



# FP7 – Energy - Demonstration Work programme 2008

Directorate-General  
for Energy  
and Transport



**Jean-Marie BEMTGEN**  
Innovation and Energy Technology



# Areas opened in 2008 (DG TREN)

● RES-electricity generation	42 M€*
● CONCERTO	40 M€*
● Renewable Fuel Production	35 M€*
● CCS/Clean Coal	20 M€*
● Smart energy networks	5 M€*
● Polygeneration	5 M€*

**Ideally some 20 projects will be supported for about 147 M€**

**\* Indicative amounts; depending on the quality of the proposals**



# RES - electricity (42 M€\*)

- **PV – multiple benefits**
- **Biomass:**
  - » medium-large power plants
  - » Waste-to-electricity installations
- **Wind: large on-shore and off-shore: cost reduction**
- **Geothermal: for low/medium temperature sites**
- **Concentrated solar power: cost reduction**
- **Ocean: from prototype to grid connection**
- **Storage of electricity**

# CONCERTO (40 M€\*)

- **Integration of RES in cities and large communities**
- **Integration of EE in cities and large communities**
- **High Performance Buildings on large scale**  
(far beyond national legislation, best practice and EPBD)
- **Fully integrated approach addressing**
  - » **Technology**
  - » **Non-Technology**
  - » **Systems integration**
  - » **Integration into local and national policies**

# Renewable Fuel Production (35 M€\*)

- **Biomethane from high moisture biomass**  
(first generation bio-fuels)
- **Bioethanol from lignocellulosics**  
(second generation bio-fuels)

- **Fluidized bed combustion**  
(with a view to CCS\*\*)
- **Oxygen based combustion**  
(with a view to CCS)
- **Advanced gas turbines for IGCC**  
(with a view to CCS)
- **Study for a large scale zero emission power plant using fossil fuels**
- **Cross-cutting issue**

# Smart energy networks (5 M€\*)

- **Electricity networks:**

Diagnostics, Surveillance, Maintenance and Control of Power Transmission and Grid Connections

- **Gas networks:**

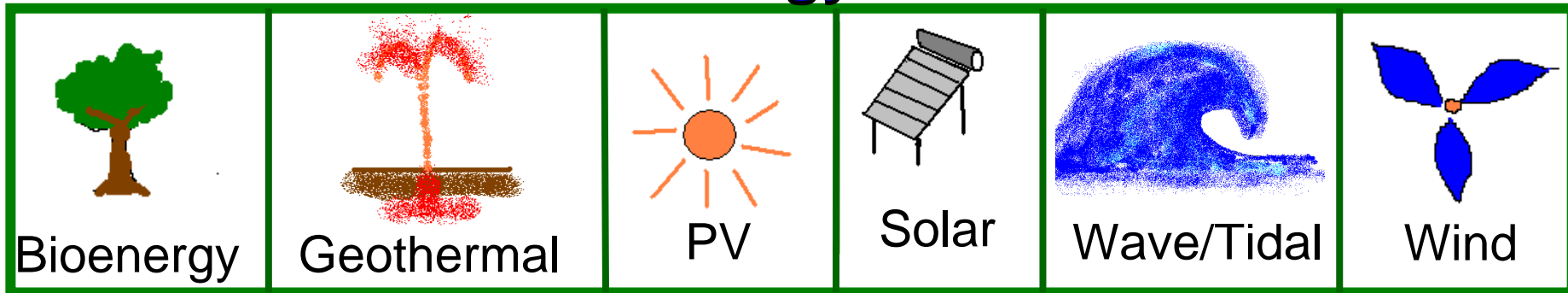
Assessment of needs for reliable and flexible future European gas networks

# Polygeneration (5 M€\*)

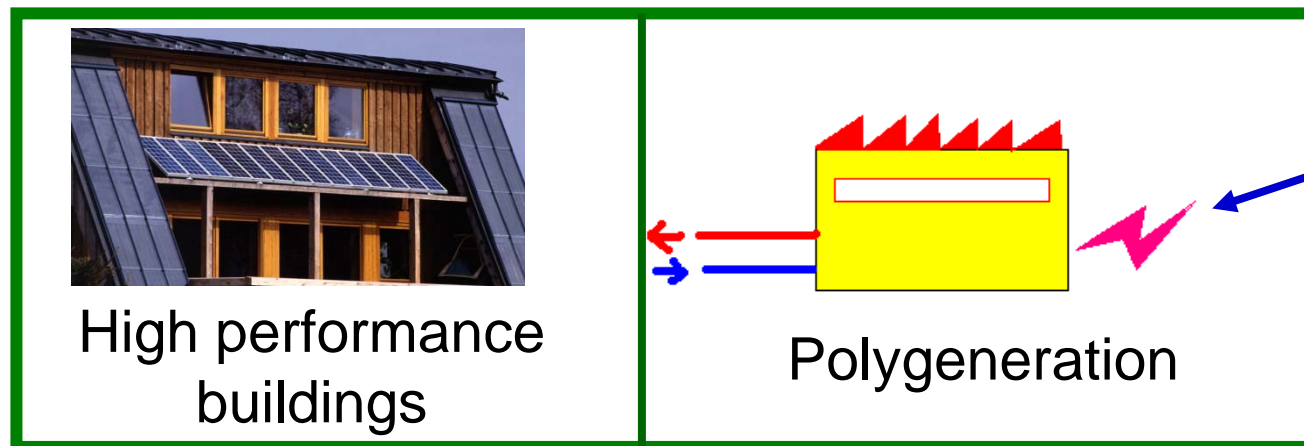
- **Polygeneration = combined production of electricity, heat, cold and products**  
(minimum 3)
- **Polygeneration**
  - **for applications in industrial environment**
  - **and using renewable energy sources**

# Traditional sectorial approach

## Renewable Energy Sources



## Energy Efficiency

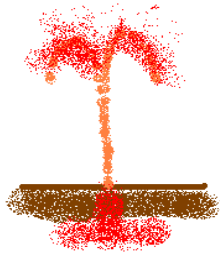


# CONCERTO

## Renewable Energy Sources



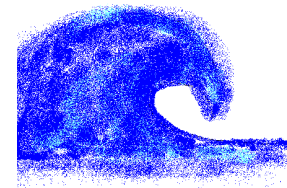
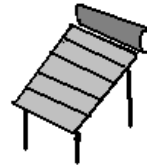
Bioenergy



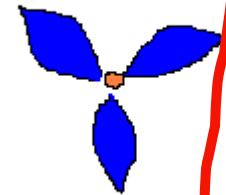
Geothermal



Solar



Wave/Tidal



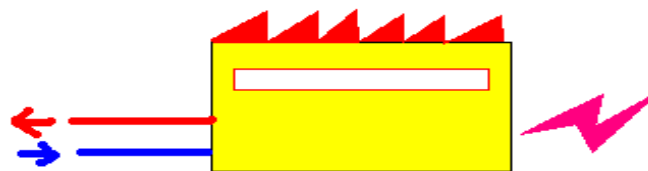
Wind

## SYSTEMS INTEGRATION

## Energy Efficiency



High Performance Buildings



Polygeneration



Smart Grid

# CONCERTO

- **One, or more communities (equal priority)**
- **Not necessarily: big is beautiful**
- **Emphasis on technology, excellence and innovation**
- **Minimum requirements for monitoring are provided by Concerto Plus (see guidelines)**



# Financing for CONCERTO

- **Eligible costs are limited to additional efforts for innovative parts**  
(e.g. very high performance buildings that are not state of the art)
- **Flat rate financing with revised scale of unit cost** (see next slide)
- **Max 6 million euro per community for flat rate demonstration**
- **“Normal homework” is not eligible**  
(e.g. meeting national buildings regulations of 2010)



# CONCERTO flat rate financing: revised scale of unit costs

Eligible innovative technologies	Eligible costs	EC contribution
<b>Buildings</b> [EUR/m <sup>2</sup> new built or refurbished]	<b>100 €</b>	<b>50 €</b>
<b>Renewable energy sources and polygeneration</b> (except photovoltaic systems and solar collectors) [EUR/kW installed]	<b>1200 €</b>	<b>600 €</b>
<b>Photovoltaic systems</b> (eligible only if innovative integration) [EUR/kW installed]	<b>5500 €</b>	<b>2750 €</b>
<b>Solar collectors</b> (eligible only if innovative integration) [EUR/m <sup>2</sup> installed]	<b>500 €</b>	<b>250 €</b>

# Officers responsible for the different topics

Topic	Technical officers
PV-multiple benefits	P. Menna
Biomass power plants & Waste to electricity	J. Riesgo; A. Charalambous
Wind	R. Gambi
Geothermal	S. De Royer
Concentrated solar power	P. Menna
Ocean	A. Kotronaros
Storage of electricity	P. Menna
Biomethane, Bioethanol (second generation)	K. Maniatis; A. Charalambous
Clean Coal	K. Tullius; H. Vu Duc
Smart Energy Networks	M. Supponen; J.F. Fievez
Polygeneration	K. Maniatis; A. Charalambous; J. Fluxa Garcia
CONCERTO	J.M. Bemtgen; S. de Royer; A. Kotronaros; M. Dionisio
Overall Research coordination	S. Fumero; Ludger Rogge

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***Thank you very much  
for your attention***