

# Natural Gas and Renewables

Study Group Report 1, PGCE

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Venue:



Patron



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## Slide 1:

# Micro view of combinations in different countries



- Approx. 60 plants injecting biogas into the natural gas grid;
- Different combination appliances available (solar panel/recondensing boiler; gas driven heat pump etc.)
- Concept for integrated energy supply with renewable power production and natural gas storage system



“Sustainable Ameland” – an island as energetic test range, including hydrogen injection

biomass gasification ready for market: wood to gas

large scale combinations of natural gas with renewable energies

biogas-driven natural gas market



large scale solar power productions with natural gas back up

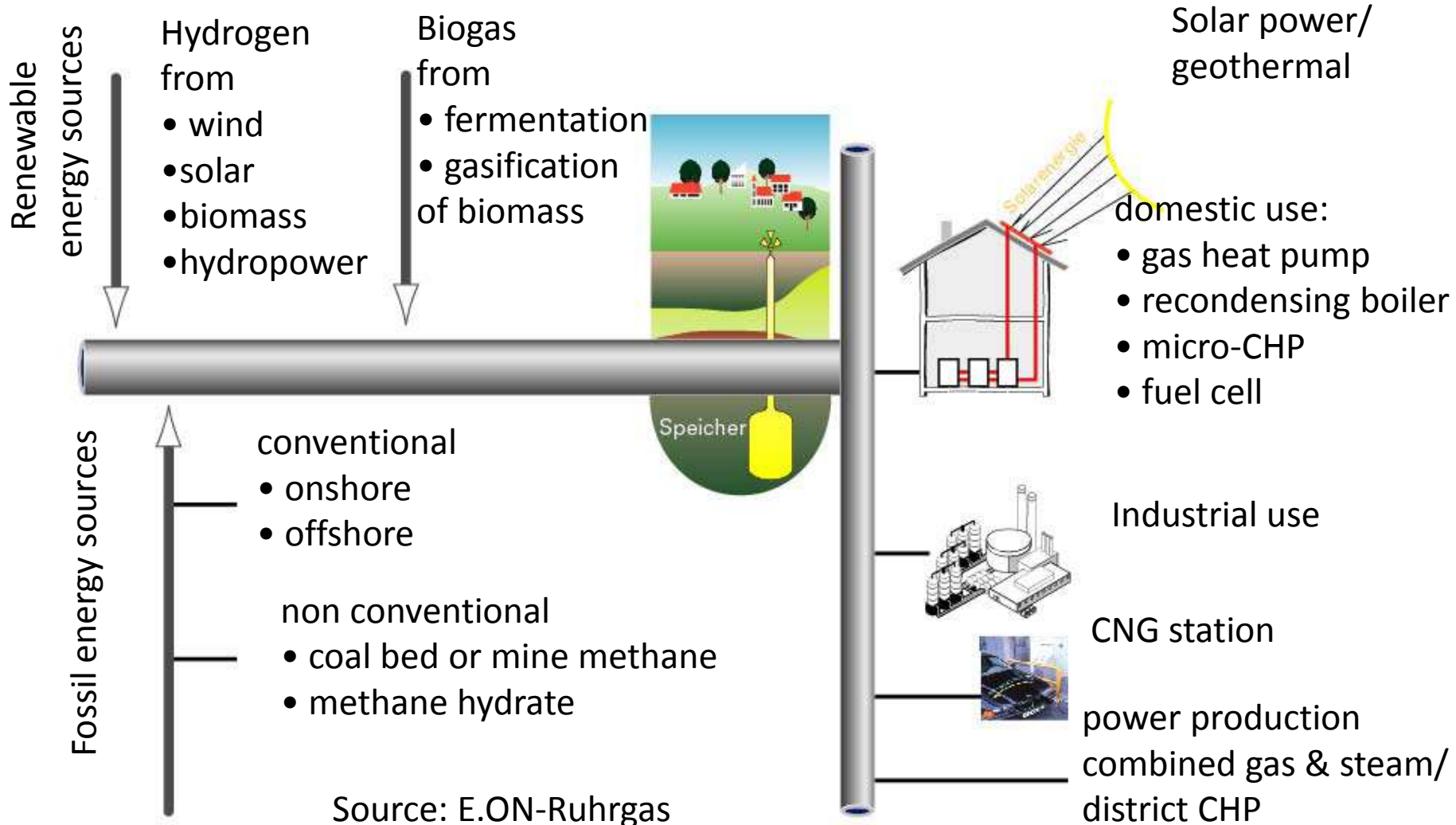


gas driven fuel cells on the market



photovoltaic power supply for a gas pipeline

# Slide 2: Macro view: Options for combinations of natural gas and renewables



## Slide 3: Conclusions

- **Regional aspects** for combination models to be taken into account
- **Trend:** Renewables are entering the market, hailed by media, governments and subsequently the general public
- **Pro-renewable attitude** creates investment climate for renewables
- **Challenge and opportunity** for new marketing alliances between renewable production and gas trade + to revamp dusted image of natural gas
- **Experience** of natural gas industry is extremely important to establish new technologies
- **Business model** natural gas + renewables: Beneficial effect on CO<sub>2</sub> certificate trade
- **Renewables** are an **image turner**, from old, fossil, dirty to **cleaned up, future oriented and secure**;

## **Cry out loud, gas industry:**

- ➔ **Natural gas and renewables: part of the solution**
- ➔ **Natural gas enables the sustainable energy development**
- ➔ **Natural gas: We open the door for renewables**
- ➔ **Renewables are there for you to integrate and survive**

**➔ GO AND GET 'EM !**

**Natural gas companies need to take action, not only react, in the field of renewables to secure their own future**

**THANK YOU FOR  
YOUR ATTENTION**