass accounting (domestic and imported) and mobilisation efforts
- Advanced technologies: more focused policy and financial support

## ● Cost estimations

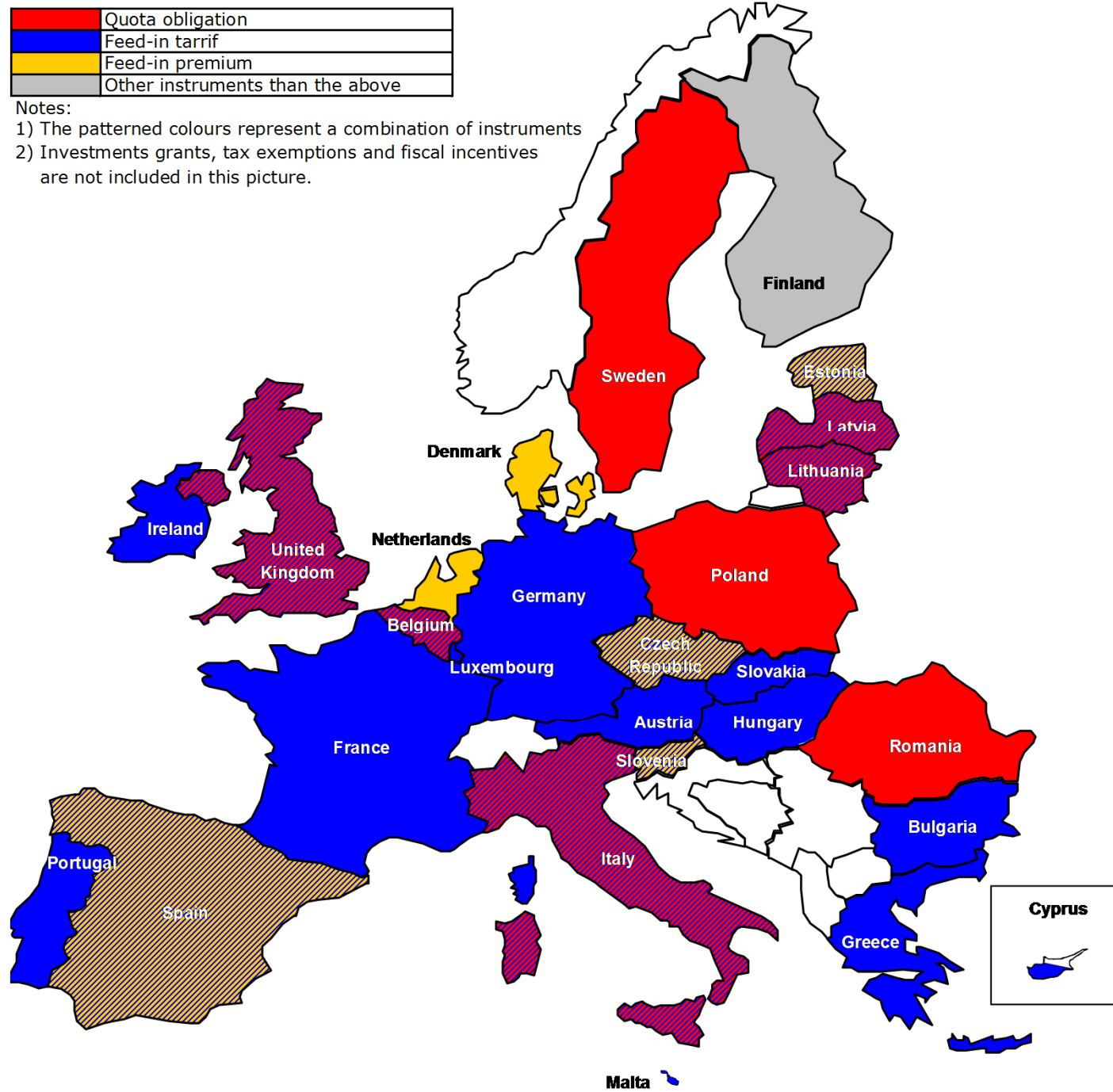
- Total investments in renewables are currently at a level of approximately €35 bn/y
- Most analysis predict this has to double to reach our 2020 targets
- Unit cost of renewables, contrary to other forms of energy, are declining; for certain technologies sharply
- Producing (and generating) renewables where most cost-efficient offers significant potential for lowering overall cost (in the range of 10%)

## Main RES-E support instruments in the EU-27

	Quota obligation
	Feed-in tariff
	Feed-in premium
	Other instruments than the above

Notes:

- 1) The patterned colours represent a combination of instruments
- 2) Investments grants, tax exemptions and fiscal incentives are not included in this picture.



# ● National support schemes

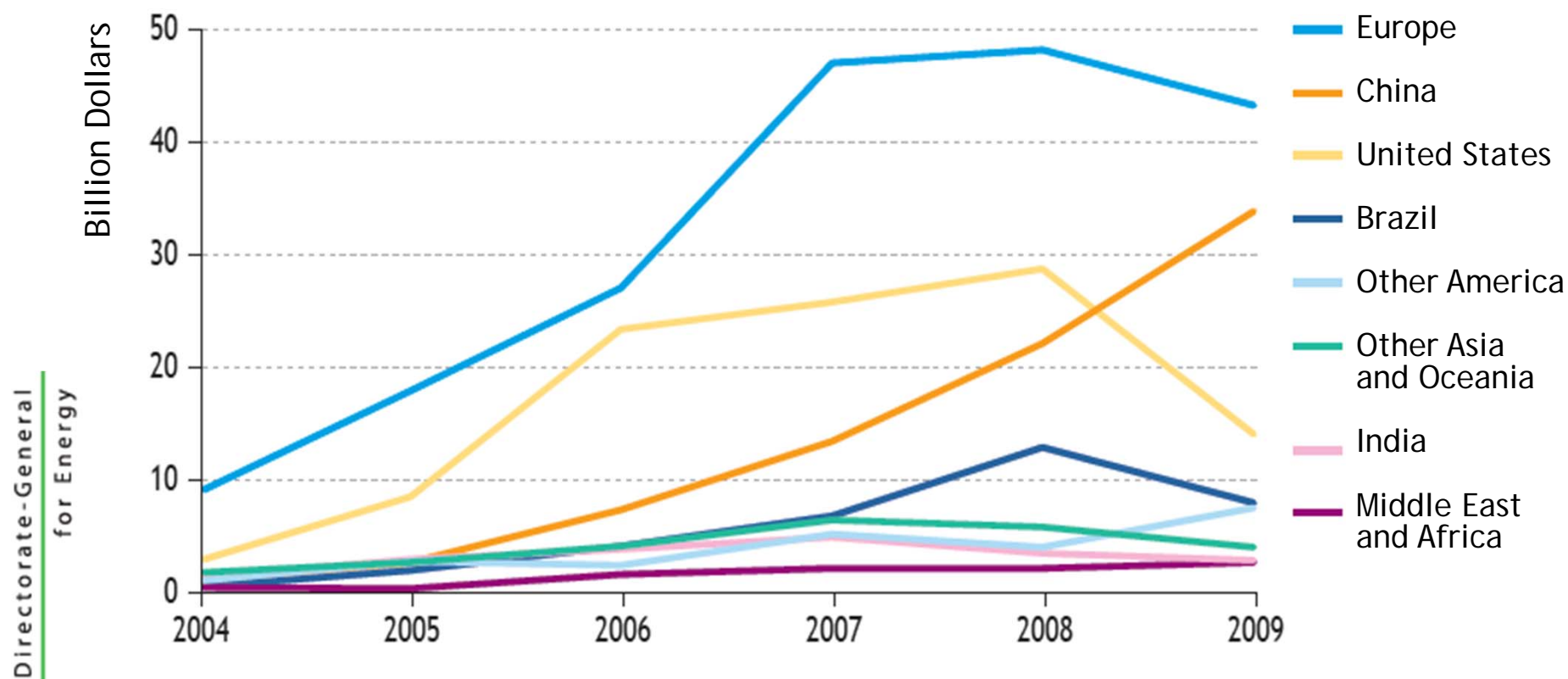
- National support:
  - » Instruments are modified, reformed, reviewed every year, sometimes smoothly, sometimes less smoothly...
- changes
  - » Tariffs
  - » Duration
  - » Eligible technologies
  - » Volume quotas
  - » Budgets
  - » Premium structure
  - » ....

➤ It's a lot for investors to manage

## ● Further effort and cooperation needed...

- The Directive created the “cooperation mechanisms” to allow Member States to reach their targets cost effectively
  - We need to ensure that these mechanisms can be easily used and reduce costs
- However Member States’ expected reliance on domestic resources makes it even more important that their national support schemes are optimised
  - More can be done to improve the stability and clarity surrounding national support schemes and this is a priority the Commission will facilitate.

# Investments in renewable energy at global level



Directorate-General  
for Energy



**In 2009, investment in renewable energy fell in the EU by 10% in the context of the economic crisis, while it increased by more than 50% in China.**

# ● Administrative measures, grid issues...

## ❖ Member States shall

- ensure that rules for authorisation, certification and licensing procedures for RES are streamlined, transparent, non-discriminatory, proportionate and necessary
- provide priority or guaranteed grid access and guarantee transmission and distribution of renewable electricity
- take the appropriate steps to develop infrastructure
- introduce appropriate measures in building regulations and codes to increase the use of renewable energy

# Enforcement

- ❖ Not through a penalty regime like ETS, but through infringement proceedings, from 2011 for
  - ❖ failure to produce an credible national action plan
  - ❖ failure to implement all aspects of the Directive
  - ❖ significant deviation from plan or trajectory
  - ❖ valid complaints from any EU citizens regarding incorrect implementation or enforcement by Member States
- ❖ Infringement proceedings are the usual tool for enforcing EU law. They are effective:
  - ❖ Most cases are resolved (corrective action taken by Member States) well before reaching Court.

## ● Conclusions

- For renewable energy, success depends on the credibility of the targets, which depend on the adequacy of the national measures to drive growth in all sectors.
- The Renewable Energy Directive provides a solid framework for this – but complete implementation of the National Renewable Energy Action Plans will be crucial.
- In financially constrained times, renewables financing needs to be optimised at EU and Member State level and the Commission will facilitate this.

# Selected Commission information sources/studies

- Transparency platform (key texts, Commission documents):  
[http://ec.europa.eu/energy/renewables/transparency\\_platform/transparency\\_platform\\_en.htm](http://ec.europa.eu/energy/renewables/transparency_platform/transparency_platform_en.htm)
- Summary of NREAPs: [www.ecn.nl/units/ps/themes/renewable-energy/projects/nreap/](http://www.ecn.nl/units/ps/themes/renewable-energy/projects/nreap/)
- Concerted action: <http://www.ca-res.eu/>
- REPAP (industry roadmaps & evaluation of NREAPs): <http://www.repap2020.eu/>
- RESHAPING (support schemes, coop. mechs: <http://www.reshaping-res-policy.eu/>
- Guarantees of origin: <http://www.e-track-project.org/project.php>
- Developing the offshore grid: <http://www.offshoregrid.eu/>
- Removal of non cost barriers study & RES financing study:  
[http://ec.europa.eu/energy/renewables/studies/renewables\\_en.htm](http://ec.europa.eu/energy/renewables/studies/renewables_en.htm)
- Removing barriers to wind integration: <http://www.trade-wind.eu/>
- Maritime spatial planning reform: <http://www.seaenergy2020.eu/links/>
- Addressing PV barriers: <http://www.pvlegal.eu>
- Planning and financing to improve public acceptance: <http://www.resshare.nu/en/resshare/home>
- Installer certification regimes: <http://www.qualicert-project.eu/>

[http://ec.europa.eu/energy/renewables/index\\_en.htm](http://ec.europa.eu/energy/renewables/index_en.htm)

Thank you for your attention

