Energie rinnovabili e fonti alternative: lo stato della cooperazione con la Cina

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EU-China Roadmap on energy cooperation (2016-2020)

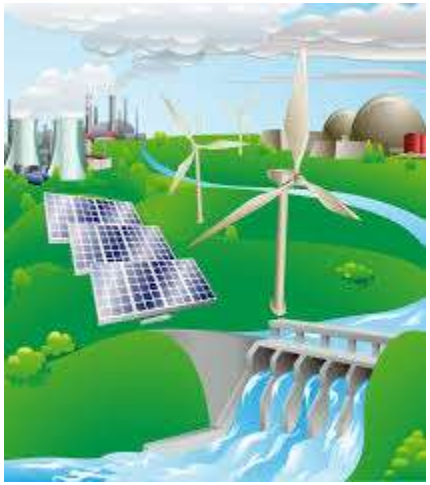
mutual interest and role to promote low-carbon development, protect the environment, address climate change and encourage clean energy development.

Objective: Ensure that energy cooperation makes a key contribution to the comprehensive strategic partnership between China and the EU:

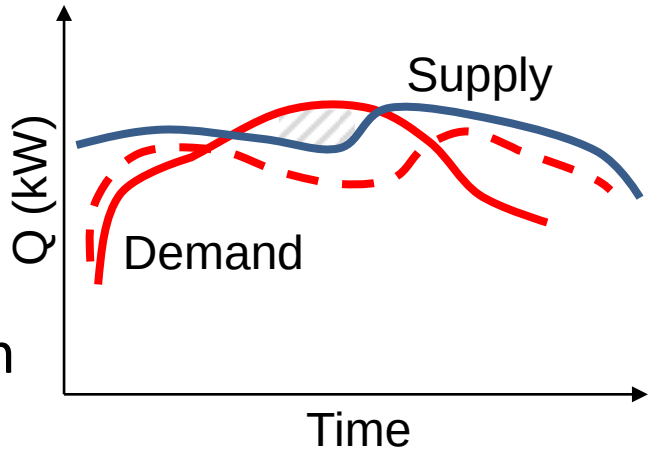
- Enhance mutual trust in energy cooperation;
- Streamline the coordination of cooperation in the field of energy;
- Build mutual trust on market-related energy issues;
- Contribute to the transformation of the energy system, to the sustainable development of the global energy system and to energy and climate resilient investment;

A. Energy Supply: Sourcing, Production and Distribution

- Renewable energy sources
  a. Foster trade and investment in renewable energy, thereby reducing costs by improving competition.
  b. Develop distributed generation and Combined Heat and Power (CHP)
  c. Expand the bio-gas sector



B. Energy Demand: Consumption



- Demand side management
  a. Management of the energy system

- Energy efficiency
  a. Promote the production and consumption of energy-efficient appliances.
  b. Develop energy standards in consumer goods.
  c. Develop a market-oriented Energy Performance Contracting (EPC) system.

C. Cross-cutting Issues

- Energy regulation and pricing
  a. Share best practices on energy regulation
  b. Enhancing coordination in regulatory policies
  c. Reform energy supply prices and support policies
- Energy and the environment
  a. Promote the mobilisation of market mechanisms for environmental protection
  b. Link energy conservation and environmental protection policies

C. Cross-cutting Issues

- International cooperation
  a. Improve trade and investment conditions in the energy sector.
  b. Engage in international energy institutions

ENGINEERING RESEARCH AREA

OBJECTIVES

This WP deals with two main research areas, both related with energy efficiency and carbon dioxide reduction:

Low Carbon Buildings

Mobility and Transportation

MOBILITY

Problem to solve: Transport sector is a major item on GHG emissions

Focus on alternative fuels (CNG/LNG)

Activities:
Feasibility analysis to introduce new vehicle fuels on the Chinese market, particularly considering methane and the European system for this fuel.

Goals:
Production of a technical, legal and economic model for the introduction of new vehicle fuels on the Chinese market

The Feasibility of Liquefied Methane as an Alternative Fuel in Europe and China

- state of the art of natural gas as fuel, especially from biogas source, in Europe and China
- Assessment of the incentive scheme necessary for LBG in Italy

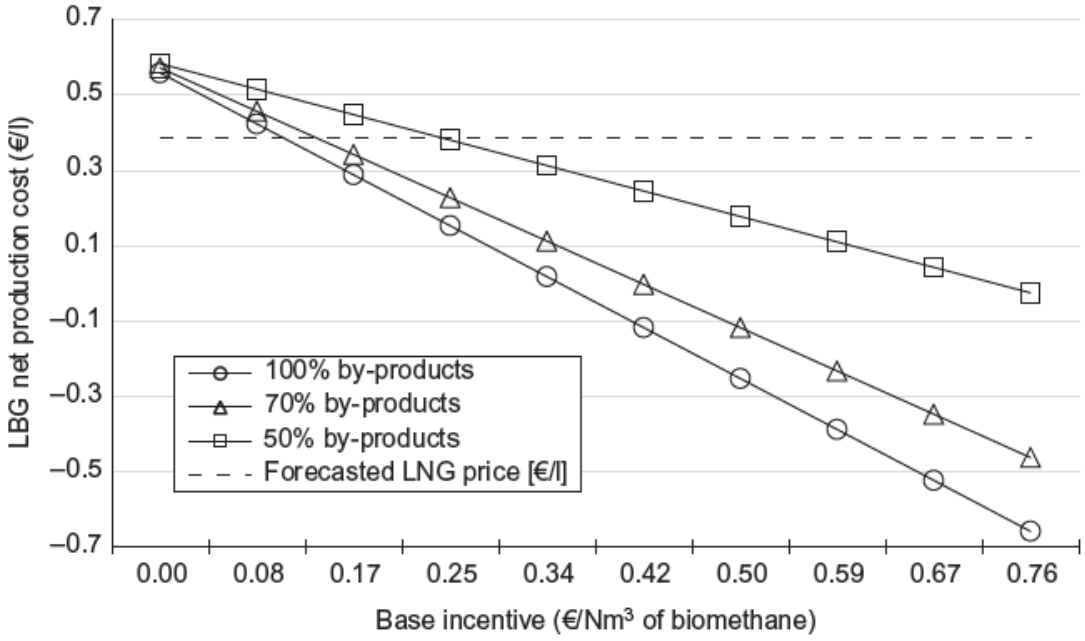


Figure 3: LBG Production Cost Depending on the Base Incentive.

BUILDINGS

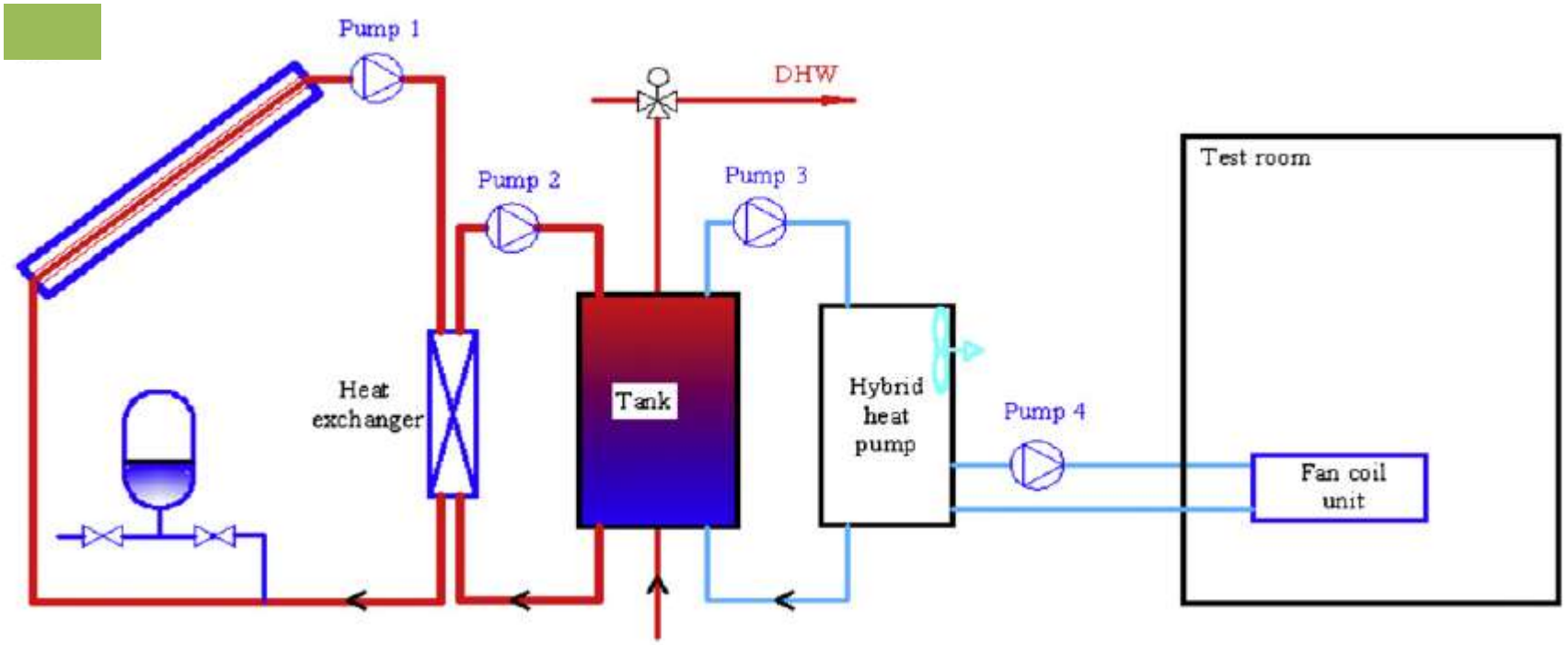
Problem to solve: Buildings account for a high share of energy consumption

Focus on low carbon buildings and energy efficiency

Activities:
to establish a standard for new low carbon buildings in terms of technologies used and operational practice. Development of refurbishment techniques and Demand Side Management (DSM) programs to reduce and adapt energy consumption in the buildings existing stock.

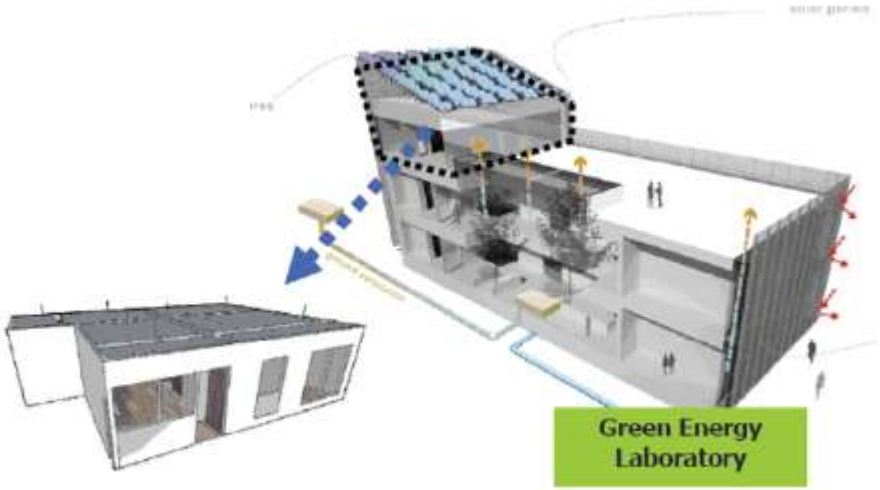
Goals:
Production of a comprehensive report proposing suitable technologies, operational practices and achievable performance;
Development of a plan of action for the introduction of instruments and incentives for DSM

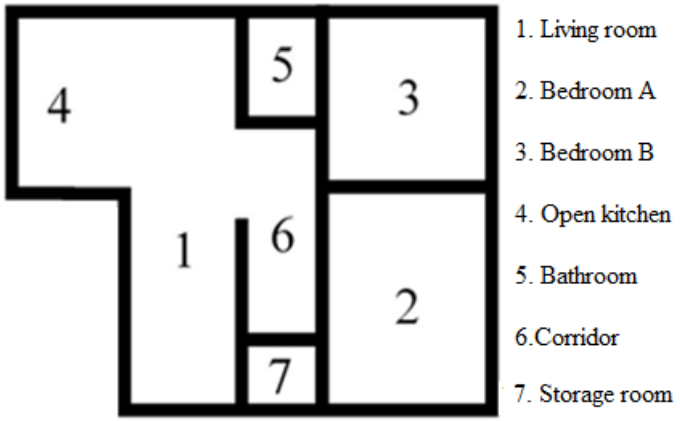
PERFORMANCE ANALYSIS OF A CARBON DIOXIDE HEAT PUMP INSTALLED IN A RESIDENTIAL APPLICATION



CASE STUDY DESCRIPTION

- **BUILDING**





Building envelop	U [W/(m²·K)]	g
Roof	0.34	-
Exterior wall	0.57	-
Interior wall	0.92	-
Floor	1.08	-
Window	2.83	0.62

Conclusions

- Strategic role of EU-China cooperation on Energy
- China is developing at a high very high pace on the technology field!