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Bioliquids-CHP symposium, 8th November 2011

Arnaud Duvielguerbigny, Head of Policy
changing the way
Europe provides heat and electricity
for a sustainable future

Agenda

- Few words on COGEN Europe
- The European energy policy
- Why Energy Efficiency -EE- matters
- The new CHP/EE Directive
- Concluding remarks

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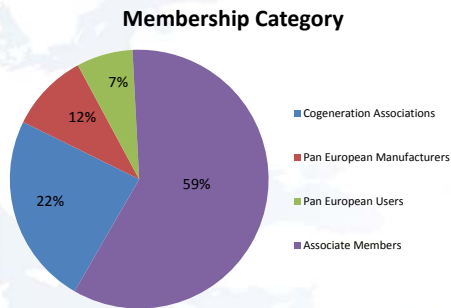
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COGEN Europe

COGEN Europe, the European Association for the Promotion of Cogeneration:

70 members in 24 countries:

- 15 National COGEN Associations
- + Pan European Manufacturers
- + Pan European Users
- + numerous associate Members



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Europe's Energy policy

ENERGY STRATEGY 2020 (published end 2010):

→ 5 PRIORITIES to achieve our 3 goals



- Efficient use of energy
- Integrated energy market
- Secure, safe and affordable energy
- Technological leadership
- Strong international partnership

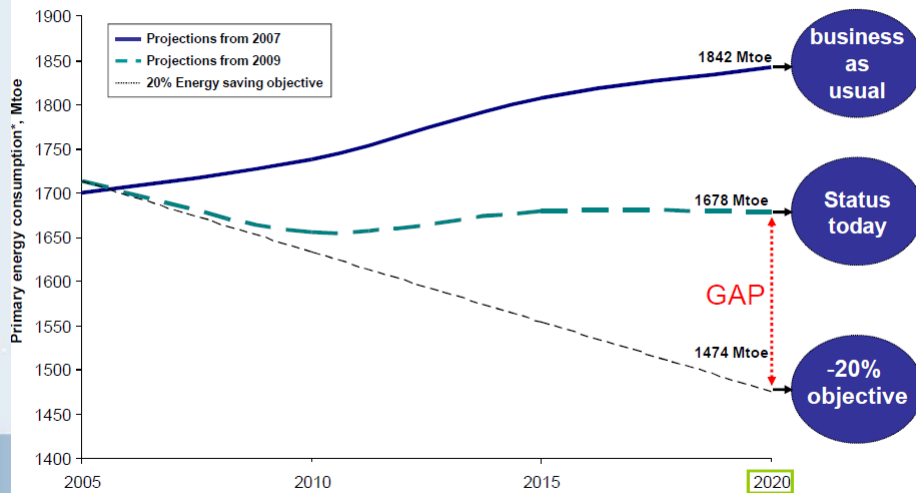
+ Soon the 2050 Energy Roadmap release

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Why Energy Efficiency matters?

SO FAR THE EU IS NOT ON TRACK TO MEET ITS 20% ENERGY SAVING TARGET BY 2020



EE within the Europe's Energy policy

Rising challenges:

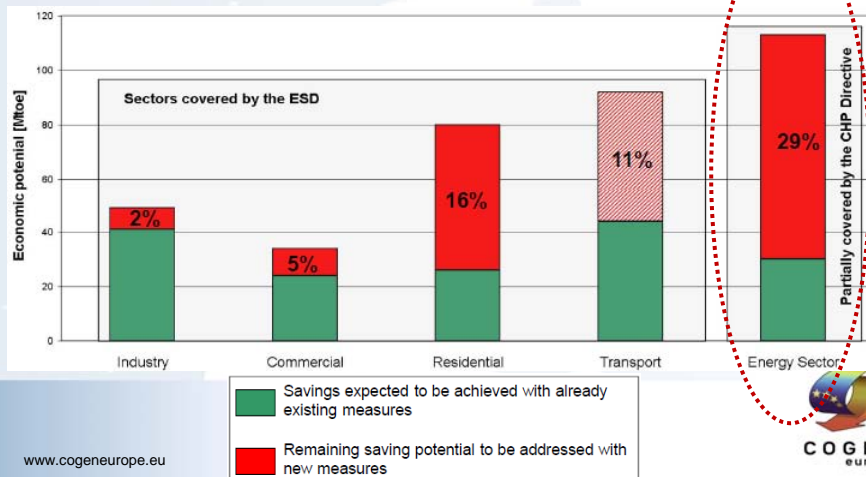
- Dependence on imports of oil and gas is growing. The EU needs to save energy and find new energy alternatives and **to produce more of its own energy**
- The EU committed to cut its greenhouse gas emissions to combat climate change. **The energy system must become low-carbon.**
- Massive investment is needed for the modernisation of energy infrastructure. **Investments** in the order of € 1 trillion are needed by 2020 **to replace obsolete capacity**
- Energy prices are rising. Citizens and businesses are entitled to have access to **affordable energy**.

→ Legislative proposal on energy efficiency COM (2011) 370
to provide an enhanced framework for energy efficiency and savings policies of Member States, merging the Energy Services and the Cogeneration Directives

The new CHP/Energy Efficiency Directive

→ Aiming at achieving the 20% EE target

What the IAS tells us:



The new EE Directive

- The 2004 CHP Directive shed lights to a potential CHP market share of 21% in the electricity market by 2020
- calculation methods & approach to high efficient cogeneration now well understood at national level
- But the potential did not turn into a market uptake...

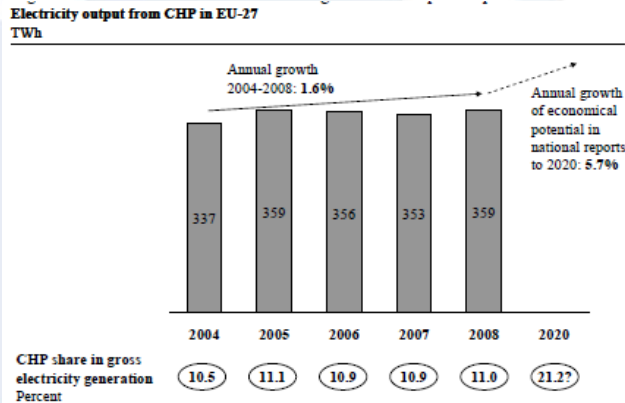
(strong primary energy savings associated with the development of CHPs (about 30% compared to the separated production of heat and elec))

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The new EE Directive

Illustration of the CHP growth rate increase required up to 2020 in order to achieve the potential identified by the MS:



Roughly 11% of the CHPs are fuelled by bioenergy

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The new EE Directive

Focus on the supply side measures:

Efficient heating & cooling (Art.10)

Energy transformation (Art.11)

Transmission & distribution (Art.12)

- **National heating and cooling plan** for development of HE cogeneration and efficient DH&C infrastructure
- New **thermal electricity generation installations** (>20 MW) to be equipped with high-efficiency cogeneration units and located in a place where waste heat can be used. Conversion to CHP as a condition for updating permit/licence of existing installations (>20 MW) undergoing substantial refurbishment or whose permit needs to be updated
- New or substantially refurbished **industrial installations** (>20 MW) generating waste heat to make use of it and be connected to DH&C networks
- **Guarantees of origin** for electricity from high-efficiency CHP
- **Inventory of installations** (for combustion of fuels (=>50 MW), refining of mineral oil and gas)
- Energy efficiency criteria in energy network regulation
- National **plans on energy efficiency potentials** of energy networks, identifying measures & investments for efficiency improvements
- Removal of incentives in network tariffs increasing volume of transported energy
- **Guarantee transmission & distribution; priority or guaranteed access and priority dispatching** of HE cogeneration electricity

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The new EE Directive

Tentative timeline:

- Possible political agreement mid 2012
- Entry into force end 2012
- Implementation at MS level end 2013-early 2014

More information on

<http://ec.europa.eu/energy/efficiency>

COGEN Europe deeply involved in the discussions

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Concluding remarks

- Flexible and reactive CHPs have a key role to play in the future energy system (with more and more variable RES-E like wind & PV)
- Energy (heat) storage is a must
- The 20% RES by 2020 is to be revised, RES-E from bioenergy-CHP has a key role to play
- Bioliquids fired CHPs will bring more energy security and less fluctuating electricity/heat prices into the system (compared to the fossil fuel alternative)
- Decentralized vs centralized model, the true lies in between

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Annex

COGEN Europe is a partner of the « **CHP goes green** » project, <http://www.chp-goes-green.info/> whose aim is to promote *an increased use of renewable energy sources (RES) whilst bettering its efficiency by using CHP. The advantage of the use of biomass in cogeneration is self-evident, as it allows highest efficiency combined with an increase of renewables' share...* *The combination of RES and CHP is a key approach to reach the ambitious EU climate protection targets. Pushing "Green CHP" and the respective technical solutions into the markets will overcome the actual separate – and sometimes even competitive – development of CHP and RES market.*

COGEN Europe is a member of the Biomass Panel Steering Committee of the RHC Renewable Heating and Cooling Platform

COGEN Europe has created an internal WG on this topic (first assumptions: 29% bioenergy share in 2030 & 44% by 2050)

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Thank you for your attention

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