



# The Strategic Energy Technology Plan: Financial Instruments

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- The European Strategic Energy Technology Plan (SET-Plan)
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# Motivation and Energy Policy Objectives

The Council of the EU endorsed on March 2007 the following objectives for 2020:

- Achieving at least a 20% reduction of greenhouse gas emissions compared to 1990 levels.
- Increasing the share of renewables in final energy consumption to 20%.
- Saving 20 % of the EU's energy consumption compared to projections for 2020.
- 10 % minimum target to be achieved by all Member States for the share of biofuels in overall EU transport petrol and diesel consumption by 2020.

# Motivation and Energy Policy Objectives

The Treaty of Lisbon and the Green Paper fixed the following objectives for UE energy:

- Ensure the functioning of the energy market.
- Ensure security of energy supply in the Union.
- Promote energy efficiency and energy saving and the development of new and renewable forms of energy.
- Promote the interconnection of energy networks.

# Motivation and Energy Policy Objectives

All of these objectives must be achieved taken into account that the Council shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply.

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# The Strategic Energy Technology Plan (SET-Plan)

Is the EU vehicle that must:

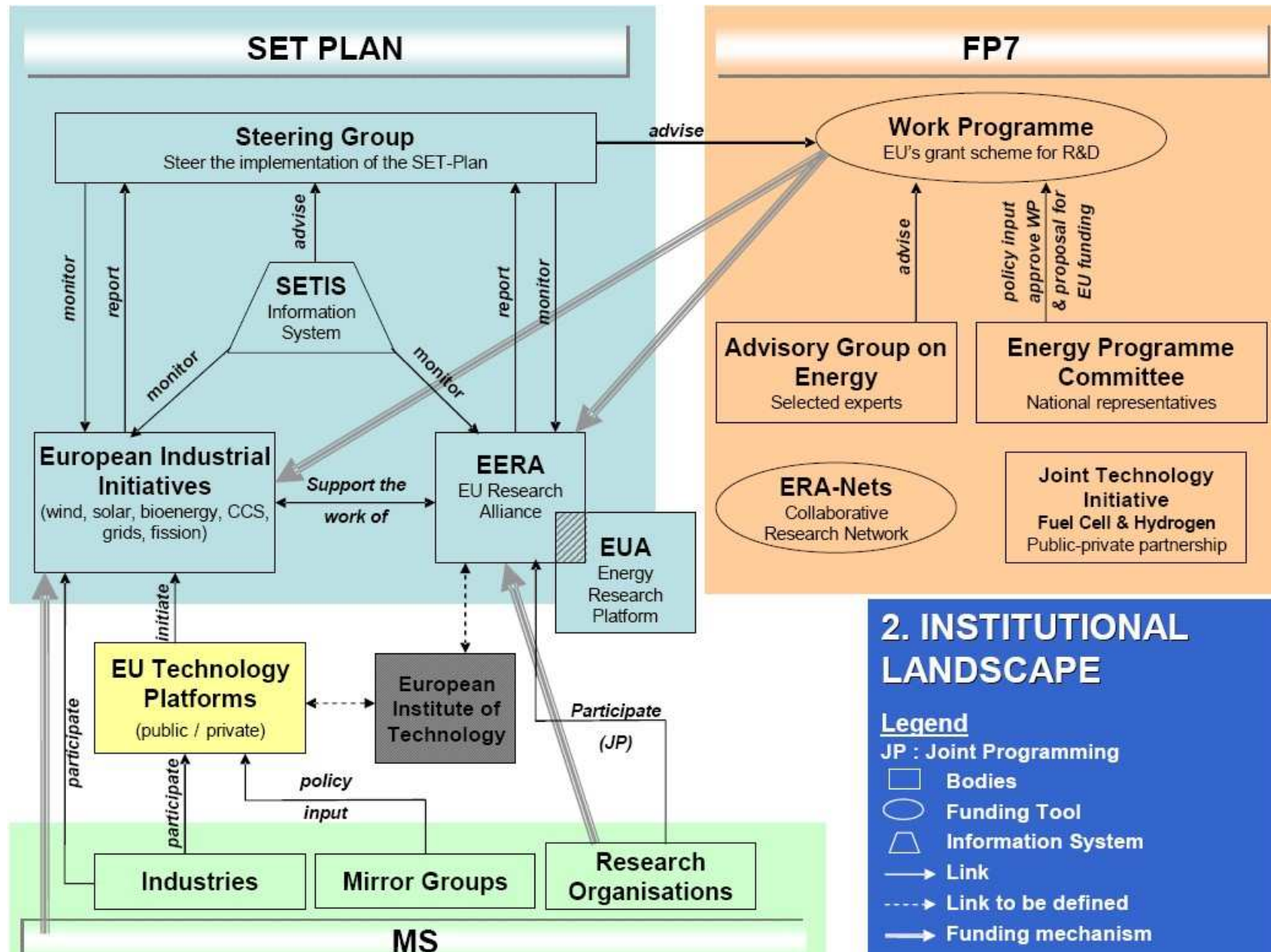
- Enable the pooling of resources and sharing of risks to develop new technologies that offer huge potential but are currently far from market competitiveness and are beyond the means of individual countries.
- Facilitate strategic planning at both the technology and energy system levels to ensure a common approach to problems that have a cross-border dimension, such as networks, as well as to optimise the transition towards the energy system of the future.

# The Strategic Energy Technology Plan (SET-Plan)

- Permit a better gathering and sharing of data and information to support sound energy technology policy making and guide investment decisions.
- Ensure coherence and critical mass in international cooperation efforts.

To get these objectives the SET Plan means a new approach never arose before at European level, which involves a great deal of cooperation among all stakeholders.

# SET-Plan New Governance Structure



# SET-Plan New Governance Structure

- Steering Group: Its mandate is to conceive joint actions, through coordinating policies and programmes, make resources available and monitor and review progress in a systematic manner
- European Energy Technology Information System (SETIS): To provide regular and reliable information and data for effective planning to the Steering Group
- European Energy Research Alliance (EERA): composed by National Research Institutes and research teams from universities and specialised centres aiming to coordinate their efforts and work plans

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# European Industrial Initiatives

The European Industrial Initiatives (EIIs) bring together industry, the research community, the Member States and the Commission in risk-sharing, public-private partnerships aiming at the rapid development of key energy technologies at the European level.

# European Industrial Initiatives

- Wind Industrial Initiative: focus on large turbines and large systems validation and demonstration (relevant to on and off-shore applications).
- European Industrial Initiative on Solar Energy: focus on large-scale demonstration for photovoltaics and concentrated solar power
- European Industrial Initiative on Bioenergy: focus on 'next generation' biofuels within the context of an overall bio-energy use strategy.
- European Industrial Initiative on Carbon Capture and Storage: focus on the whole system requirements, including efficiency, safety and public acceptance

# European Industrial Initiatives

- European Industrial Initiative on Smart Grids: focus on the development of the smart electricity system, including storage, and on the creation of a European Centre to implement a research programme for the European transmission network.
- European Industrial Initiative on Sustainable Nuclear Energy: focus on the development of Generation-IV technologies.
- European Industrial Initiative on Smart Cities: focus on achieving in 2020 a 40% of green house gas reduction in European cities.

# European Industrial Initiatives

In 2009, the technology roadmaps, as well as the estimated inversion for its implementation, elaborated by all related stakeholders, were published by the European Commission.

The six first EII were launched during the year 2010. The EII on Smart Grids is foreseen to be ready at the beginning of 2011.

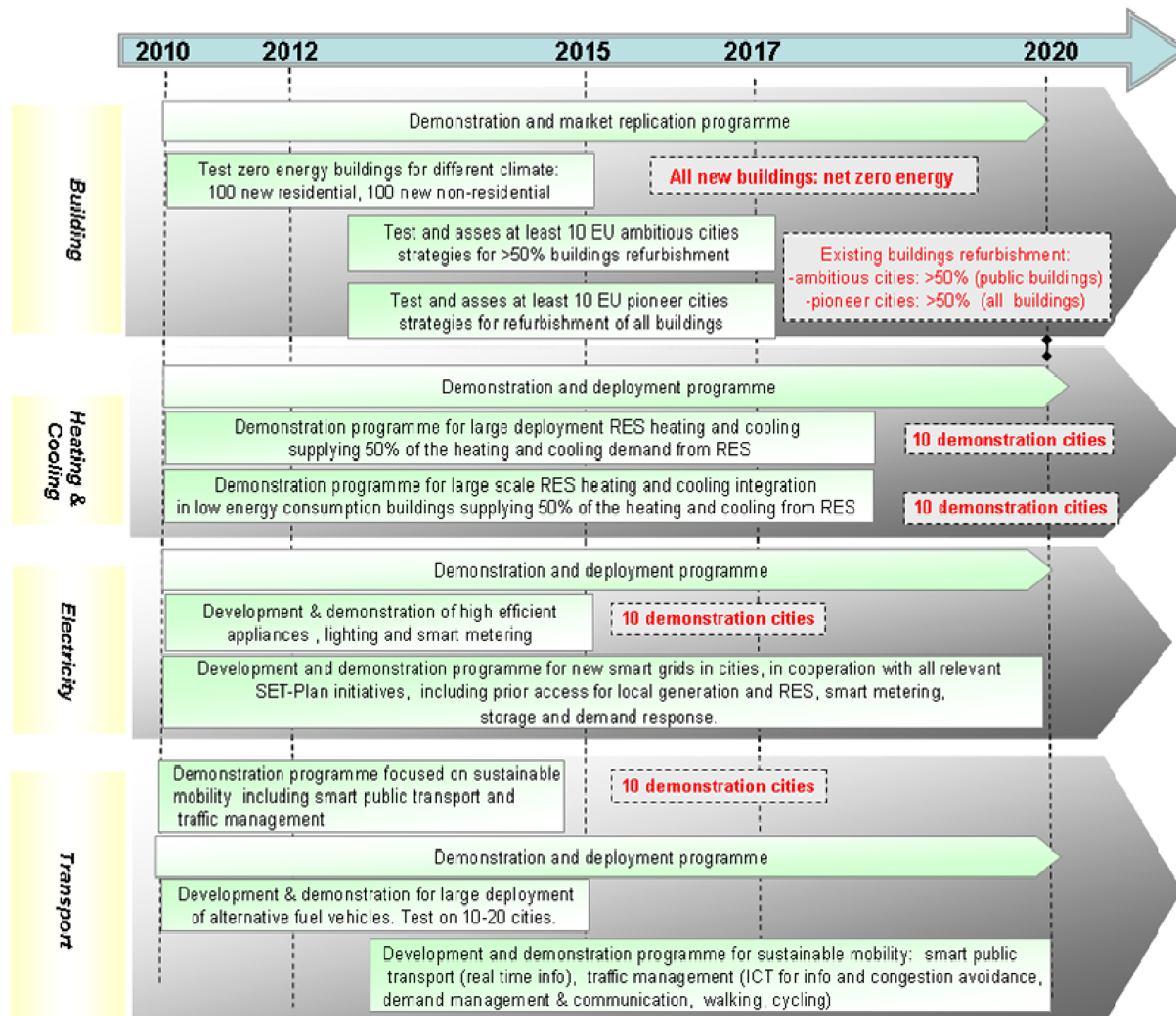
# Industrial Initiative on Smart Cities

Demonstrate the feasibility of rapidly progressing towards European energy and climate objectives at a local level while proving to citizens that their quality of life and local economies can be improved through investments in energy efficiency and reduction of carbon emissions. This Initiative will foster the dissemination throughout Europe of the most efficient models and strategies to progress towards a low carbon future.

# Industrial Initiative on Smart Cities

- Promote the deployment of energy efficiency and low carbon technology affecting at least 5% of population in order to develop a real market.
- This Initiative will support cities and regions in taking ambitious and pioneering measures to progress by 2020 towards a 40% reduction of greenhouse gas emissions through sustainable use and production of energy.

Actions	Total (M €)
New buildings and remodeling of existing buildings affecting more than 20 M people	10.000-12.000
Energy grids (Heating, Cooling and electricity)	
Transport	



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# Financial Instruments

Spite of the EU only manages one quarter of the public investments on R&D related to the SET Plan priorities, the SET Plan might serve as a framework to coordinate and leverage the investments coming from member states, industry and RTD performers

# Financial Instruments

- Member States R&D funding instrument: are encouraged to align them in the direction of the SET Plan.
- FP7: It is the key tool of the EU for funding R&D projects.
- FCH JTI: works very close to the EIIs so as to find potential common interest but not under the Set Plan governing board.
- Energy Intelligent for Europe: it funds projects aiming to overcome non-technical barriers for the implementation of energy technologies.

# Financial Instruments

- European Energy Programme for Recovery: big demo projects 50% co-funded.
- European Economic Recovery plan: One of the included measures was the creation of four Public Private Partnerships focused on (1) Green Cars (2) Energy Efficient Buildings, (3) Factories of the Future and (4) Internet of the Future.

# Financial Instruments

- NER 300: It contains the provision to set aside 300 million allowances (rights to emit one tonne of carbon dioxide). The allowances will be sold on the carbon market and the money rose - which could be as much as 4.5 bn EUR if each allowance is sold for 15 EUR - will be made available to projects as they operate.
- Structural Funds
- European Investment Bank

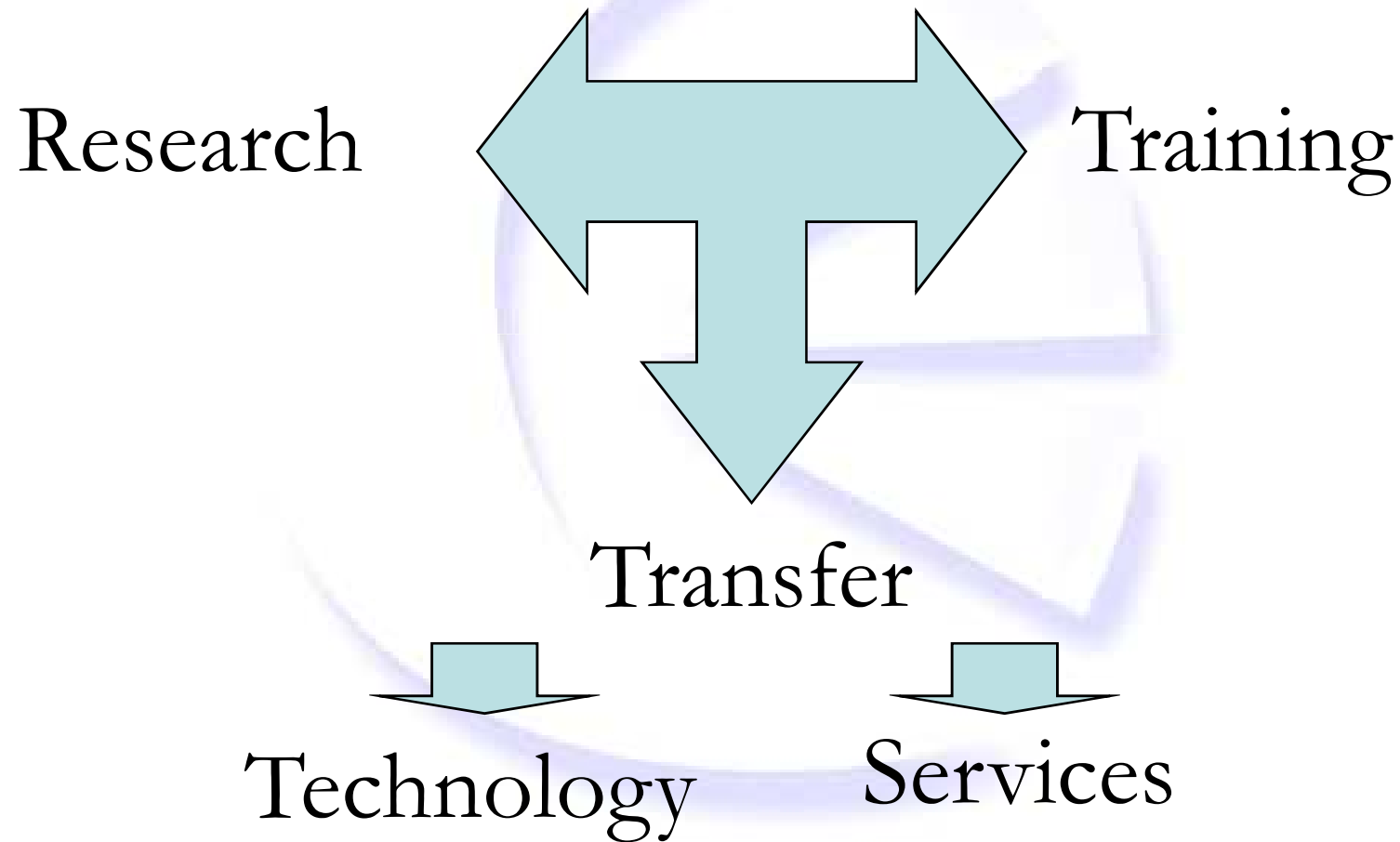
# Conclusions

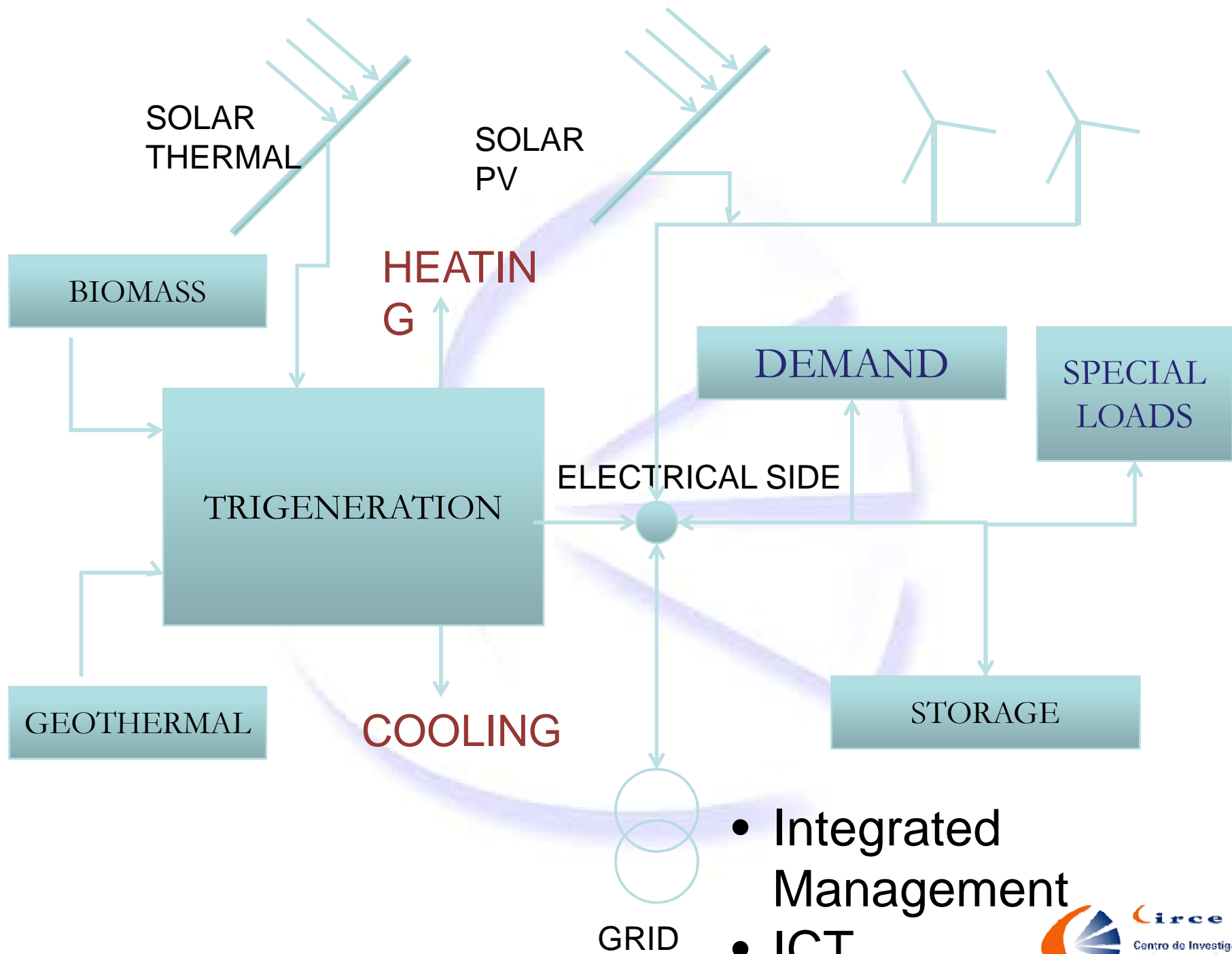
- ✧ It is not clear who is going to pay (public part).
- ✧ The industry is going to pay half of the investment.
- ✧ The industry is the key actor to plan the deployment of the actions.
- ✧ The demo projects are the most important part of the SET Plan.
- ✧ The research institutions must be close to the Industry if they want to be involved.

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# Knowledge Triangle





# Thinking from the other side

- Why someone is going to pay more for living in a house/flat with such a system
- Having a green mark.
- Security of supply.
- Grid services.





**Thanks for your attention**