



Centro Tecnológico de Eficiencia
y Sostenibilidad Energética

**Creating Value and Opportunities in the
field of Energy Efficiency and Sustainability**



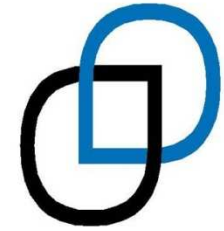
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What is EnergyLab?

What is EnergyLab?



- ***EnergyLab is a research centre specialized in Energy Efficiency and Sustainability***
- ***We have top private and public partners warranting our stability and strategic growing prospects***
- ***We look forward to build up a leading team of professionals interested in helping us to carry out this project and benefit from belonging to a cutting-edge centre***

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What is EnergyLab? Our mission and vision

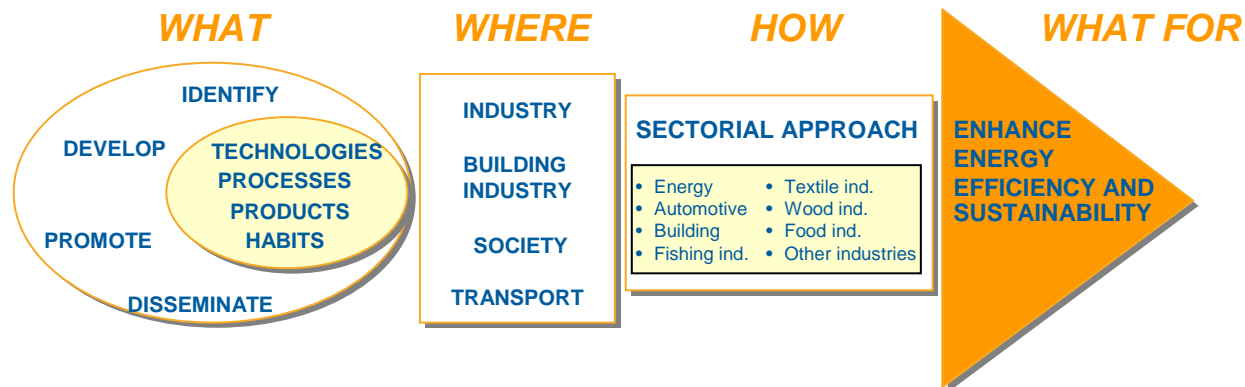


Mission

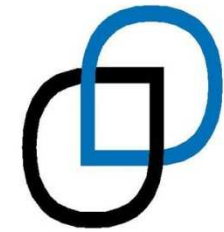
“Identify, develop, promote and disseminate technologies, processes, products and consumption behaviors that enhance Energy Efficiency and Sustainability among industry, transport, building industry and among society overall”

Vision

“A Centre with international reputation specialized in boosting Energy Efficiency and Sustainability, with the ability to guide, coordinate and lead innovative initiatives and project impacting on the society, the economy and the environment.”



1 What is EnergyLab? Our goals and services



Goals

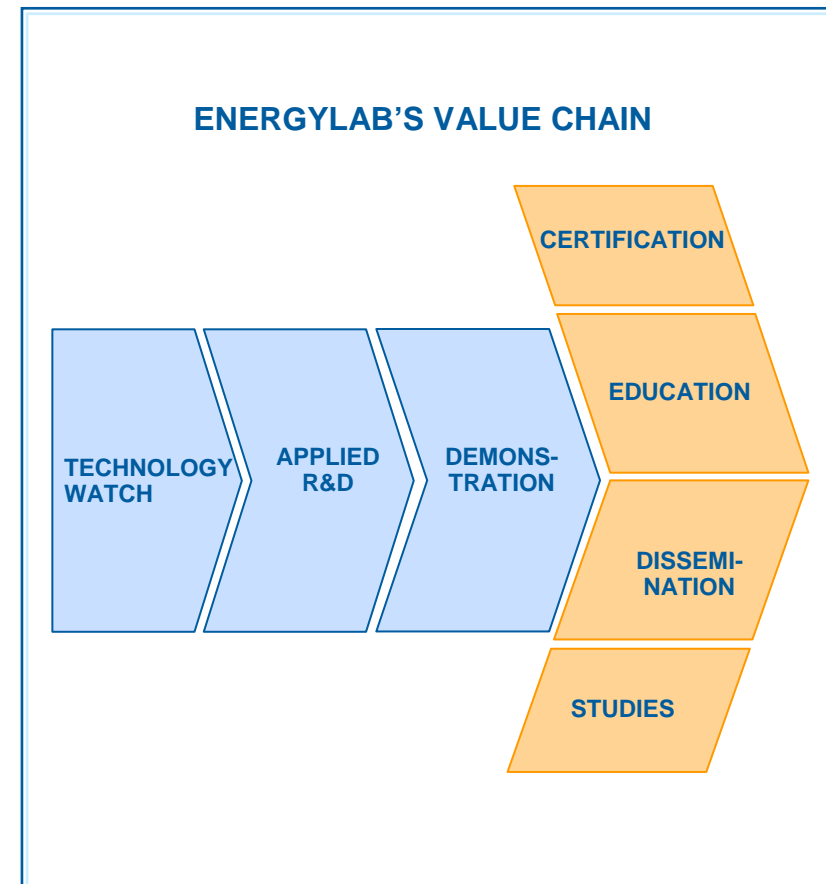
What for

- Stimulate the continuous market penetration of new products, processes and technologies in the field of Energy Efficiency and Sustainability
- Identify, stimulate and develop business opportunities in the field of Energy Efficiency and Sustainability

- Build up and coordinate a wide network of clients comprising top companies and research institutes of excellence in Spain and worldwide
- Raise multiple sources of income and financial sources from public and private funds, that assure economical stability and sustainability in the mid term

Why

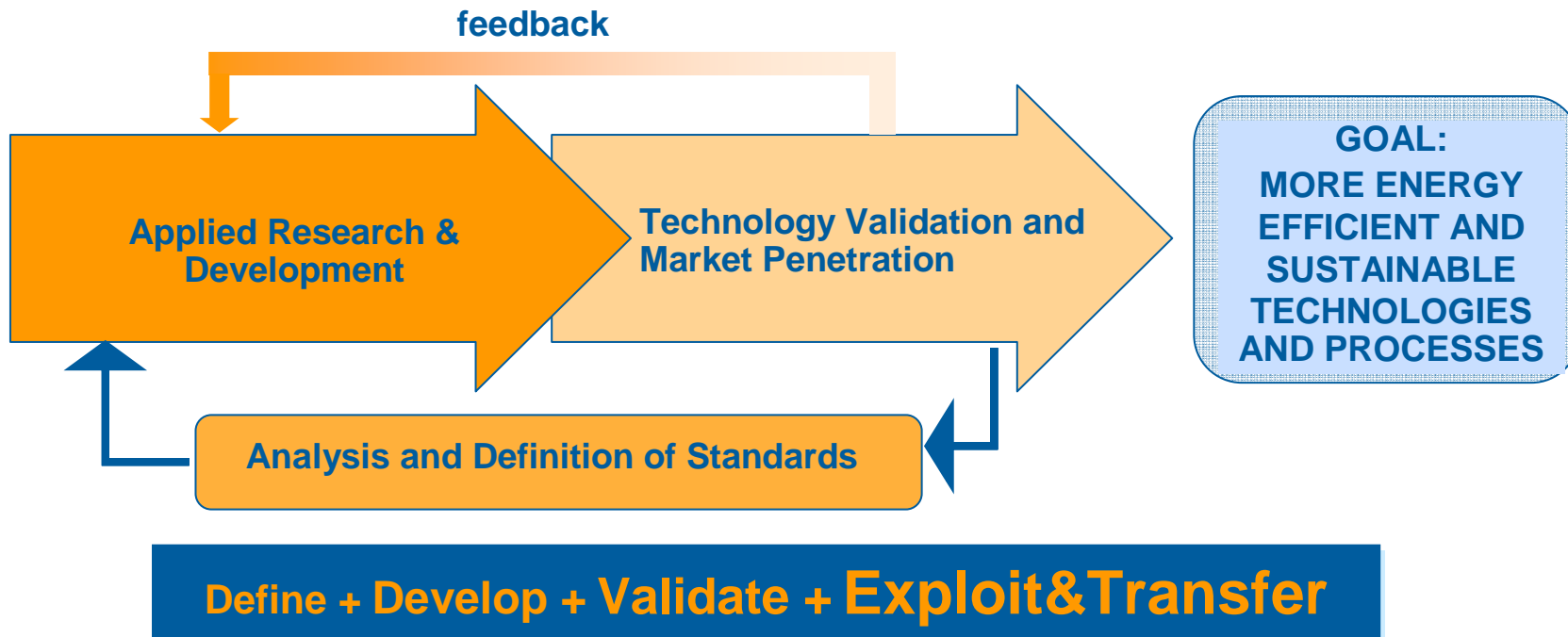
Services



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What is EnergyLab?

EnergyLab's technological strategy is committed to the penetration of advanced technologies ...



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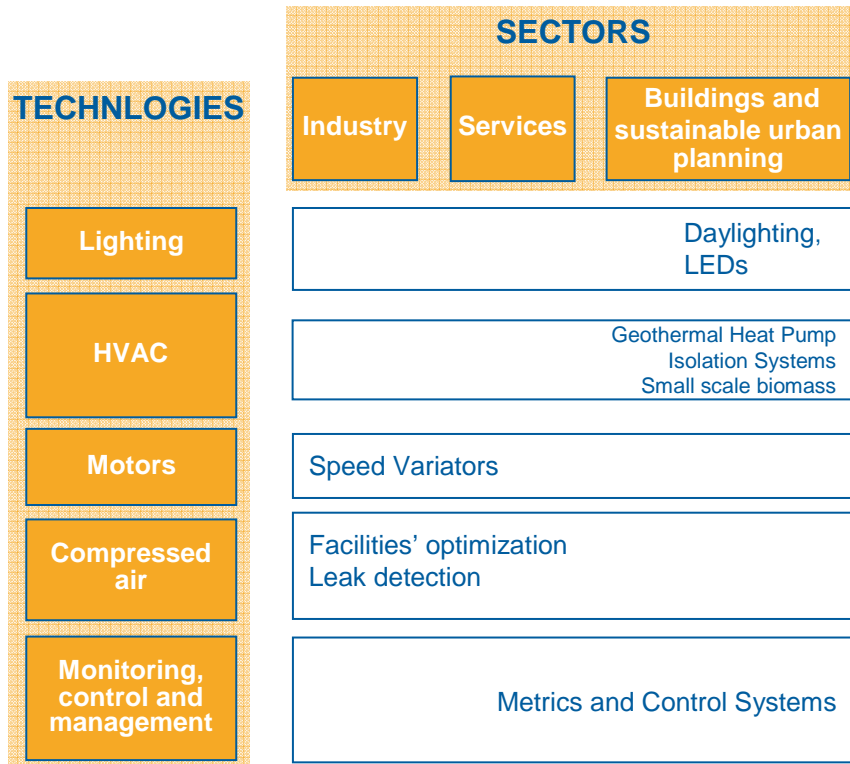
What is EnergyLab?

... focused, in the short and mid term, on the industry and construction sectors



TECHNOLOGICAL STRATEGY IN THE SHORT TERM

TECHNOLOGICAL STRATEGY IN THE LONG TERM



Progressively, EnergyLab's technological strategy will grow along with the evolution of the Center's capabilities, the trustees' interests and the opportunities that may arise

		Tecnologías					
		Generación y almacenamiento de energía		Equipamientos		Sistemas Globales	
		Generación	Almacenamiento	Equipamientos térmicos	Equipamientos eléctricos		
Sectores	Industria	<ul style="list-style-type: none"> > Cogeneración y microgeneración > Generación distribuida 		<ul style="list-style-type: none"> > Quemadores > Calderas ind. > Secaderos > Hornos ind. > Infrarrojos > Termocompresores > Redes de servicios (vapor, calor) 	<ul style="list-style-type: none"> > Enfriadoras > Motores > Ventiladores > Aire comprimido > Bombas > Variadores de frecuencia > Compresores > Cocinas industriales 	<ul style="list-style-type: none"> > Reingeniería de procesos > Alumbrado público > Abastecimiento eficiente de agua > Instrumentación de control y regulación > Calidad de suministro > Automatización 	
	Edificación	<ul style="list-style-type: none"> > Microgeneración > Microgeneración 		<ul style="list-style-type: none"> > Cocinas industriales > Calderas industriales > Calderas industriales > Refrigeración activada > Almacenamiento térmico > Bombas de calor > Bombas de calor > Bombas de calor > Bombas de calor > Bombas de calor > Bombas de calor 	<ul style="list-style-type: none"> > Calderas (lavanderías) > Calderas (lavanderías) > Calderas (lavanderías) > Calderas (lavanderías) > Calderas (lavanderías) > Calderas (lavanderías) > Calderas (lavanderías) > Calderas (lavanderías) > Calderas (lavanderías) > Calderas (lavanderías) 	<ul style="list-style-type: none"> > Urbanismo y construcción > Climatización y ACS > Medida, monitorización, gestión y control energético > Doméstica > Iluminación (bajo consumo, LED) 	
	Transporte				<ul style="list-style-type: none"> > Motores híbridos > Motores híbridos > Motores híbridos > Motores híbridos > Motores híbridos > Motores híbridos > Motores híbridos > Motores híbridos > Motores híbridos > Motores híbridos 	<ul style="list-style-type: none"> > Motor Híbrido > Baterías 	<ul style="list-style-type: none"> > Gestión de rutas > Gestión del tráfico > Seguimiento y control de flotas
	Energía	<ul style="list-style-type: none"> > Turbinas de vapor > Turbinas de gas > Microturbinas 	<ul style="list-style-type: none"> > Baterías 		<ul style="list-style-type: none"> > Alternadores > Transformadores 		

Continuous analysis of technology and market

2

Who sets up EnergyLab's project

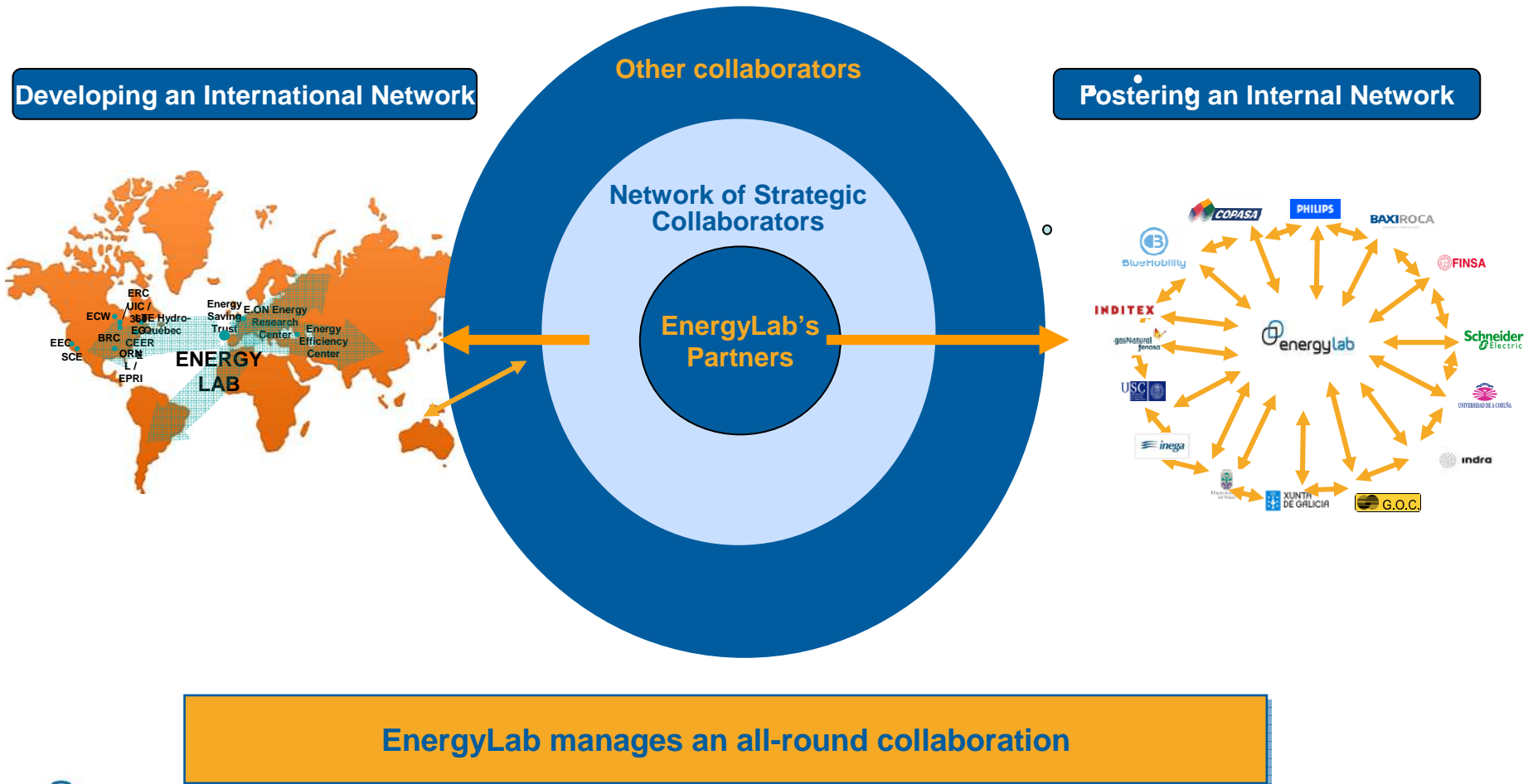
EnergyLab is developing from its private and institutional trustees ...



Private Companies	  	  	  
Public Institutions			
Universities			

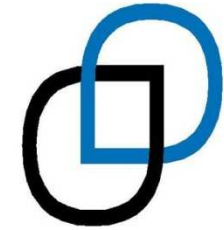
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Who sets up EnergyLab's project
... into and Open Centre coordinating several
collaboration frameworks with an international scope



6 Specific Projects

Industry Area



<p>Pilot Project of Speed Drives</p> <ul style="list-style-type: none">- Technology validation through installations of these systems in various industrial processes and measuring results.
<p>Technology watch in energy efficiency technologies</p> <ul style="list-style-type: none">- Making Technology Watch reports on various energy efficient technologies, both the lighting area, and the industry and construction area .
<p>Metrics between Gas&Electricity</p> <ul style="list-style-type: none">- Determine the metrics and indicators to establish energy efficiency and sustainability, technical and economic, of various industrial processes which may be powered by gas or electricity
<p>Energy Study on Aggregates Industry</p> <ul style="list-style-type: none">- Mobility and Energy Study Process in an Aggregates Industry Plant.
<p>Strategic analysis in energetic matter in the Mine Cobre Las Cruces</p> <ul style="list-style-type: none">-Identification of points of improvement and actions to reduce the energetic consumptions of the miners facilities.
<p>Evaluation in field of microcogeneration system with Stirling engine</p> <ul style="list-style-type: none">-Evaluation of the applicability and potential penetration in the national market, based on Stirling engine, through one test of real application in field
<p>Technical support for plan of business ESCo</p> <ul style="list-style-type: none">-Technical support for the new model of business of energetic services. Application in engines and ASD's for: ventilation / aspiration, compressed Air, Pumping Systems and machines of plastic injections.
<p>Demonstrative project " Application of hybrid supply system in a fishing vessel "</p> <ul style="list-style-type: none">-To define, to develop and to execute the implantation of a hybrid system of electricity supply in a fishing vessel.

6 Specific Projects

Buildings projects and Sustainable Urban Planning



Demonstrative project of Geothermal Heat Pump in single family houses

- Installation and monitoring of systems of GHP in houses in Spain, in order to obtain indicators that fully describe the technology characteristics of the Spanish geography .
- Development of a Business Plan of GHP also carrying out a valuation of the viability of the different technologies.

Demonstrative plan for the use of Geothermal Heat Pump in Galicia.

- Installation and monitoring of pilot facilities of GHP in buildings of houses and buildings of the services sector in Galicia in order to deeply characterize the technology.

Lignum Facile: Wood, energy efficiency and sustainability. Construction systems

- Modelling of energy efficiency standards in building systems that allow the comparison of energy efficiency of wood versus other materials

Energy Studies in Galician councils

- Conducting a study of energy savings in public facilities of several Galician areas.

Study of removers of parasite consumptions through Stand-by in domestic equipment

- Analysis of consumption and checking of own equipment to estimate the simplicity and convenience of use, efficiency, and final determination of the pros and cons.

Empirical study and system evaluation of ACS's production

- To evaluate the applicability and potential penetration in the national market of the different ACS production systems.

Cold Solar Study University Carlos III

- Feasibility and positioning study of a new technology of an absorption machine in combination with thermal solar capture for air conditioning.

Project VEGALSA – EROSKI

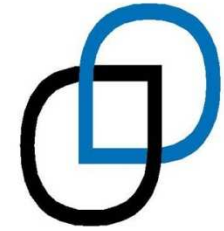
- Energetic study in establishments of supply, as well as management of the aids of INEGA's energy efficiency in order to reform interior lighting with more efficient conditions.

Study of energetic viability

- Study of viability on the installation of air conditioning system with geothermal heat pump in the new facilities of the center of Super-computing of Galicia CESGA, located in Santiago de Compostela



6 Specific projects



R&D projects funded by Public Notice

Showcases Lighting Advanced System Project

- Project in collaboration with the company Inditex, based on the study of an advanced system of lighting in shop windows to improve energy efficiency

Optimization Project of a Geothermal Heat Pump for DHW and Heating or Cooling

- Project in collaboration with the University of Vigo, which studies the experimental energy optimization of a geothermal heat pump for simultaneous production of ACS with air conditioning

6 Specific projects



Training Activities

Training course of Geothermal Heat pump

- Course of Design and Installation of Geothermal Heat Pump Systems which offered comprehensive training to installers, with theoretical, practical and actual site visits.

Participation in Master of Energy efficiency in the University CEU of Valencia

- Imparting of several modules in the Energy efficiency Master's Degree
- Master's Degree in Constructive Prefabricated Systems
- Pathologies, diagnose and energetic rehabilitation in the building

Technical days

- Day " Energy efficiency in the Buildings ", Vigo June, 2009
- Day " New Technologies of Energy efficiency in the industry ", Chamber of Trade of Orense October, 2009
- Conference by the Association of Architects' of Galicia " Foundations of the Geothermal Energy ", October - November, 2009 Vigo, Santiago de Compostela, Pontevedra, Orense, Lugo and Ferrol.
- Day " Energy efficiency in Heating and Refrigeration: Geothermal Utilizations through Heat pump ", Vigo November, 2009.
- Day " Energy efficiency in the Industry ", Barcelona December, 2009
- Day " Energy efficiency in the Industry, buildings and the municipalities " La Rioja April, 2010
- Technical day ENERGYLAB " Energetic Management in the building ", Vigo on September 28
- Technical day ENERGYLAB " Energy efficiency in heating and refrigeration: geothermal utilizations through heat pump ", Valencia October
- Technical day EnergyLab " New Technologies in the sector of automotion", Vigo on October 28
- Technical day EnergyLab " Cases of success in industrial cold and compressed air ", Barcelona in December



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