



Direcção Geral
de Energia e Geologia

SUSTAINABLE ISLANDS CONFERENCE

A brief overview of the
**National Strategy for Energy
(ENE 2020)**

Lisbon, 25/26 March 2010

Bento de Morais Sarmiento



MINISTÉRIO DA ECONOMIA,
DA INOVAÇÃO E DO DESENVOLVIMENTO

A brief overview of the

National Strategy for Energy 2020

summary

- Expected deliveries of the Strategy
- The main drivers of the Strategy, with a particular reference to Renewable Energy
- Storage is addressed in the Strategy to optimise contribution of intermittent energy sources



National Strategy for Energy 2020

approved by the Government on the 18th March 2010

The ENE 2020 sets an agenda for:

- competitiveness and growth;
- reduction of energy dependence and cost;

through an energy model focusing on:

- renewable energies and energy efficiency;
- security of supply;
- economic and environmental sustainability



NES2020 expected deliverables

- 1) Reduce energy dependence of the country to 74% in 2020
- 2) Achieve the commitments for 2020 in the context of climate change
 - 31% of final energy from indigenous resources
 - above 60% of electricity generation from renewable sources
 - final energy consumption reduced by 20%.



NES2020 expected deliverables

- 3) Reduce in 25% the energy balance through energy generated from indigenous sources (reduction of the imports of around 2,000 million euros per year by 2020).
- 4) Consolidate the cluster of renewable energies in Portugal
 - ensuring a Gross Value Added of 3,800 million euros
 - creating 100,000 more jobs (in addition to 35,000 existing in the sector) by 2020.



NES2020 expected deliverables

- 5) Continue to develop the industrial cluster associated with the energy efficiency
 - creation of 21,000 jobs
 - generating an investment of 13,000 M€ until 2020
 - additional exports of 400 M€.

- 6) Keep promoting the sustainable development and creating the conditions for the fulfilment of the Portuguese goals of GHG emissions under the European commitments.



ENE2020: 5 Main axes of action

- 1 – Competitiveness, growth and reduction of energy dependence and cost**
- 2 – Renewable Energy**
- 3 – Energy efficiency**
- 4 – Security of supply**
- 5 – Sustainability**

A closer view on ENE 2020 Axis 2: PROMOTION OF RENEWABLE ENERGY

(1/2)

Hydro	<ul style="list-style-type: none">✓ Implement the Action Plan for small hydro, aiming to achieve 250 MW;✓ Increase hydro power generation to 8.600 MW (National Hydropower Plan);✓ Develop reversible hydro capacity.
Wind	<ul style="list-style-type: none">✓ Install, as priority, the 2.000 MW already allocated .
Solar	<ul style="list-style-type: none">✓ Install 1.500 MW by 2020;✓ Update the Micro-generation Program and launch a Mini-generation Program;✓ Develop a new industrial cluster based on concentrated solar energy;✓ Promote solar thermal energy.

A closer view on ENE 2020 Axis 2: PROMOTION OF RENEWABLE ENERGY

(2/2)

Biomass	<ul style="list-style-type: none">✓ Install, as priority, the power already allocated (250 MW) through flexibility of licensing;✓ Promote forestry biomass production.
Biofuels and Biogas	<ul style="list-style-type: none">✓ Implement the directives and the best practices regarding biofuels;✓ Exploit the potential associated to the biogas from anaerobic digestion of waste and effluents.
Waves, Geothermal and Hydrogen	<ul style="list-style-type: none">✓ Implement the Ocean Pilot Zone (up to 250 MW);✓ Promote exploitation of the geothermal potential;✓ Exploit the potential of hydrogen

Adressing
THE STORAGE CONCEPT
in the
National Strategy for Energy 2020



WIND ENERGY AND HYDRO ENERGY TARGETS

Wind Energy

- **Targets:**
 - ↳ 5600 MW by 2012
 - ↳ 8500 MW by 2020
- **Allocated licenses through public tenders**
- **Created two clusters, industrial and of R&D**
- **Created an Innovation Fund**

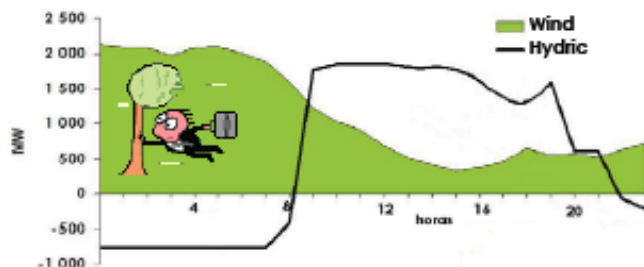
Hydro Energy

- **Targets:**
 - ↳ 5575 MW by 2012
 - ↳ 8625 MW by 2020
- **Anticipation of the projects that enhance the power of the existing facilities**
- **Implementation of the Dams National Programme**



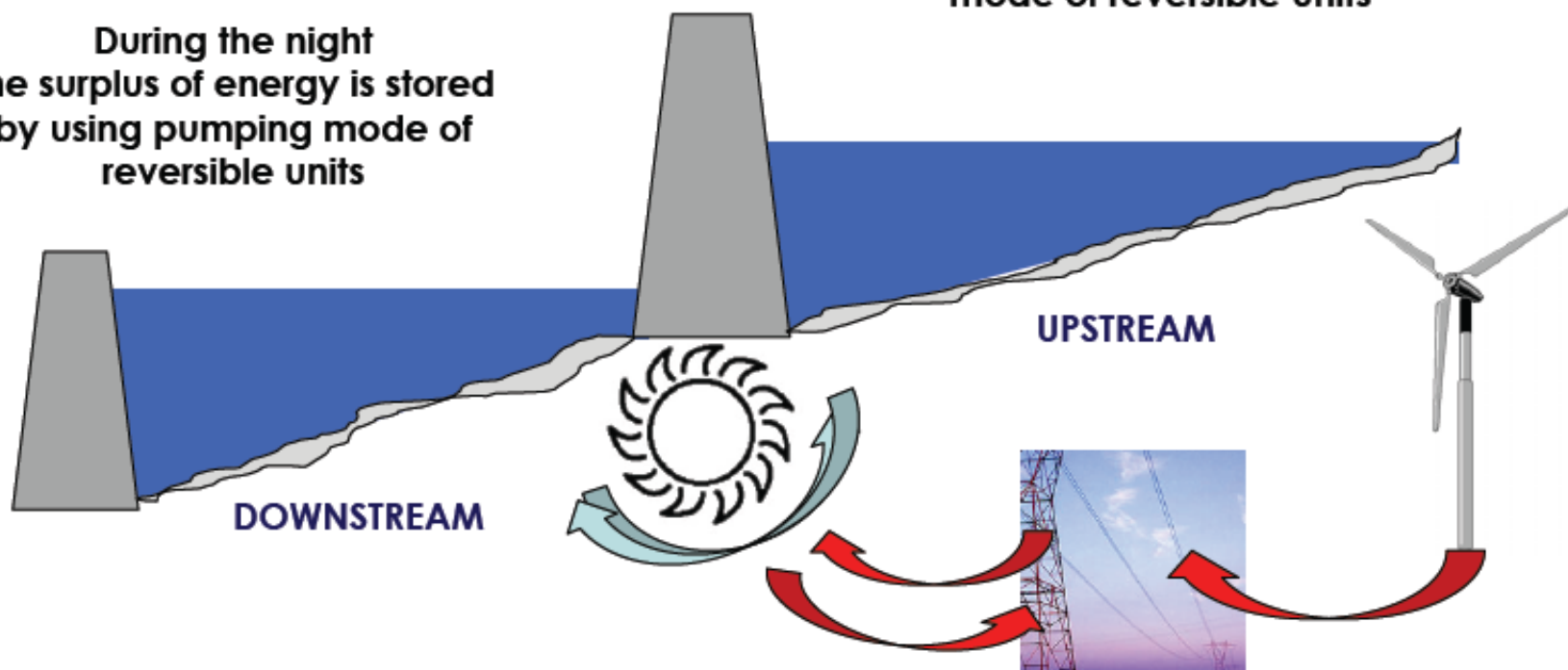
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ENERGY STORAGE – HYDRO/WIND SYNERGIES



During the night
the surplus of energy is stored
by using pumping mode of
reversible units

During the day
energy is generated in the most
appropriate time by using turbining
mode of reversible units





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Thank you for your attention

www.dgge.pt

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A INSPIRAR PORTUGAL.

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NEW.
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