



# **PCTE – Pólo de Competitividade e Tecnologia da Energia**

**(“Competitiveness and Technology  
Center for Energy” - ENERGYIN)**

**Short Introduction**

Lisbon, 5th of November 2009

## PCTE was set up as a non-profit Association, to promote the Technology Development and the Innovation in the Portuguese Energy Sector

### Founding Associates



MIT Portugal

- Right to appoint the President
- Permanent sit at the Board of Directors
- Some specific obligations

### Other Associates

Any (national or foreign) companies or other entities which undertake significant activity (\*) in the Portuguese Energy Sector

### Focus Areas

Renewable Energies and Energy Efficiency

\* At least 20% of their income, are supposed to come from the Energy Sector

## PCTE intends to be “the heart” of a Portuguese ENERGY CLUSTER (initially focused on the Renewable Energy & Energy Efficiency) dedicated to New Technologies and Innovation



Offshore  
Energy

Rational: taking advantage of the privileged natural conditions of Portugal, to bet on the development of a few promising technologies, building competitive industrial capabilities in an international context.



Solar  
Energy

Rational: taking advantage of the good natural conditions to give incentive to the “micro generation” and to develop some distinctive industrial competences in the segments that may offer high added value.



Energy  
Efficiency

Rational: allowing a better energy management by the industry, residential sector and public sector, through the development of new services and new devices.



Smart  
Grids

Rational: ensuring the sustainability & flexibility of the network after promoting the micro-generation/“distributed generation” and the use of the electric vehicle.



Sustainable  
Mobility

Rational: reducing significantly the CO<sub>2</sub> emissions and the dependence on oil, for instance, leading the implementation of a network of electric vehicles.

## **ACTION standpoint – “PCTE” must play a TRIPLE ROLE**

### **As an OBSERVATORY:**

- ▶ Front running technologies (state of the art);
- ▶ Required manpower qualifications (vs. previous situation).

### **As a NETWORK to link:**

- ▶ Renewable energy developers/ users;
- ▶ Equipment manufacturers;
- ▶ Universities, Labs and Research Centers;
- ▶ Possible partners for I&D or for business;
- ▶ National and European official departments;

(Detection of “special” opportunities to invest on research, to make partnerships, to launch new companies, etc.)

### **As an ACTIVE PROMOTER OF TECHNOLOGY DEVELOPMENT & INNOVATION:**

- ▶ Calling/ taking the Universities, Labs and Research Centers to supply the actual Companies’ needs for I&D;
- ▶ Making efforts to import advanced foreign technologies;
- ▶ Helping to make appropriate partnerships at national and international level;
- ▶ Encouraging innovative entrepreneurship.

## PCTE must act as a “*think tank*” to streamline the Energy Sector

### PCTE Mission

To contribute to the development of an Energy Cluster dedicated to Technology Development and Innovation, that must be competitive at International level

### Instrumental Objectives:

1

Periodic identification of strategic areas

2

Identification and promotion of projects

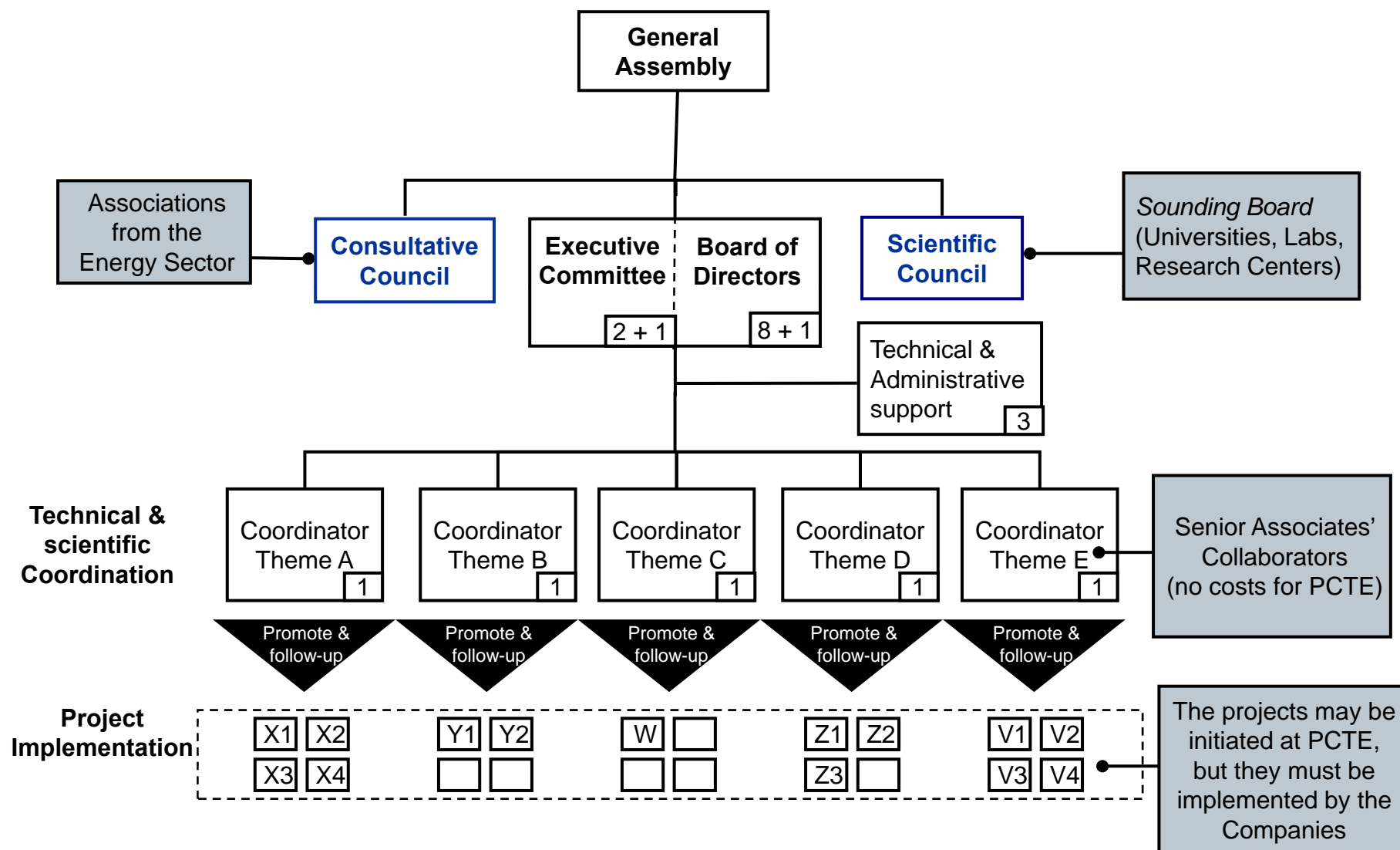
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Streamlining the cooperation between companies and other entities of the Energy Sector






### Examples of activities to be developed:

- **Acting as a *think tank* to identify and promote the strategic areas**, based on criteria of innovation and existing potential for industrial competitiveness.
  - **Defining the medium-long term ambition**, for the development of those areas.
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- **Launching projects** which can be maximized through the coordination between different players of the sector, contributing to achieve each area's goals.
  - **Meeting conditions** for the projects to be implemented by private initiative.
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- **Promoting the cooperation** e dissemination of knowledge among companies and other entities of the sector, either national or foreign or international (e.g. *benchmarks*)
  - **Promoting activities of the Cluster** abroad, to attract investment.
  - **Carrying out studies** and publishing opinions on the sector's development policies.

## PCTE: a light model of organization with a broad scope of action

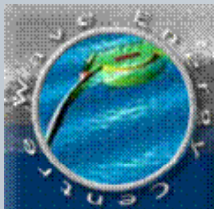


## Summary of the Initial Projects to be developed

		Anchor Projects	Additional Projects
1		<p><b>Offshore Energy</b></p> <p><b>A</b> Setting up the “<i>Offshore Energy Institute</i>”, by adding new infrastructures, competences and resources to the existing WavEC. The new “OEI” will ensure the availability of offshore-related services in Portugal (a lab, O&amp;M equipment, a test zone, etc.) which may also be used by foreign technologists who wish to undertake any tests in our country.</p>	<ul style="list-style-type: none"> <li>Analysis of the starting situation as to the offshore energy, from the legal and financial point of view, as well as the identification of the main requirements for its development.</li> <li>Selection and characterization of locations with offshore wind potential in the portuguese coast.</li> <li>Evaluation of the “industrial potential” for offshore wind energy in Portugal.</li> </ul>
2		<p><b>Solar Energy</b></p> <p><b>B</b> Creation of a Center for Innovation and Promotion of Sustainable Buildings, to encourage energy efficiency and the integration of solar energy in buildings.</p>	<ul style="list-style-type: none"> <li>Review study of legal framework and tariffs for solar energy (photovoltaic and thermal)</li> </ul>
3		<p><b>Energy Efficiency</b></p> <p><b>D</b> Sustainable urban energy systems</p>	
4		<p><b>Smart Grids</b></p> <p><b>E</b> Launching of InovGrid (a test with ~50.000 clients)</p>	<ul style="list-style-type: none"> <li>Assessment of the main opportunities to reduce the energy consumption and evaluation of the instruments and incentives, best suited to achieving the objectives</li> <li>Assessment of the opportunities for launching commercial offerings and home automation systems that might leverage the network potential.</li> <li>Marketing potential study, at international level, for smart grid integrated solutions.</li> </ul>
5		<p><b>Sustainable Mobility</b></p>	

## A The Wave Energy Center (WavEC) is supposed to serve as the embryo of the new Offshore Energy Institute (OEI)

### Wave Energy Center



- A Forum aggregating the main players of offshore energy in Portugal.
- Owning an international reputation with regards to the study of wave energy.
- Having 8 qualified researchers and a network of relevant contact points.

### Offshore Energy Institute



**An entity that is based on WavEC, but with extensive capabilities and additional technical and human resources, namely:**

- Own technical resources and access to others' resources, e.g.,
  - Testing prototypes to small-scale
  - Laboratories at the service of research teams
  - Specialized software (e.g. numeric modeling)
- Shared technical resources, e.g.:
  - Agreements with other entities for using specialized labs, when the disciplines at stake are not available in the Institute
  - Agreements for using naval equipment to install and maintain prototypes at sea
  - Preparation of documents to dissemination
- Own human resources, e.g.:
  - Professional management of the Institute
  - Driving initiatives to promote and disseminate its scientific-technical capacity
  - Operation and maintenance of the laboratories
  - Provision of services to the users of the Institute (e.g., certification)

## PCTE – Contacts

**Temporary e-mail contact:** [custodio.miguens@edp.pt](mailto:custodio.miguens@edp.pt)

Future brand name: **ENERGYIN**

Future Internet domain: [www.energyin.pt](http://www.energyin.pt)

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