



AGÊNCIA
PORTUGUESA
DO AMBIENTE

Transport policies and climate change in Portugal

Capacity building workshop for effective policy implementation
under the Effort Sharing Decision



GOVERNO DE
PORTUGAL

MINISTÉRIO DO AMBIENTE,
DO ORDENAMENTO DO TERRITÓRIO
E ENERGIA

22 October 2014

Pre-2012 Policy and Support Architecture

Low Carbon 2050 Roadmap (from 2011)

**National Climate Change Program
(latest update in 2008 for 2008-2012 period)**

**National Adaptation Strategy
(2010-2013)**

EU-ETS (2008-2012)

**National System for Policies and
Measures (CumprirQuioto.pt) (2008-2012)**

National Inventory System (from 2005)

KP Compliance (2008-2012)

Portuguese Carbon Fund (from 2006)

Post-2012 Policy and Support Architecture

Climate Change Post-2012 Strategy

Low Carbon 2050 Roadmap

**National Climate Change
Program (2013-2030)**

**National Adaptation Strategy
(2014-2020)**

EU-ETS (2013-2020)

**National System for Policies and
Measures and Projections (2013-2020)**

**National Inventory System
(2013-2020)**

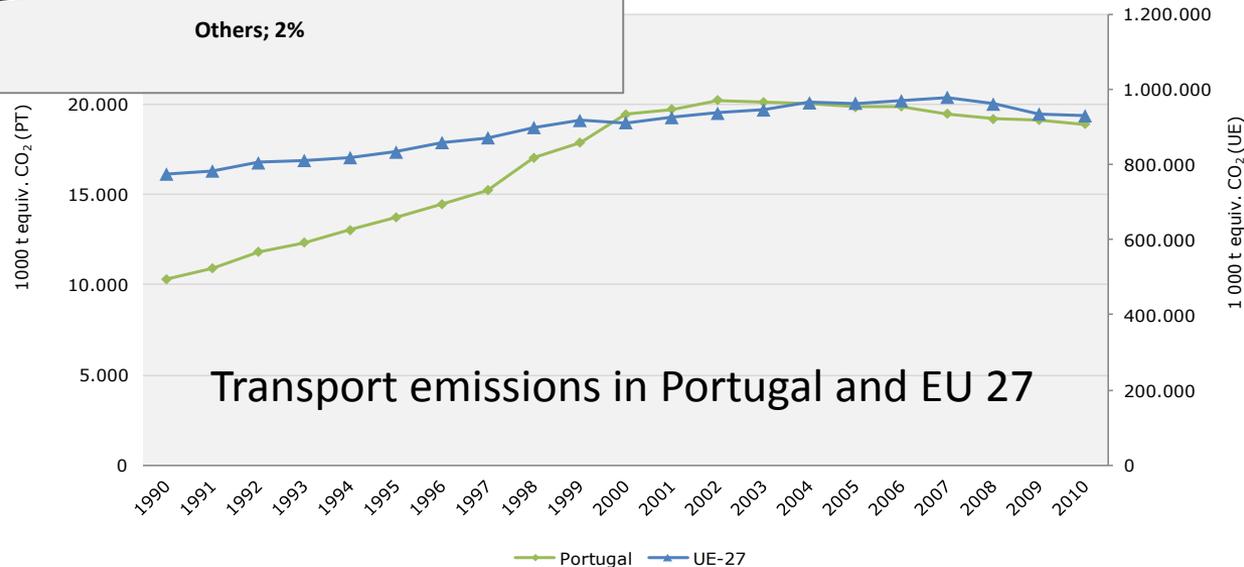
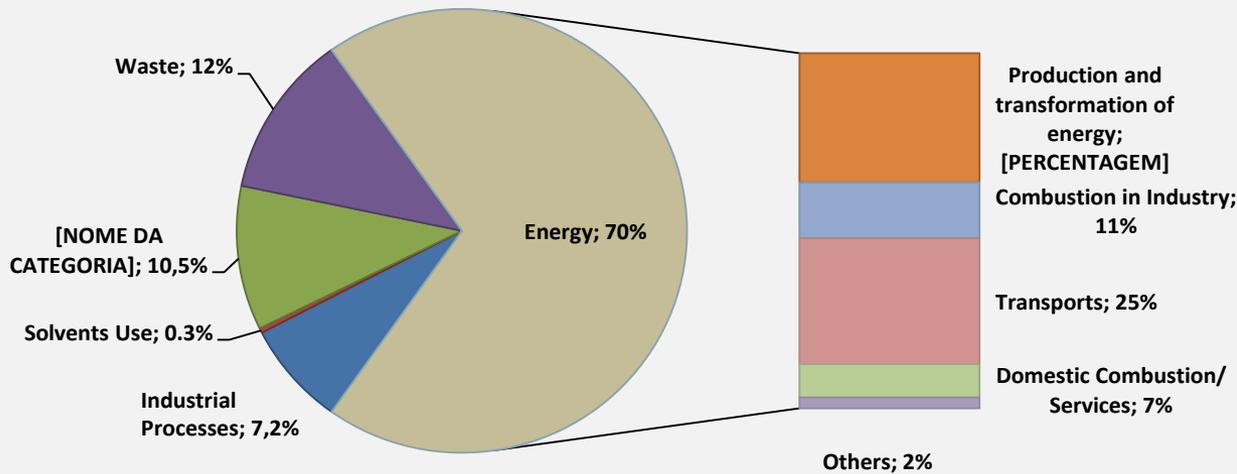
**KP2 and EU Climate and Energy
Package Compliance (2013-2020)**

**EEA Grants Program AdaPT
(2013-2016)**

Portuguese Carbon Fund (PtCF)

European Structural and Investment Funds (ESIF) 2014-2020

Sectorial CO₂ Emissions in 2012 versus Transports



NOTE: In 2013, the cars sold in Portugal emitted, in average, 112 g CO₂/l

PNAC - Sectors

- National Climate Change Program (PNAC)
- PNAC 2006 (Approved by RCM 104/2006, of 23/08)
 - 44 sectorial policies and measures (P&M)
 - 24 P&M in the transport sector
- PNAC New targets 2008 (RCM n.º 1/2008, of 9/01)
 - Energy supply sector
 - Biofuels in transport – 10%

Energy offer



Energy demand



Residential & Services



Transport



Industry



Waste



Forest



Agriculture & Livestock



PNAC – P&M in transport

- **Transport P&M included:**
 - Electrification of railway lines
 - New underground lines in Lisbon
 - Construction of new tram lines in Porto, Coimbra and Almada/Seixal
 - Introduction of natural gas vehicles in passenger transport public fleets
 - Fiscal measures promoting low carbon vehicles
 - Scrapping scheme incentive for end of live vehicles
 - Promotion of public transport
 - Energy efficiency management in transport regulation
 - Biodiesel target of 10% in transport

To monitor P&Ms: CumprirQuioto.pt

CumprirQuioto.pt
Sistema de Previsão do Cumprimento de Quioto

Ir para: **Monitorização de Políticas e Medidas**

Monitorização de Políticas e Medidas
Ficha de Medida

Medidas | Sector: Transportes

Mat6 Programa de Incentivo ao Abate de Veículos em Fim de Vida (VFV)

Sector: Transportes
Ponto Focal: Direcção Geral das Alfândegas e dos Impostos Especiais sobre o Consumo [MFAP]
Categoria: Medida Adicional

Potencial de Redução de Emissões de GEE
Ano 2010: 0,4 Gg CO₂e

Anexos

- Plano de Actuação
- Informação complementar

Meta
Ano 2010: abate de 4700 veículos ligeiros de passageiros e mistos

METAS	UNIDADE	ANO				
		2008	2009	2010	2011	2012
Meta [08-12] (Principal)						
Veículos em Fim de Vida, ligeiros de passageiros e mistos, abatidos anualmente [com idade entre 10-15 anos e com + de 15 anos]	veic.	4.700	4.700	4.700	4.700	4.700

Frequência Mínima Obrigatória de Registo: Semestral

Fiabilidade: ■ Muito Fiável ■ Fiável ■ Pouco Fiável

Detailed information on P&M:

- Description
- Sector
- Focal Point
- Overall target
- Annual target
- Input data
- Annual performance indicator (%)
- Deviation to annual target
- Impact on emission reduction potential

Policies and Measures: Focal Points



Sectorial focal points are responsible for the input of data:
Historical data(year)
Other information.

Register of inputs and changes

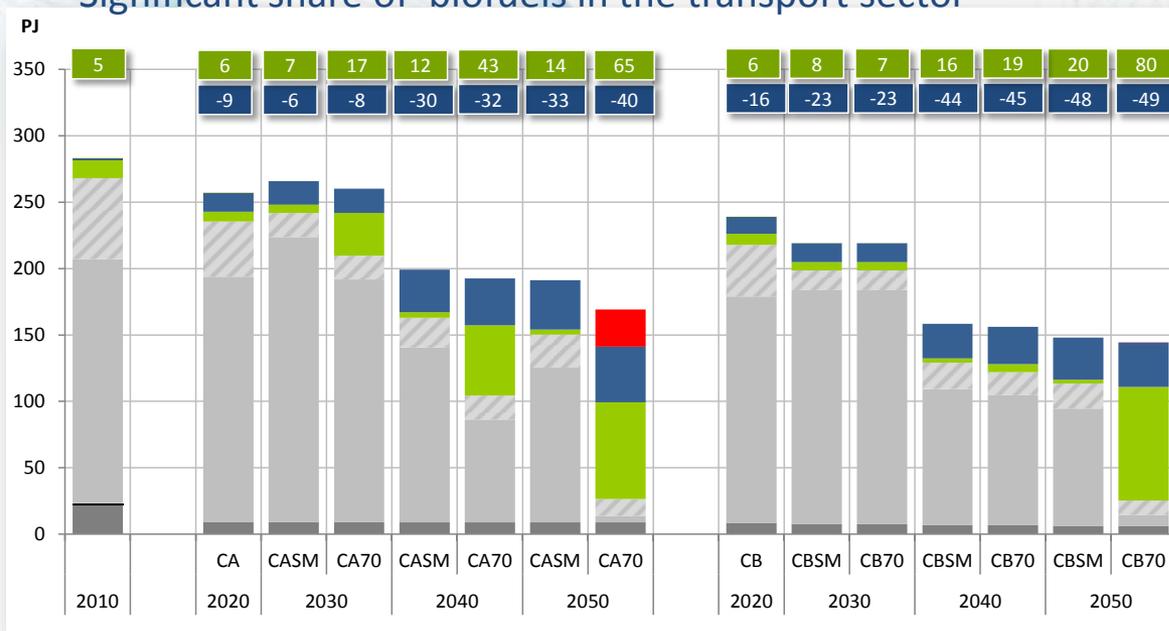
Transport P&M assessment

- **Main difficulties in transport P&M were related to**
 - **Lack of information;**
 - **P&M implementation delayed, mainly those related with infrastructures construction;**
 - **Changes in transport policies and priorities.**

It is being prepared an electric mobility pilot program

Low Carbon Roadmap 2050 - Transport sector

- 64%-85% emission reduction in transport by 2050 when compared to 1990
 - Energy efficiency in transport due to new technologies will play an important role in decarbonisation of the transports sector
 - Electric mobility for vans will be competitive by 2020
 - Electric mobility (plug in vehicles) in passengers transport will be competitive by 2030
 - Significant share of biofuels in the transport sector



Evolution and structure of final energy consumption in transport (road, rail, aviation and national navigation) (% Relative to the consumption of renewable energy and heat - Electricity total final energy consumption in the sector)

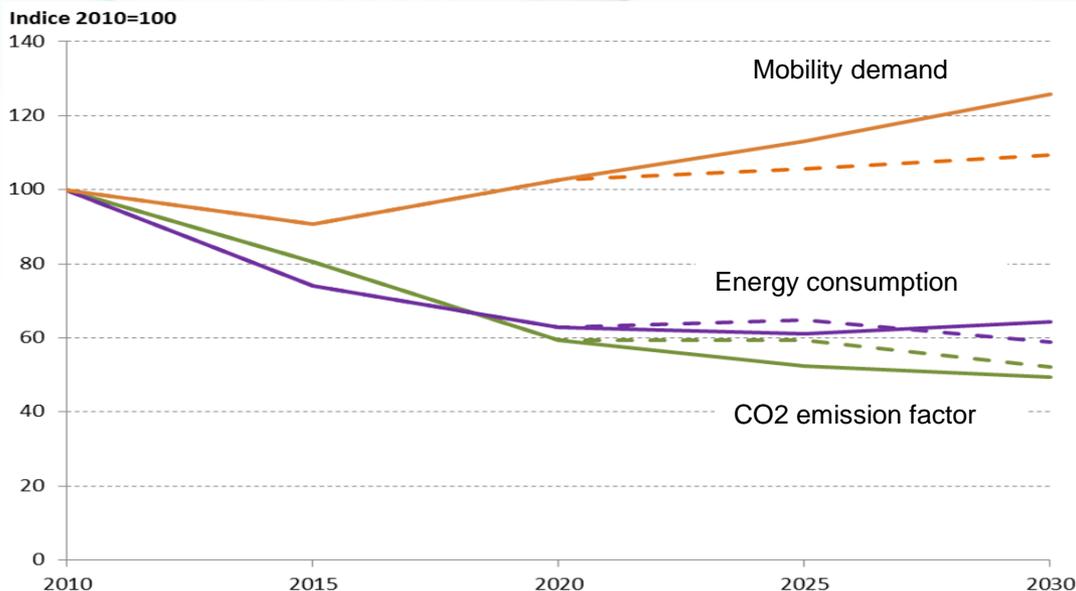
■ Outros Prod. Petrolíferos ■ GPL ■ Gasóleo ■ Gasolina ■ Biocombustíveis ■ Electricidade ■ Hidrogénio ■ Gás Natural

n Evolução percentual do consumo de energia final face a 2010

n Percentagem (%) do consumo de energia renovável no total do consumo de energia final (electricidade e calor renovável considerados)

National Climate Change Program 2020/30

- **Transport sector highlights:**
 - **Initial results from modelling:**
 - Demand for mobility will increase
 - Energy consumption stabilizes or slightly decreases
 - CO₂ emission factor decreases

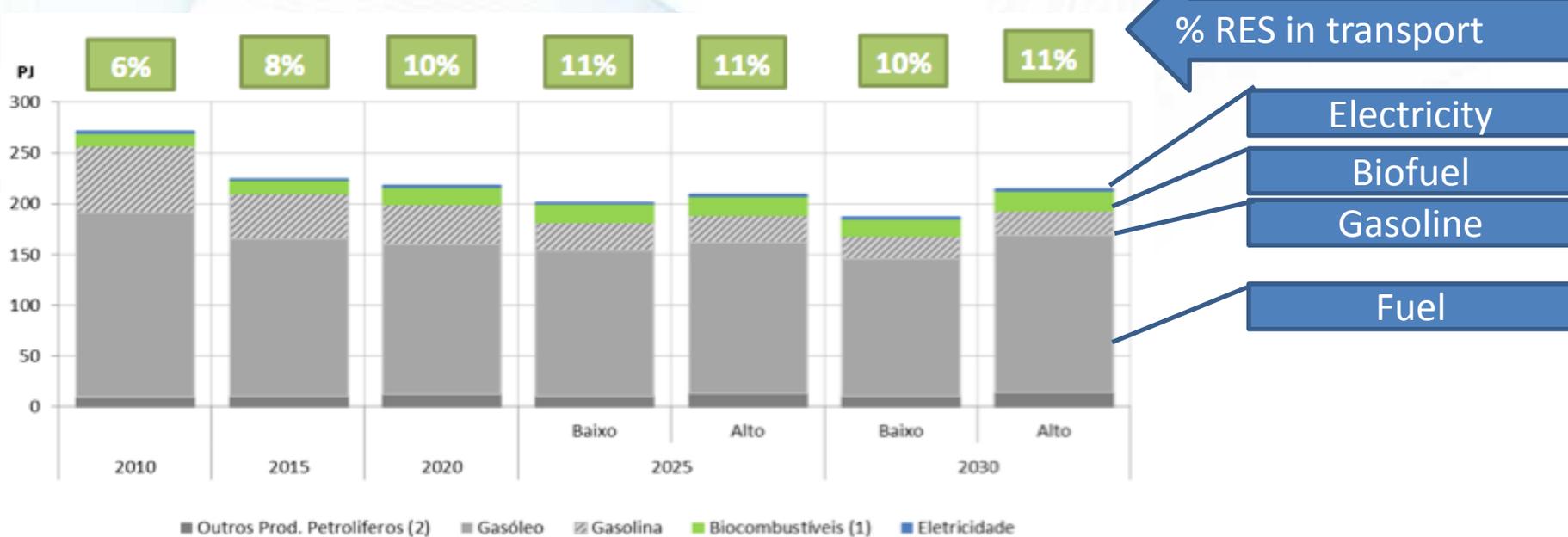


Bold line – high scenario
Dashed line – low scenario

New and more efficient vehicle technologies such as hybrids make the decoupling

National Climate Change Program 2020/30

- **Transport sector highlights:**
 - **Initial results from modelling:**
 - RES in transport reach the 10% target
 - RES in transport most due to biofuels
 - Electricity in transport with a small share
 - Diesel is still the most important source of energy in transport by 2030



National Climate Change Program 2020/30

Policies and Measures (P&M) technical methodology:

- **P&M strategic drivers and objectives**
- **Measures – general description and focus**
- **Actions – specific description**
- **Targets – mandatory or indicative including indicators for assessment**
- **Barriers**
- **Instruments – regulation, fiscal, economic and investment**

National Climate Change Program 2020/30

**Policy & measures
strategic drivers**

Technology

**Urban
mobility
management
and
passengers
transport**

**Freight
mobility
management**

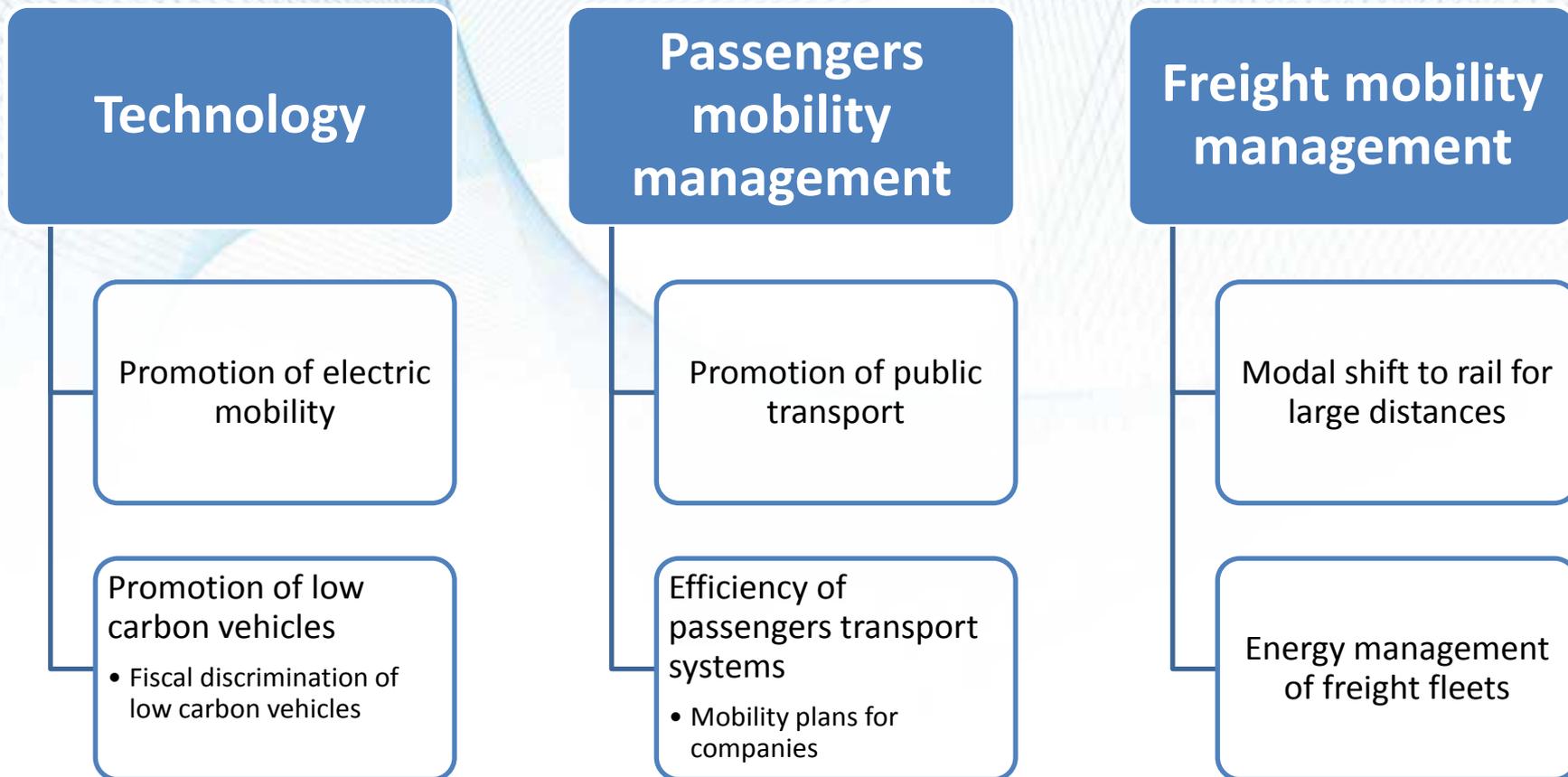
Behaviours

**Public
Administration**

Cities

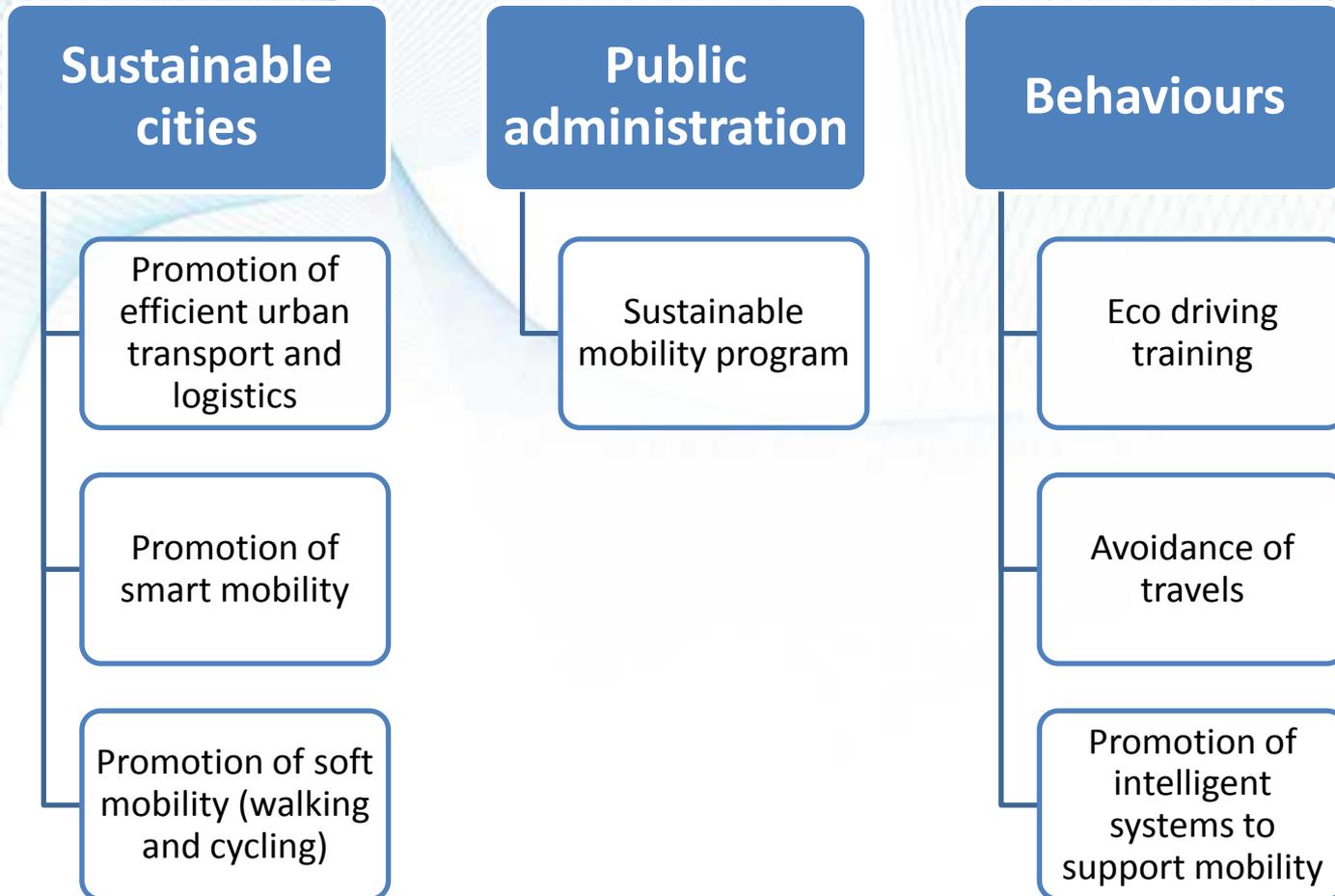
National Climate Change Program 2020/30

Examples of P&M:



National Climate Change Program 2020/30

Examples of P&M:



Sustainable Mobility Program for Public Administration

Electric Vehicles acquisition Program

- **Aims to reach 1250 EV on Central Public Administration by 2017**
- **Pilot phase beginning with 30 EV is already on going**
- **Includes the installation of charging points for public bodies**
- **All vehicles with GPS to allow monitoring**
- **Supported by Portuguese Carbon Fund (FPC)**

NEW

Carbon Tax

- **Just announced by the Government a Carbon Tax which will start in 2015**
- **Additional on the Petroleum Products and Energy Tax when gasoline and diesel are purchased (about 0,01€/l)**
- **The value of this Tax is indexed to the price of CO₂ in the EU ETS (5 euros/ton for 2015)**
- **Government foresees that this measure manages 95 million euros of revenue**

Electric Mobility Pilot Network – MOBI.E



MOBI.E

- a pilot electric charging point network of 1350 charging points
- an information and management system
- development supported by the Portuguese Carbon Fund (FPC) (9 M€) and by the Innovation Support Fund (FAI)
- Reduction potential 0,92 Mt CO₂ (2010-2020)



The Portuguese Carbon Fund also supported the acquisition of private electric vehicles in 2011

Pilot electric mobility charging network

- The project supported by the Portuguese Carbon Fund included the following work packages:
 - **W1: Project management**
 - **W2: implementation, test and pilot operation**
 - Technical studies
 - MOBI.E model development and specialization
 - Charging points technical solutions
 - Charging operation and management systems
 - **W3: Project communication**



MOBI.E
ELECTRIC MOBILITY



MOBI.E - Portuguese electric mobility case

MOBI.E SYSTEM IN PORTUGAL

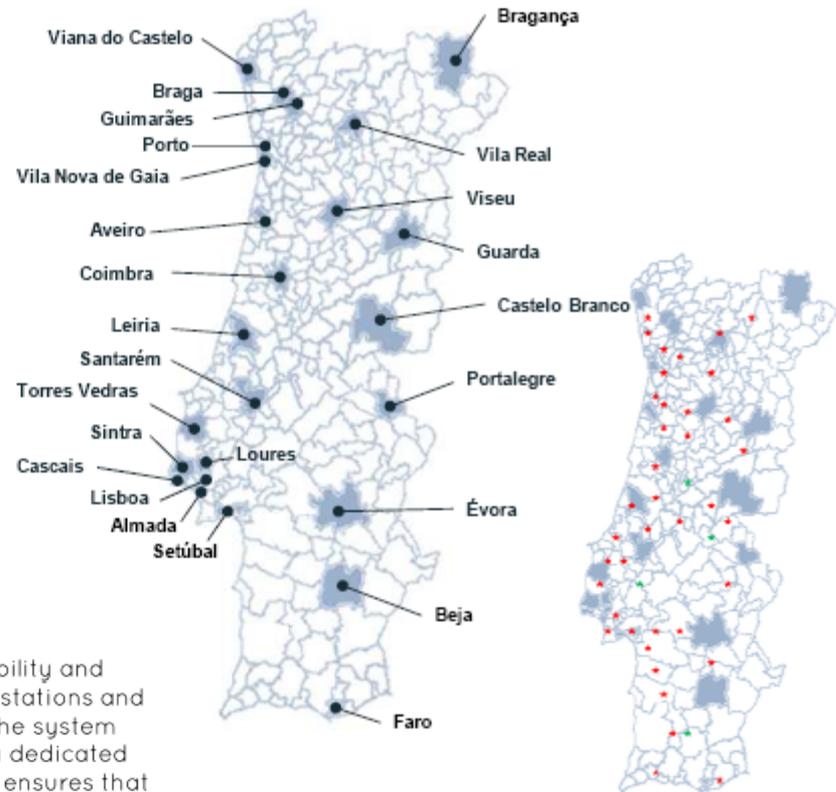
25 MUNICIPALITIES (IN 300) INVOLVED IN THE PILOT INFRASTRUCTURE NETWORK + MAIN HIGHWAYS

**WIDESPREAD PILOT CHARGING NETWORK:
1300 SLOW CHARGE + 50 FAST CHARGE**

INCLUDED LOCATIONS:

- STREETS
- PUBLIC PARKING LOTS
- SERVICE STATIONS
- AIRPORTS
- HOTELS
- SHOPPING CENTERS

MOBI.E has established the first “market place” for seamless integration of mobility and energy services in Portugal, supporting a network of more than 1100 charging stations and representing more than 600 000 km charged. In operation since early 2010, the system ensures “roaming” between charging operators and the possibility to choose a dedicated electricity provider for mobility, even at home or at the office. Robust clearing ensures that any user is able to charge any vehicle at any location by using a single authentication and subscription service. Furthermore, ensuring service integration with parking or carsharing operators, while safeguarding transparent differentiation and competition between all service providers, and keeping track of direct and indirect environmental impacts. This means one single contact point for users and vehicle manufacturers, easing the introduction of simple or more complex services.



Current Status of Electric Mobility in Portugal

- **Implementation delayed and pilot phase postponed until Dec 2014**
 - **Charging points in 38 cities**
 - 1070/1300 slow charging points installed
 - 1/50 fast charging points installed
 - **3 market operators (EDP MOP, Galpgeste and PRIO.E)**

 - **530 EV in Portugal (Fev 2014)**
 - **153 MWh of consumption**
 - **33.000 transactions**
 - **83 t CO₂ avoided**
- 
- Low demand**

To Increase demand for electric mobility

Incentives for electric mobility

Eliminate barriers to EV charging

The system has to become more universal – revision of the market model for electric mobility

Easier utilization of the system

Reduce charging time in the public network – upgrade of public charging points

Sustainable mobility Program for Public Administration

Reduce costs of EV

Technical evolution of batteries

Actions to promote Electric Mobility

The Government establishes electric mobility as a priority included in the Green Growth Commitment

A new market model for electric mobility was recently approved and published

The Environment Ministry signed a protocol with Portuguese Electric Vehicle Association (APVE) aiming to test and monitor the use of EV of several brands by the cabinets

The Commission for Green Fiscal Reform in Portugal proposed several measures to promote electric mobility

Thank you very much!!!

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