CA ESD
CONCERTED ACTION
ENERGY SERVICES DIRECTIVE

ESD implementation in Portugal

In Portugal, implementation of the ESD is the responsibility of the Ministry of Economy, Innovation and Development. The decree-law that transposed ESD into national law was published in November 2009 and the Portuguese Energy Efficiency Action Plan in May 2008.

Legal context

Decree-law n.º 319/2009, published in November 2009, transposes into Portuguese law ESD and establishes the need to create conditions for promotion and development of a market for energy services and to develop measures to improve energy efficiency to consumers. In addiction, contributes to the achievement of an overall national indicative energy saving target of at least 9% for 2016 and also the promotion of mechanisms, incentives and institutional frameworks, financial and legal, to overcome existing constraints and market failures preventing better efficiency in energy end-use through the spread of low-consumption equipments and rationalization of energy consumption to be adopted by consumers.

Our National Energy Efficiency Action Plan was published in May 2008 (Cabinet Resolution n.º 80/2008) and comprises a set of measures aiming an increase in energy efficiency equivalent to 9.8% of the final energy consumption. The Plan also designated Portugal Efficiency 2015 is geared towards energy demand side management and articulates with PNAC - National Climate Change Programme and PNALE - National Allocation Plan for Emission Allowances. It covers four specific areas: Transport, Residential and Services, Industry and State, and three cross cutting action areas: Behaviours, Taxes, Incentives and Financing. For these areas were created 12 action programmes covering the several aspects of energy efficiency, aiming stimulate the use of new technologies, the improvement of organisational processes and the change in behaviours and values leading to more sustainable consumption habits.

Status of the implementation

NEEAP implementation

The following table shows the implementation progress of the NEEAP for the period 2008-2010:

NEEAP – Energy Savings (2008-2010)

Sector	Program	2008 (ktoe)	2009 (ktoe)	2010 (ktoe)	Cumulated 2008-2010 (ktoe)	Target for 2015 (ktoe)	% of the target for 2015 already accomplished
Transports	Renew Car	15	11	54.5	80.7	298	27
	Urban Mobility	0.65	15	83.5	99.6	170	59
	Energy Efficiency Transport System	15	14	16.5	45.7	223	20
Residential & Services	Renew Home & Office	14	41	54.5	109.1	180	61
	Energy Certification of Buildings	4	18	58.6	81.2	193	42
	Microgeneration and Solar Thermal Energy	1	14	10	24.9	49	50
Industry	Management System of Intensive Energy Consumption (SGCIE)	69	67	40.9	177.9	536	33
State	State Energy Efficiency Program (Energy Certification, Solar Thermal, School Microgeneration, Mercury Vapour Light Bulbs, LED traffic lights	0.25	4	6.1	10.1	49	20
Behaviours	Operation E (Home Energy)	(-)	7	21.3	28.1	94	30
TOTAL		**119**	**192**	**345.8**	**657.2**	**1 792**	**36.7**

Source: ADENE – Agency for Energy

The implementation of these measures resulted in 345.8 ktoe of energy savings in 2010, representing 19.3% of the target for 2015.

The accumulated value of energy savings, resulting from the implementation of the measures in 2008, 2009 and 2010, is 657.2 ktoe, showing that Portugal has already reached 36.7% of the 2015 target.

Main measures under implementation:

- In 2008, the Portuguese government imposed a new **tax on inefficient lighting equipment**. The tax aims to compensate the environmental costs related to the inefficient use of energy in this type of equipment, and

foster the use of more efficient and economical lighting. The tax is applied to manufacturers, traders and other economical agents that introduce such equipment onto the Portuguese market.

As part of the Action Plan, in September 2008 began the phase-out of incandescent light bulbs, trough the large-scale substitution of incandescent light bulbs with CFLs. Over 5 million free high-efficiency light bulbs were distributed to low income families.

- The legislation on building's energy efficiency that fully transposed Directive 2002/91/EC on energy performance of buildings was published in 2006, but the **National System for Energy and Indoor Air Quality Certification of Buildings** (SCE - Decree-Law n.º 78/2006) which has two main objectives, reduce energy consumption and CO2 emissions, come into force in 3 phases until its full implementation in January 2009, when all the buildings were included in the certification system: new buildings, major renovations, public buildings and all buildings when sold or rented. This legislation is a fundamental step for the increase of energy efficiency on buildings, bringing new requirements to the construction, namely making mandatory the installation of solar panels in new buildings.

  The implementation of the building's regulations is checked by qualified experts at several stages throughout a building's lifetime. The Energy Certificate assigns an energy performance label to residential and non residential buildings and it may list measures for improving their energy performance. There are, until the end of May 2011, about 415.000 Energy Certificates registered on a web based central registration system (www.adene.pt/ADENE/Canais/SubPortais/SCE) that qualified experts must access and use to issue certificates.

- The SGCIE (**Management System of Intensive Energy Consumption**) was created by Decree-Law n.º 71/2008, is in force since June 2008 and comprises the modification of excise duties on oil and energy products (ISP) applied to industrial fuels establishing an incentive mechanism for GHG reduction; and the definition of a new RGCE – Management Regulation of Energy Consumption - in industry (that was in force since 1986). This new system aims the promotion of energy efficiency and energy consumption monitoring in intensive energy facilities (consuming more than 500 toe/year) broadening the scope of RGCE application (1000 toe/year).

  SGCIE imposes binding energy audits, with a 6-year periodicity, in intensive energy facilities with consumptions above 1000 toe/year. An 8-year periodicity energy audits is applied to facilities with energy consumptions comprised between 500 and 1000 toe/year.

  Facilities operators are obliged to conduct an energy audit and elaborate an Energy Consumption Rationalization Plan (PREn), establishing targets for energy and carbon intensity and specific energy consumption and including the energy rationalization measures. They have to present this through a website (www.adene.pt/SGCIE) to the Directorate General for Energy and Geology (DGEG) from the Ministry of Economy, Innovation and Development, as well as biennial execution and progress reports. Upon DGEG's approval (which is the competent authority that supervises and inspects SGCIE operation) the PREn become a Rationalization Agreement for Energy Consumption (ARCE), which gives to facilities operators excise duties exemption (ISP) on oil and energy products (coal, oil coke, fuel oil and oil gases) and the possibility to apply for incentives on energy audit costs and on investments in energy management and monitoring equipments.

The monitoring of this system is made through the execution and progress reports that have to be present every 2 years. Penalties are foreseen for those who won't meet the targets.
Energy audits, Energy Consumption Rationalization Plans and biennial execution and progress reports have to be elaborated by auditors recognized by DGEG according to their academic education and professional experience. This is regulated in a specific legislation (Ordinance n.º 519/2008, of June 25th) and until the end of May 2011 there are 334 auditors recognized.

Until the end of May 2011 DGEG approved 372 Energy Consumption Rationalization Plans which became Rationalization Agreements for Energy Consumption (ARCEs), giving to facilities operators excise duties exemption (ISP) on oil and energy products (coal, oil coke, fuel oil and oil gases) and the possibility to apply for incentives on energy audit costs and on investments in energy management and monitoring equipments.
The implementation of these ARCEs will lead to a reduction of 48.450 toe in energy consumption and 170.487 tCO_2 of GHG.

- Legislation for the microproduction of electricity from renewable energy sources promotes micro generation in individual households "Renováveis na Hora", and creates a simplified licensing regime for small-scale producers of renewable energy (max. 3.68 kW), allowing the connection to a local low voltage distribution network. Applications can be performed on-line (www.renovaveisnahora.pt), requiring only that the promoters have a contract with the electricity supplier and a solar thermal system. The feed-in tariff amounts to 650 €/MWh during five years and after 10 MW, decrease 5%.

- In May 2009 the Portuguese government launched a program to promote the use of renewable energy in the residential sector. The introduction of direct incentives for the purchase of solar thermal systems is a way to reduce the costs of solar thermal systems, thereby helping to surpass the high initial investment associated to their acquisition. Up to 50 % of the cost of the solar thermal system and installation services, with a maximum amount of 1.641,70 €, is granted over this initiative, available trough bank credit agreements. In August 2009 this initiative was extended to private institutions of social solidarity and sports associations with public utility, with an incentive 65% of the investment. (More information: www.paineissolares.gov.pt).

- EDP Distribuição, (company from EDP Group which operates in the business areas of generation, supply and distribution of electricity and supply and distribution of gas in Portugal), with industrial and scientific national partners has a pilot project under way called **InovGrid Programme**. This Programme aims to support the installation of smart systems for energy metering in about 10% of electricity consumers from households sector. This project aims, namely, to facilitate the penetration of renewable energy in the electricity grid.
  It is an innovative project in the smart grids area, developed with cutting-edge technology and Portuguese "know-how". It will contribute to significant benefits for the stakeholders, namely the consumers and the transmission system operator.
  During the second quarter of 2009, a pilot project was launched, covering 600 households, in order to demonstrate and validate the smart grid technology - introduction of advanced energy telemanagement tools, the ability to integrate microgeneration and, above all, smart mechanisms that will establish a new

way of managing and controlling the grid. The pilot phase is being completed, and the launch of the more structured enlargement of the project took place in February 2010. In April 2010, the concept of *InovCity* was introduced – a new way to generate and supply electricity. Évora was the chosen city to host the InovGrid pilot-project.

- The National Strategic Reference Framework (QREN) constitutes the framing for the application of the Community's policy for economic and social cohesion in Portugal for 2007-2013. In 2009 there were 2 tenders for financing projects within our NEEAP, one for the creation of Esco's and another for energy efficiency projects in industry.
  In 2011 five tenders were published to support energy efficiency in public lighting and traffic lights through the Regional Operational Programmes for the five regions in mainland Portugal. With a total budget of EUR 26 million, these financial incentives were targeted to municipalities, associations of municipalities, metropolitan areas, as well as to municipal, intermunicipal or metropolitan enterprises and municipal services. Submission of proposals was possible until the end of July and results are expected by the end of 2011.

- The **Energy Efficiency Fund** was approved by Decree-Law nº 50/2010, 20 May, and aims to fund the programs and measures under the NEEAP with three main objectives: encourage efficiency by citizens and businesses, to support energy efficiency projects in areas where until now these projects had not yet been developed, and promote behaviour change in this area.
  The Fund can support predominantly technology-oriented projects in transport, residential and services, industry and public sector; action-oriented cross-inducing energy efficiency in the areas of behaviour, taxation and incentives and financing; projects not covered by the NEEAP but which demonstrably contribute to energy efficiency.
  This Decree-Law also establishes the creation of a management structure, already foreseen in the NEEAP, to support and promote the implementation of its programs and measures, including the technical management of the Fund.

- Following the creation of the Energy Efficiency Fund, the **Management Structure of the NEEAP** was published by the Ordinance n.º 1316/2010 of 28 December. This Ordinance identifies the bodies and competencies of the management structure, the organisations involved and the allocation of responsibilities for the management and implementation of measures, as well as the procedures for the monitoring and evaluation of results and the procedures for inclusion of new programs and measures. Also specifies, that the NEEAP is structured in four specific areas predominantly technological (transport, residential and services, industry and State), and three cross-cutting areas (behaviours, taxation, incentives and financing) which in turn are divided into programs and measures, as described in the Resolution of the Council of Ministers n.º 80/2008 of 20 May.

- Following the creation of the Energy Efficiency Fund, was published the **Regulation for the Management of the Energy Efficiency Fund** by Ordinance n.º 26/2011 of January 10th, defining the financial support system for measures and programs eligible for the Fund.

This regulation is intended to coordinate the funding and support process for projects aiming the implementation of programs and measures that lead to reduce the final energy demand contributing to the compliance of national targets on energy efficiency.

- In January 2011, as part of the National Energy Strategy (ENE2020) and the National Energy Efficiency Action Plan (NEEAP), the Portuguese Government launched the **Energy Efficiency in Public Administration Programme (ECO.AP)**. This programme aims to achieve a 20% increase in energy efficiency by 2010 in all public services and public administration bodies, particularly through the procurement of energy service companies (ESCOs).
  ECO.AP covers a set of measures from the appointment of energy managers by all public bodies to the implementation of energy efficiency management contracts between those bodies and ESCOs, as well as, the establishment of a public administration energy efficiency barometer and the definition of a national White Certificates Scheme.
  Decree-Law n.º 29/2011 passed in February 2011 created the legislative framework for drawing up and implementing energy efficiency management contracts between the State and other public bodies with ESCOs. Contract models and ESCOs qualification procedures are being developed to facilitate the implementation of the initiative.

- Under the National Energy Strategy 2020, Decree-Law n.º 29/2011, of 28 February, published the Public Contract Regime with **Energy Services Companies** (ESE), aiming to establish a role for the public sector in the promotion and development of an energy services market, as well as the adoption of measures to improve end-use energy efficiency.
  This legislation regulates the use of ESE (ESCOs), through a competitive tender process, allowing these companies to identify potential energy savings in buildings and public facilities and to implement procedures for enhancing energy efficiency, reflected in the final energy bill. This Decree-Law also establishes the procedures for the formation and conclusion of contracts between public administration bodies and energy service companies, with a clear commitment on simplified and objective models for the evaluation of proposals.

Additional efforts

- Law n.º 10/2009, of 10 March, created the "Investment and Employment Initiative" Program, that contains five structural measures containing several projects or actions. These measures are aimed at generating an anti-cyclical economic impact on investment and employment, and they are also consistent with the framework of the Lisbon Strategy, contributing to strengthening the country's modernisation and competitiveness, the qualification of the Portuguese people, energy efficiency and self-sufficiency, as well as environmental sustainability and fostering social cohesion. In this initiative the Government strives to benefit from the European Council's decision of 13 December to support the simplification of procedures and the faster implementation of programs financed by the Cohesion Fund, Structural Funds or by the European

Agricultural Fund for Rural Development with a view to increasing investment in infrastructure and energy efficiency.

The Minister of State and Finance is responsible for coordinating and monitoring the IEI. The performance of the measures will be monitored and assessed and the Government will maintain the necessary flexibility to carry out any adjustments deemed appropriate in view of the development of the economic situation and the level of effectiveness shown by the measures.

Under this program, through the measure "Improved energy efficiency of public buildings", the State will invest in solutions to improve the energy efficiency of a set of the most energy-consuming public buildings (hospitals, universities, law courts, offices of public services, etc.), which will galvanise the construction, metalwork and mechanical engineering and energy consultancy sectors, while also driving direct gains through the reduction of energy expenditure. It was foreseen for 2009 an intervention in 100 public buildings with a budget of 100 million euros.

- In 20 February 2009 was published the Cabinet Resolution n.º 20/2009 that created the **Program for Electric Mobility in Portugal**. This program meets the national targets to reducing energy dependence and combating climate changes (also contributing to meet the objectives of Kyoto Protocol), by promoting the replacement of fossil fuels and the consequent reduction of emissions in the transport sector. The program calls for the popularization of the electric vehicle, through the development of a service model that allows any individual or entity: the use of electric vehicles in terms of competitiveness and comfort compared to conventional cars; mobility solutions offers by various manufacturers of electric vehicles, the establishment of an infrastructure appropriate to the loading of the park development of electric vehicles in Portugal.

  The Cabinet Resolution n.º 80/2009 adopted a set of measures for the implementation of the Program for Electric Mobility in Portugal, for the mass use of electric vehicle, including: establishment of the strategic objectives of the program and the definition of its fundamental principles; approval of the model for Electric Mobility in Portugal; approval and timing of the phases of the program; creation of additional incentives to promote the access and therefore widespread the use of electric vehicle in Portugal.

  This programme starts with a pilot-phase for the platform for electric mobility – Mobi.E that will be extended until 2011. 25 municipalities signed a cooperation agreement with the Portuguese Government to draw up municipal plans for the electric mobility by the end of 2010.

  Portugal is developing a charging network for electric vehicles, foreseeing 180,000 electric vehicles by 2020. An initial network with more than 1,300 charging points, is expected until 2011 and more than 25,000 by 2020.

  The National Energy Strategy (Cabinet Resolution 29/2010, 15th April) reinforces the Government's ambition to position Portugal as a reference in terms of electric mobility solutions (demonstration, development and production).

  Decree-Law n.º 39/2010, of April 26th, regulates the organization, access and operation of the electric mobility, establishes a pilot network for electric mobility and regulates the incentives for electric vehicles.

  Ordinance n.º 1201/2010, of November 29th, establishes the rules for running the business of operating charging points of the electric mobility network, including the installation, provision, operation and maintenance of battery-charging points for electric vehicles, with access to public or private, which have been integrated into the network of electric mobility. It also establishes the technical requirements which the

granting of license to exercise the business operation of charging points of the network of electrical mobility is subject and some procedural rules.

(More information: www.mobi-e.pt)

Future planning

The first NEEAP is in progress. We're preparing the second NEEAP, as required by the directive, updating its measures and programmes.

Relevant information

More information regarding the situation in Portugal can be found at the following websites:

National Energy Efficiency Action Plan: http://ec.europa.eu/energy/efficiency/end-use_en.htm

Ministry of Economy, Innovation and Development: www.min-economia.pt/

Directorate General for Energy and Geology: www.dgge.pt

Energy Agency (ADENE): www.adene.pt

http://www.renewable.pt/en/Pages/default.aspx