



Asociación Española de Cogeneración

# La energía: Ahorro y Eficiencia

Mejora tu empleo en el Sector Privado Forestal, Educativo y Ambiental en Castilla-La Mancha



www.acogen.es

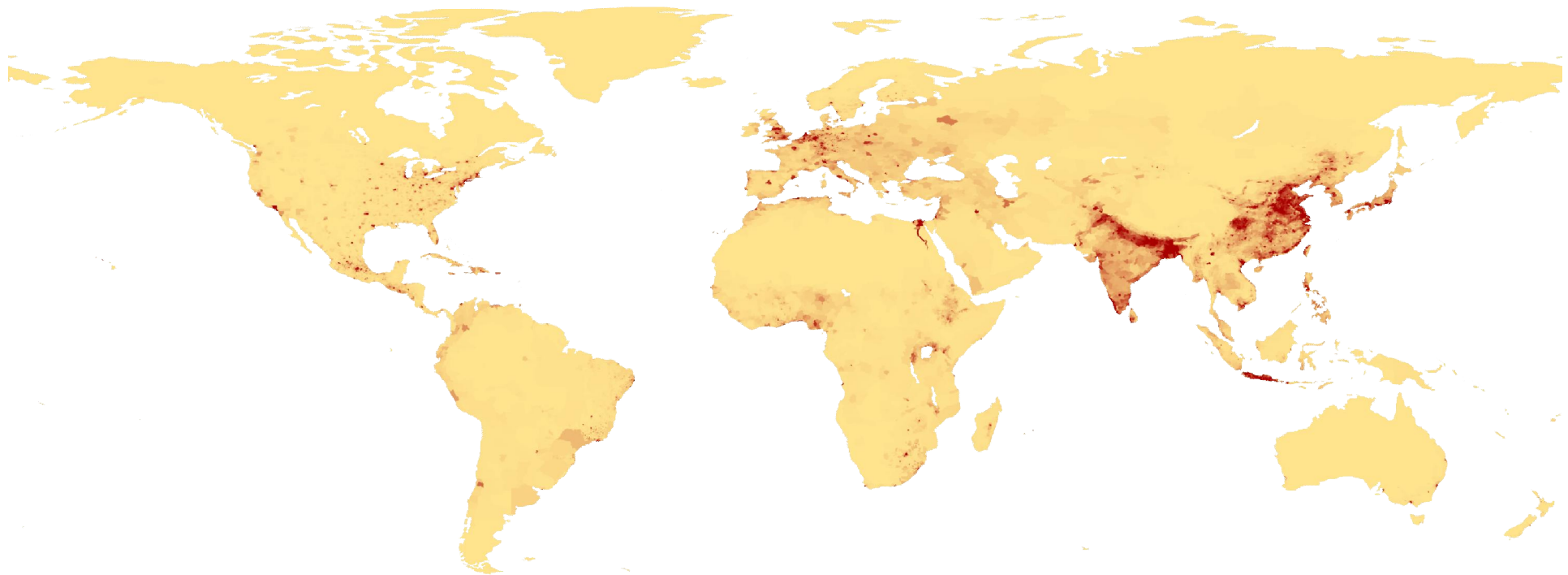
José Javier Rodríguez - Director General

1-octubre-2010



Energía Eficiente





## CRECIMIENTO EXPONENCIAL DE LA POBLACION Y DEL CONSUMO MUNDIAL:

- Hoy: 6.800 Millones de personas.
- 2050: 10.200 Millones de personas!!!!

## RECURSOS LIMITADOS

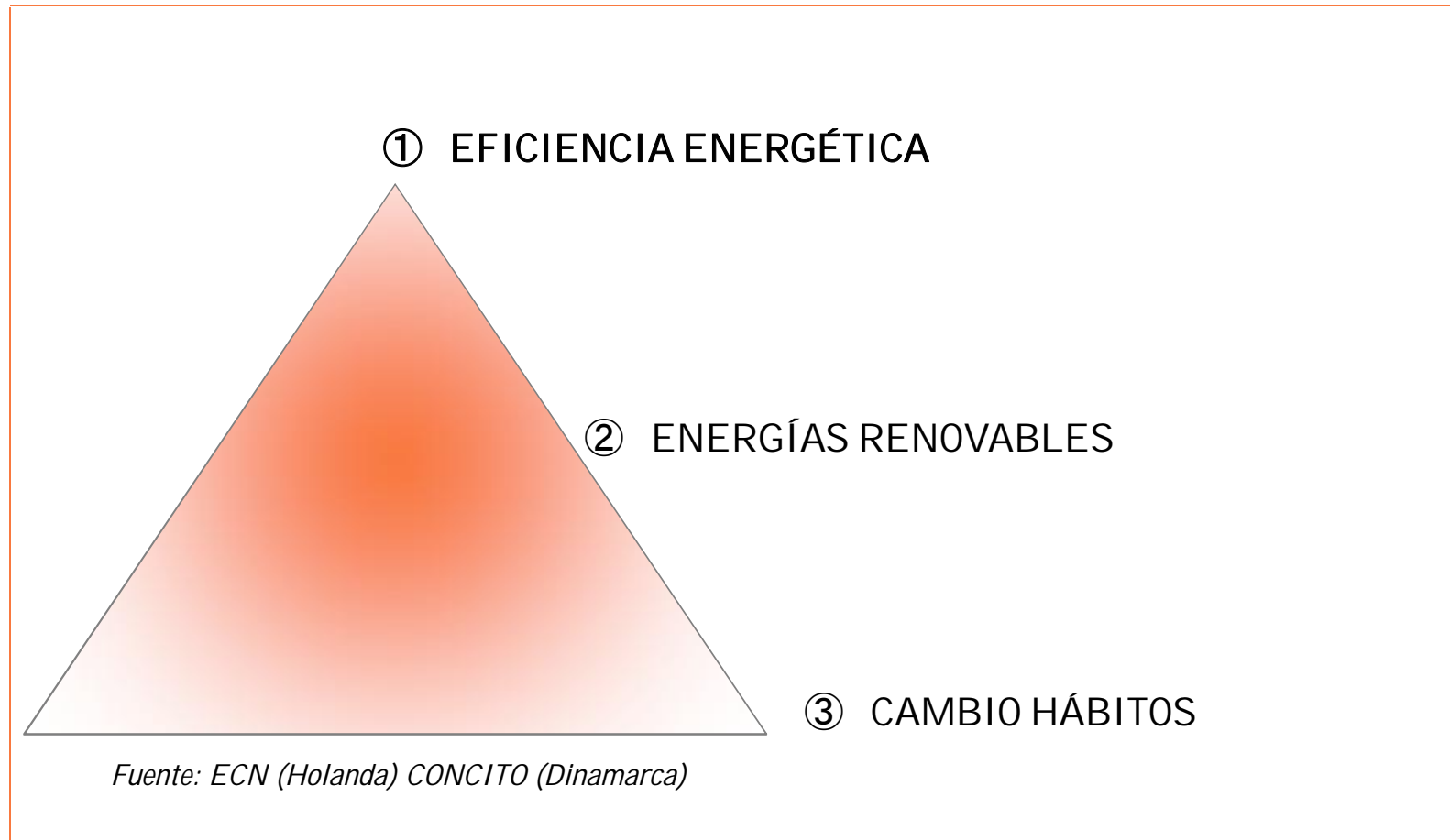
**¡ URGE PENSAR EN EFICIENCIA!**



# Priorizar la eficiencia

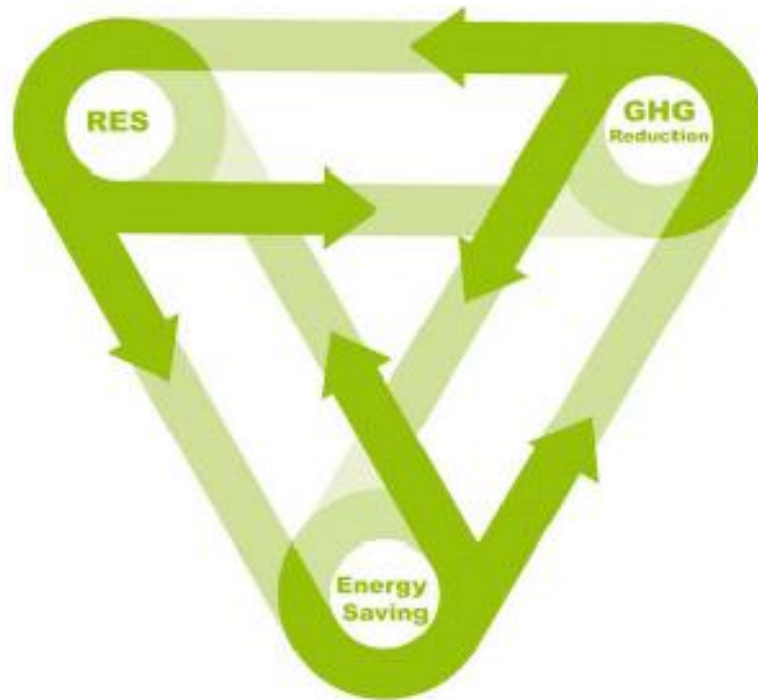
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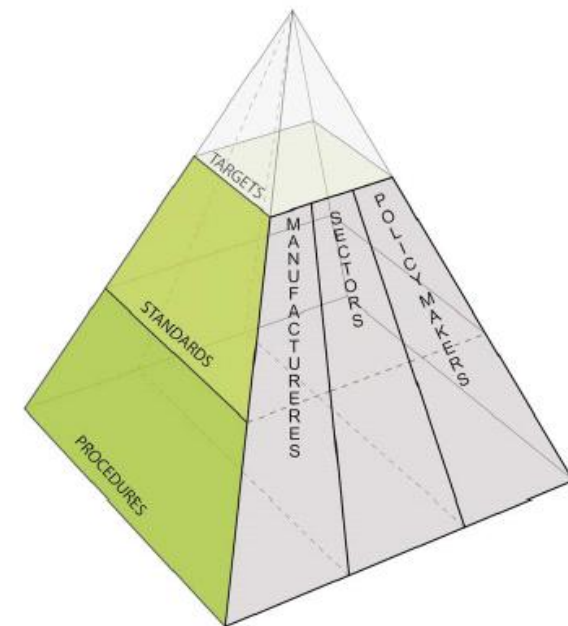


# Priorizar el ahorro y la eficiencia energética

## EU policy architecture



## Energy saving policies

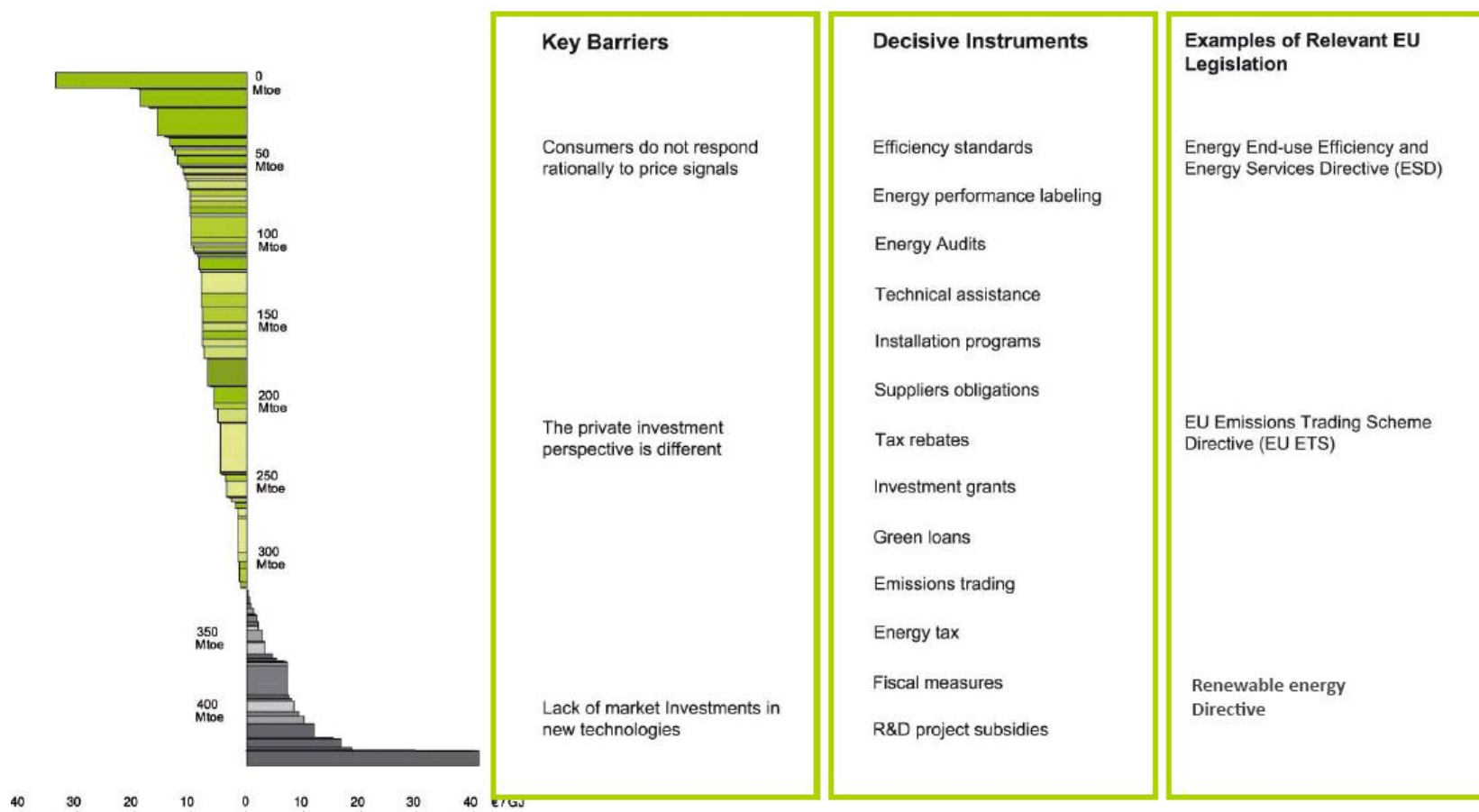


- "EU energy trends to 2030 – update 2009": [http://ec.europa.eu/energy/observatory/trends\\_2030/doc/trends\\_to\\_2030\\_update\\_2009.pdf](http://ec.europa.eu/energy/observatory/trends_2030/doc/trends_to_2030_update_2009.pdf)
- "Energy Savings 2020: How to triple the impact of energy savings policies in Europe": [http://roadmap2050.eu/contributing\\_studies](http://roadmap2050.eu/contributing_studies)

# Priorizar el ahorro y la eficiencia energética

## Capturing available energy savings requires a mix of policy instruments

EU 2020 Marginal Abatement Cost Curve for End-Use Sectors



# Priorizar el ahorro y la eficiencia energética

[http://ec.europa.eu/energy/efficiency/index\\_en.htm](http://ec.europa.eu/energy/efficiency/index_en.htm)

## Energy efficiency

### What do we want to achieve ?

Reducing energy consumption and eliminating energy wastage are among the main goals of the European Union (EU). EU support for improving energy efficiency will prove decisive for competitiveness, security of supply and for meeting the commitments on climate change made under the Kyoto Protocol. There is significant potential for reducing consumption, especially in energy-intensive sectors such as construction, manufacturing, energy conversion and transport. At the end of 2006, the EU pledged to cut its annual consumption of primary energy by 20% by 2020. To achieve this goal, it is working to mobilise public opinion, decision-makers and market operators and to set minimum energy efficiency standards and rules on labelling for products, services and infrastructure.



#### Discover energy efficiency and renewable energy actions

BUILD UP, Covenant of Mayors, Sustainable Energy Europe, CONCERTO, ManagEnergy, Intelligent Energy – Europe, Eco-innovation



#### Energy Star Programme (EU-US)

Energy efficiency of office equipment



#### Strategic Energy Review

Securing our Energy Future



#### Strategic Energy Technology Plan (SET Plan)

Strategic plan to accelerate the development and deployment of cost-effective low carbon technologies



#### Green paper

A European Strategy for Sustainable, Competitive and Secure Energy



# Priorizar el ahorro y la eficiencia energética

[http://ec.europa.eu/energy/actions\\_energy\\_en.ht](http://ec.europa.eu/energy/actions_energy_en.ht)

Energy efficiency & renewable energy actions



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Energy efficiency

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# BUILD UP

In 2009, the Commission has launched its BUILD UP initiative to increase the awareness of all parties in the building chain of the saving potential which remains untapped. BUILD UP will therefore promote better and smarter buildings across Europe by connecting building professionals, local authorities and citizens. Its interactive web portal will catalyse and release Europe's collective intelligence for an effective implementation of energy-saving measures in buildings.

The BUILD UP web portal <sup>[1]</sup> shares and promotes existing knowledge, guidelines, tools and best practices for energy-saving measures in buildings across Europe. At the same time, it informs and updates the market about the legislative framework in terms of goals, practical implications and future revisions.

The BUILD UP web portal is an influential and interactive European tool engaging powerful networks and well-established umbrella organisations in a proactive commitment to energy efficient buildings.

As such, the web portal encourages communications, transfer and promotion of existing information and knowledge, guidelines, tools and best practices for energy savings measures in buildings across Europe.

[1] <http://www.buildup.eu/>

# The Covenant of Mayors

The Covenant of Mayors represents a commitment by towns and cities across Europe to reduce their CO<sub>2</sub> emissions beyond the EU's 20% by 2020 target.

The Covenant requires participants to draft and implement their own unique Sustainable Energy Action Plan (SEAP), which will act as blueprints for a more eco-friendly and sustainable town or city. These Action Plans must be operational within the year that the cities sign, and will be continually monitored by the European Commission to ensure they are delivering on their promises. Any city that does not carry-out this commitment will be excluded from further participation.

Launched in 2008, the Covenant has gone from strength to strength and has attracted more than 500 cities to join. This rapid expansion means that no less than 80 million citizens across Europe are now part of the initiative.



# Sustainable Energy Europe

a Campaign to change the landscape of energy

Launched in 2005 and now extended until 2011, the Sustainable Energy Europe Campaign is a major tool, next to legislation and support programmes, to promote the EU's sustainable energy policy. The Campaign aims to stimulate the necessary trends towards an increase in private investment in sustainable energy technologies, to spread best practices and to build alliances among sustainable energy stakeholders serving as a platform for new ideas and actions.

The two key actors within the Sustainable Energy Europe Campaign are the Sustainable Energy Partners and the Sustainable Energy Campaign Associates. They are both designed to ensure greater visibility at the European level and more efficient spread of know-how on sustainable energy technologies.

The Sustainable Energy Europe Campaign also includes a major annual event, the European Sustainable Energy Week<sup>[1]</sup>, and supports the organisation, during the whole year, of relevant Energy Days in all 27 Member States.

[1] <http://www.eusew.eu/>



# CONCERTO

The CONCERTO initiative, launched by the European Commission, is a Europe wide initiative proactively addressing the challenges of creating a more sustainable future for Europe's energy needs. Today, there are a total of 45 communities in 18 projects, each working to deliver the highest possible level of self-supply of energy. CONCERTO is part of the framework research programme supervised by the DG Energy and Transport of the European Commission.

## CONCERTO IN A NUTSHELL

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CONCERTO supports local communities, as clearly defined geographical areas or zones, in developing and demonstrating concrete strategies and actions that are both sustainable and highly energy efficient. Interactions and relevant energy flows between centralised and decentralised energy supplies and demands can be identified, measured and assessed.

The CONCERTO initiative has been only possible as a result of the strong commitment from the relevant, local authorities and includes technical experts, academics, and private companies from across Europe.

Throughout the 18 participating CONCERTO projects the focus is primarily on demonstrating the environmental, economic and social benefits of integrating renewable energy sources (RES) together with energy efficiency (EE) techniques through a sustainable energy-management system operated on a community level.

The CONCERTO initiative provides a platform for the exchange of ideas and experiences between the 45 CONCERTO demonstration communities, and other cities that are committed to introducing similar strategies. Communities participating will benefit from the shared expertise of Europe's most advanced communities, active in the field of energy sustainability.





# ManagEnergy

Launched in 2002, the ManagEnergy initiative <sup>[1]</sup> supports the work of actors working on energy efficiency and renewable energies at the local and regional level. ManagEnergy provides training, workshops and online events targeting energy professionals and managers of energy agencies. ManagEnergy also offers free internet broadcast facilities <sup>[2]</sup> including more than 1000 individual video presentations, speeches and interviews on topical energy matters.

Since 2005, ManagEnergy has placed an increasing emphasis on education. For example, the KidsCorner website <sup>[3]</sup> features energy and transport pages including games, downloads, animations, videos, statistics, photos and other teaching resources aimed at 7-11 year olds, 12-16 year olds and their teachers in 23 languages.

[1] [www.managenergy.net](http://www.managenergy.net)

[2] [www.managenergy.tv](http://www.managenergy.tv)

[3] <http://www.managenergy.net/kidscorner/index.html>



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#### Why this initiative?

Within the framework of the EU's Competitiveness and Innovation Framework Programme (CIP), the CIP Eco-innovation initiative addresses European companies that have come up with new ways of reducing the industry's ecological footprint and making a better use of natural resources. This initiative supports the market entry and further market uptake of new "green" products, services and technologies. Nearly € 200 million will be available between 2008 and 2013 to co-fund eco-innovation projects across Europe and thus contribute to the implementation of the Environmental Technologies Action Plan (ETAP). Under this scheme, Community funding covers 50% of the eligible project costs; applications from SMEs are particularly encouraged. Some 40 projects are due to start in the coming months following a selection of over 130 proposals received in response to the first call for proposals launched in April 2008.

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#### What is 'eco-innovation'?

Eco-innovation is the innovation process to develop and bring to market new environmental technologies, products and services that reduce the overall impact on the environment; business and innovation come together to create sustainable solutions.

Eco-innovation refers to all forms of innovation (both technological and non-technological), new products, services and business practices, which create business opportunities and benefit the environment by preventing or reducing their environmental impact, or by optimising the use of natural resources.

The Practical examples of eco-innovation include processes to recover valuable substances from waste water, more efficient food packaging, the production of construction materials from recycled waste, eco-products and 'green' management methods.

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#### Who can take part?

Organisations from the 27 EU Member States, as well as from Norway, Iceland, Liechtenstein, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, Serbia, Israel, Turkey and Albania may table a proposal under annual calls for proposals. To qualify under this scheme, projects must be innovative, technically proven, highly replicable, show a strong European dimension and be supportive of EU's environmental policies.

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#### Want to know more?

The CIP Eco-innovation call for first application and market replication projects are managed by the Executive Agency for Competitiveness and Innovation (EACI) on behalf of the European Commission. To learn more please visit the Eco-innovation website: <http://ec.europa.eu/ecoinnovation>

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#### Contacts

For additional information and media enquiries please contact:  
Mr Andrea Pascal, EACI Communication Officer  
Phone: +32 (0)2 29 90452; E-mail: [andrea.pascal@ec.europa.eu](mailto:andrea.pascal@ec.europa.eu)



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#### Why this programme?

With 730 € million funds available between 2007 and 2013, the Intelligent Energy – Europe (IEE) programme helps deliver on the ambitious targets that the EU has set for itself to sustain the competitiveness of its economy while fighting climate change. It does so by supporting concrete projects and real people doing real things.

The programme runs annual calls for proposals and funding covers up to 75% of the eligible project costs. To date, the programme has given financial support to nearly 400 projects including 60 new local or regional energy agencies and involving over 3 000 organisations across Europe.

Examples of projects funded under this programme include training on new construction techniques that can lead to 50 percent or more energy savings compared with traditional buildings, improving the effectiveness of support schemes for electricity generation from renewable energy sources across Europe or help for transport in Europe's cities to become cleaner and more energy efficient.

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#### What is 'intelligent energy'?

Today, methods, tools and technologies towards smart production and consumption of energy exist, but the knowledge and know-how required to make them work is not always available and differs significantly from country to country, and sometimes even from region to region.

When it comes to energy saving practices in the office or at home, it is the way people behave and act that makes the difference. Likewise, the installation of photovoltaic system into an existing building involves some specific expertise that is often hard to find.

The IEE programme puts the 'power to change' back in the hands of those people and organisations that are committed to a more rational use of energy and that believe in the potential of renewable energy sources. This programme brings them together and helps them cooperate better on a European level.

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#### Who can take part?

Annual calls for proposals are open to any public or private organisation established in the EU, Norway, Iceland, Liechtenstein and Croatia. Hardware-type investments and research and development projects are not supported under this funding scheme.

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#### Want to know more?

The IEE programme is managed by the Executive Agency for Competitiveness and Innovation (EACI) on behalf of the European Commission.

To learn more please visit the IEE website: <http://ec.europa.eu/intelligentenergy>

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#### Contacts

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Phone: +32 (0)2 29 90452; E-mail: [andrea.pascal@ec.europa.eu](mailto:andrea.pascal@ec.europa.eu)

# Priorizar el ahorro y la eficiencia energética

## Why Energy Savings? 20% by 2020

### Benefits:

- Cutting energy bills by €78 billion for European consumers and businesses annually by 2020
- Creates local jobs (over one million new jobs by 2020)
- Reduces EU energy import dependency
- Contributes to the achievement of the 20% RES target
- Puts the EU on track to achieve 80-95% GHG reduction by 2050 at lowest costs



# Priorizar la eficiencia

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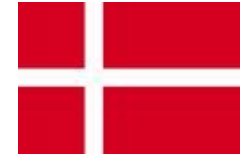
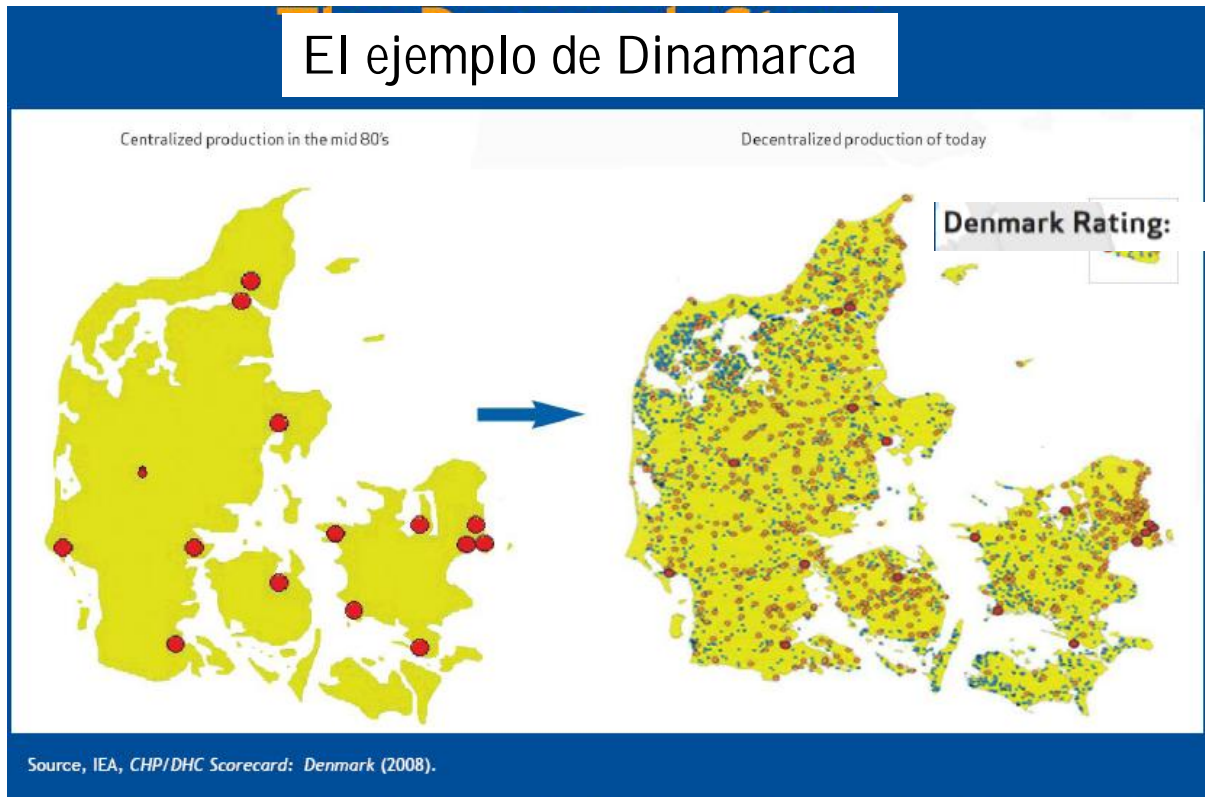
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① EFICIENCIA EN LA GENERACIÓN

② EFICIENCIA EN EL CONSUMO

# Cogeneración: Eficiencia Energética y Generación Distribuida

## El ejemplo de Dinamarca



Industrias alimentarias, químicas, papeleras, textiles, cerámicas, ladrillos, automóvil, refino, invernaderos, etc. etc....y hospitales, centros deportivos, hoteles, servicios municipales, universidades, mercados....hogares:

**Desarrollo local eficiente y sostenible**

Las ciudades danesas dicen "sí en mi patio trasero"

2015 Reductions - 21% of EU's 2020 target of reducing emissions by 20%

# Un ejemplo Tech. Eficiente = Cogeneración

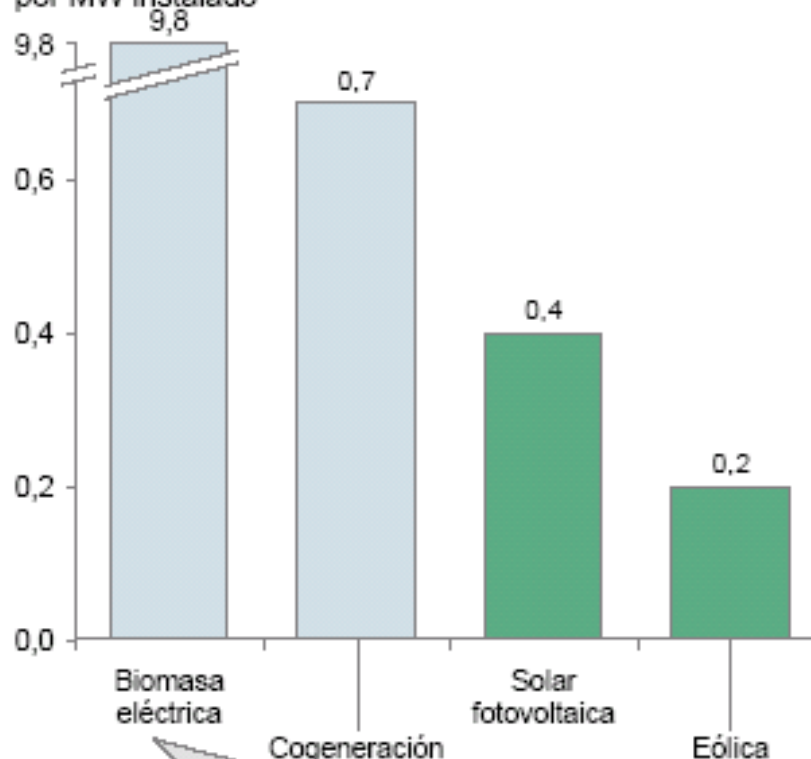
La cogeneración es la generación **simultánea** y uso eficiente de electricidad y calor.



# Un ejemplo: Cogeneración en Castilla la Mancha

## La cogeneración es una tecnología intensiva en empleo

Empleo directo generado en la explotación por MW instalado



La cogeneración con biomasa representa un 30% del total de biomasa eléctrica actual

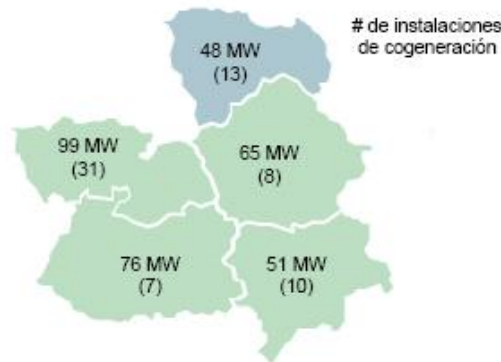
- El PANER prevé que se mantenga esta cuota en 2010-2020

# Un ejemplo: Cogeneración en Castilla la Mancha

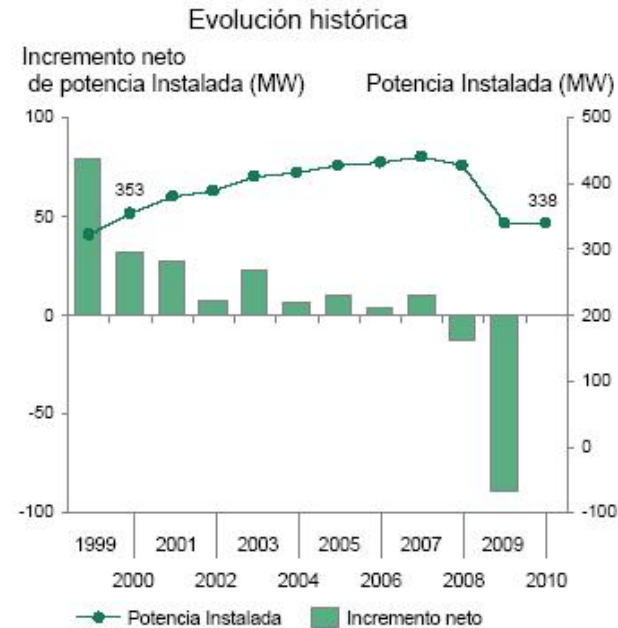
**En Castilla-La Mancha existen 338 MW de cogeneración instalados**

BORRADOR

Existen 338 MW de cogeneración distribuidos entre las distintas provincias



Aunque durante los últimos 10 años la capacidad ha disminuido en 15 MW



Nota: Los valores de potencia instalada corresponden a valores a final de año. Según IDAE existen 370 MW instalados en 2008  
Fuente: CNE IAP Abril 2010

275122-00-ACOGEN-Anejos CCAA v3.0.ppt

THE BOSTON CONSULTING GROUP

28

**La cogeneración en Castilla-La Mancha permite ahorrar anualmente hasta 2.025 GWh de energía y 1,1 Mton de CO<sub>2</sub>**  
Equivalente a 60 M€ / año

BORRADOR



La cogeneración produjo 2.640 GWh en Castilla-La Mancha en 2009. Supone 22,7% del consumo eléctrico total de la comunidad

...permitiendo importantes ahorros en consumo de energía y emisiones de CO<sub>2</sub>

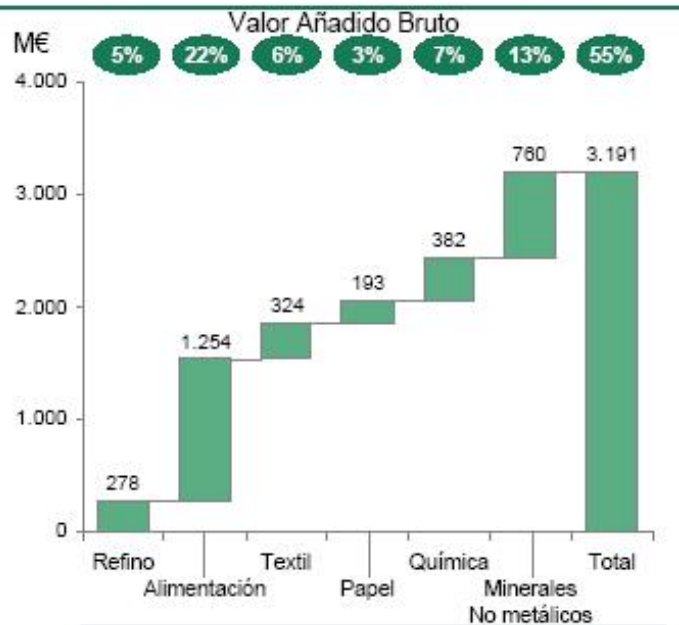


# En Castilla-La Mancha, existen 76.000 empleos industriales en sectores con alto potencial de penetración de la cogeneración

De ellos depende el 55% del PIB industrial de Castilla La Mancha (ex-construcción)

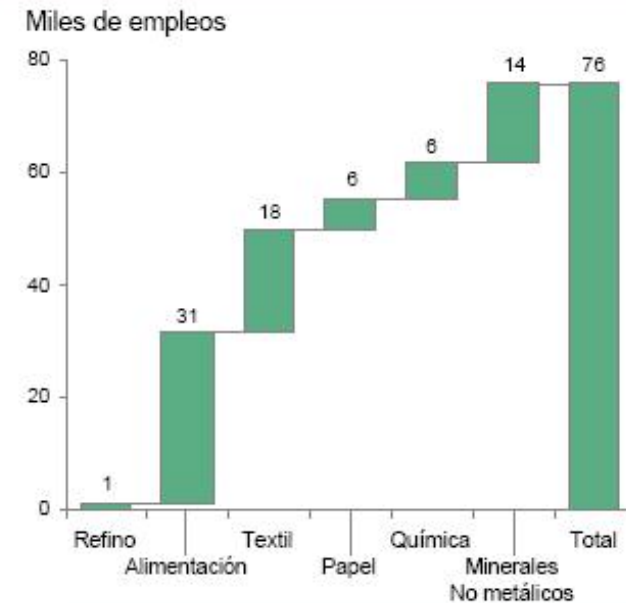


Estos sectores con potencial para cogenerar suponen un 55% del VAB industrial<sup>1</sup>



En C. La Mancha la inversión acumulada en cogeneración ha sido de 338 M€

y suponen 76.000 puestos de trabajo



Sólo en operación y mantenimiento la cogeneración genera alrededor de 240 empleos directos

<sup>1</sup>. Calculado según las categorías del INE de Industria y energía excluyendo la construcción  
Fuente: INE; CNE; Análisis BCG

# EL futuro de la Eficiencia Energética: Generación y Ahorro

## EUROPE 2020

A European strategy for smart, sustainable and inclusive growth

### COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT

#### 7 Measures for 2 Million New EU Jobs

#### A Low Carbon Eco Efficient & Cleaner Economy for European Citizens

## II. 7 MEASURES FOR 2 MILLION NEW EU JOBS

This Action Plan focuses on the following 7 measures:

- Legally binding targets for Member States;
- The European Building Initiative: refurbishing 15 million buildings by 2020
- Smart cities of Europe
- Energy saving in the utility sector
- Using the full potential of SMEs
- Behaviour and education
- International cooperation



Energía  
Eficiente

# EL futuro de la Eficiencia Energética: Generación y Ahorro



<http://www.idae.es/index.php/mod.pags/mem.detalle/idpag.17/recategoria.1022/reImenu.42>

## Ahorro y eficiencia energética

En la medida que el consumo de energía por unidad de producto producido o de servicio prestado sea cada vez menor, aumenta la eficiencia energética.

- **Plan de Acción de Ahorro y Eficiencia Energética**
- **Industria**
- **Transporte**
- **Doméstico / edificios**
- **Servicios públicos**
- **Servicios energéticos**
- **Agricultura y pesca**
- **Transformación de la energía**

Tanto la tecnología disponible, como los hábitos responsables, hacen posible un menor consumo de energía, mejorando la competitividad de las empresas y la calidad de vida personal.



Energía  
Eficiente

# EL futuro de la Eficiencia Energética: Generación y Ahorro

<http://www.agecam.es/>



Energía  
Eficiente



ahorra energía



Energía  
Eficiente

Asociación Española de Cogeneración

**MUCHAS GRACIAS**

[www.acogen.es](http://www.acogen.es)

José Javier Rodríguez - Director General



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