2010 – 2050: on the way to 100% renewables

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Vice-President Green/EFA in the EP
Rapporteur EU renewables directive, 2008
Rapporteur EU electricity market, 2003
We are on track to a full renewables energy society

• Renewables Energy directive
  – Forecast documents positive
  – National action plans in the drafting

• Energy Market directives (3rd package)
  – Mandate for regulators to include renewables
  – New EU bodies (ENTSO-E, ACER)

• Buildings directive
  – Near zero energy as a new concept for buildings
Next big dossiers

• Move EU -30% on GHG (-36% ETS)
• Blue print for the North Sea@Baltic Sea Supergrid
• Next financial perspectives (structural funds, more leverage for EIB&others)
• Quick Start Money under Copenhagen
• EU energy efficiency action plan
• EU 2030/2050 discussion
The 3 biggest actual traps

- **EU 2050:**
  - manipulation of scenarios
  - 2030 more important than 2050

- **MEDA:**
  - plan solaire&desert tech as a greenwash for cables for coal&nuclear

- **Transport:**
  - Secrecy around agrofuel sustainability
  - Electro-mobility hype
SHIFT HAPPENS

• Power sector
  – 2010-2025: coal/nuclear to renewables/gas
  – 2025-2040: full renewables system

• Heating&Cooling sector
  – 2010-2025: efficiency/efficiency/renewables
  – 2025-2040: oil&gas to renewables&green electricity

• Transport sector:
  – 2010-2025: new mobility concepts/optimising conventional engines/hybrid/demo electric
  – 2025-2040: full green electric cars/sustainable biofuel or green hydrogen ships/lorries/airplanes
Shift happens!
From coal/nuclear to renewables/gas

• The power investments of last 10 years
• The climate package and its consequences on EU power investments
• The next paradigm: resource&energy (electricity) productivity and savings
• Grid development: new alliances
• Electro-mobility: a lot of questions still
Gas & renewables – a one night stand? (figure: power sector in EU 2000-2009)
Gas & renewables – a one night stand? (figure: power sector in EU 2008)

- Wind: 36%
- Gas: 29%
- Photovoltaic: 18%
- Fuel oil: 10%
- Coal: 3%
- Hydro: 2%
- Biomass: 1%
- Other: 1%
- Nuclear: 0.3%

Note: Preliminary figures for solar photovoltaic installations
Source: EWEA, EPIA and Platts PowerVision
Gas & renewables – a one night stand? (figure: power sector in EU 2009)
...or a 10 years love story!

EU Power sector 2000 – 2009:

+85,000 MW gas
+65,000 MW wind
+13,000 MW solar
- 7,000 MW nuclear
- 12,000 MW coal
- 12,000 MW fuel oil
Why would gas & renewables love story end now?

• “climate package EU 2020” (Dec 2008)
  – 20% - 30% GHG
  – 20% raise in efficiency
  – MINIMUM 20% renewables

• other energy legislation (2009)
  – EU elec&gas market (ACER, new mandate regulators)
  – “near zero energy” buildings decision
  – Gas security of supply (on-going)
The new center: wind

• The center of gravity of the EU power system will shift away from coal/nuclear
• Thermo-electric will have to be more flexible and will have less running hours
• Storage, balancing and other grid services will be growing “business”
• New regulation might be needed in the power markets (capacity markets?)
renewables&gas love story – no place for other lovers?

• Renewables progress between 2020 - 2030 is “normal” with
  – full supply chains up and running (off-shore wind, PV, Biomasse, CSP...) and
  – new actors (Munich, Zurich, Blackstone,...) entering the market

• Intermittency is manageable: new results from KEMA&Poyry studies

• Gas will beat coal & nuclear as a back-up
Bremerhaven, a success story
New Bremerhavens
EWEA’s 20 year offshore network development plan

Source: EWEA 2009
Scenario for CSP Interconnection between MENA and Europe

Source: DLR, 2009
The 100% renewables community

JOIN US TO BUILD UP THE

• 100% renewables buildings!
• 100% renewables cities!
• 100% renewables regions!
• 100% renewables companies!
• 100% renewables citizens!
Thank you for your attention!

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