

<b>Title of the measure:</b>	POR 26 – National Energy Efficiency Action Plan (NEEAP)
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### **General description**

The Ministries Council Resolution n° 20/2013 approved the National Action Plan for Energy Efficiency (NEEAP 2013-2016). The National Action Plan sets several guidelines for energy efficiency in the transport sector, which are organized into three programmes: Eco Car – Tp1 (*Eco Carro*) aiming to promote private transport energy efficiency; Urban Mobility – Tp2 (*Mobilidade Urbana*) to promote the use of public transport; and Transport’s Energy Efficiency System – Tp3 (*Sistema de Eficiência Energética nos Transportes*) to promote energy efficiency within passengers and freight transport operators. These programmes are subsequently divided into more specific measures that are going to be briefly described.

#### **Tp1m1 – Green Taxation: review of the private vehicle tax regime**

This measure intends to maintain and improve current conditions in order to promote the introduction of vehicles with low CO<sub>2</sub> emission factors, through mechanisms that can disseminate them in the road transport sector. Some of these mechanisms are connected with the vehicle tax regime review, as well as the availability of fuel consumption guides and energy information publication about new vehicles. This measure is in line with the European Community strategy, essentially set on 3 pillars: (i) voluntary commitment of the automotive industry in order to reduce the emission of greenhouse gases, (ii) better information to the consumer and (iii) promotion of more efficient vehicles regarding energy consumption, through the implementation of fiscal measures. The measure intends to encourage the acquisition of new light duty passenger vehicles, for private or commercial use, with lower pollutants emissions. The mechanisms that enforce it are from fiscal nature, associated with the differentiation of the Tax over Vehicles – *Imposto sobre Veículos* (ISV) – and the Tax over Vehicles’ Circulation – *Imposto Único de Circulação* (IUC) – based on the level of gCO<sub>2</sub>/vkm emissions. The ISV computation considers CO<sub>2</sub> emissions according with the progressive tables that are annually set in the State Annual Budget, in order to boost the lower emission vehicles market.

#### **Tp1m2 – Green Tire**

This measure intends to increase the market introduction of energy efficient tires, with low rolling resistance (RR), and the reduction of passenger vehicles that are circulating with the wrong tire pressure. This measure is divided into two: Efficient Tires (Tp1m2-1) and Right Pressure Tires (Tp1m2-2).

Tp1m2-1: It is estimated that the sub-measure Efficient Tires will produce a fuel consumption average reduction between 1 and 2%. The EC Regulation n° 1222/2009, of November 25<sup>th</sup>, regarding tire labelling, introduced the obligation to label tires from November 2012 onwards. This Regulation intends to increase the sale of energy efficient tires, through the quality improvement of the information that’s available about these products, namely the ones concerning fuel consumption reduction and vehicle security increase. Furthermore, the Government is committed to promote, with the collaboration of sector associations and tires’ manufacturers, campaigns on the advantages of the use of more efficient, safer and with lower noise emissions levels tires. Currently, some features regarding the supervision of the Regulation implementation (namely the information that has to be on the label and the communication duties) are still not fully regulated in Portugal.

Tp1m2-2: The Right Pressure Tires sub-measure intends to reduce the number of passenger vehicles that are circulating with the wrong tire pressure. The number of vehicles that can be covered by this measure is projected to be high. The fuel consumption increase due to the vehicle circulation with the wrong tire pressure is estimated to go from 1 to 2.5%. The mechanisms implemented along with this measure should essentially be campaigns to promote the use of the correct tire pressure and its calibration, as well as incentives to the periodic tire pressure check. It should be also promoted its enforcement as mandatory, namely in the Periodic Mandatory Inspection Centers - *Inspecção Periódica Obrigatória* (IPO).

### **Tp1m3 – Promotion of electrical vehicles acquisition**

This measure intends to encourage the purchase and introduction of electric vehicles in the light duty and passenger vehicles' market, as well as electric scooters, taking advantage of the investments already made for the development of a smart and integrated management platform during the Mobi.E programme. In order to implement this measure, one of the suggested solutions is the adaptation of the already existent charging infrastructures, altering them to fit covered parking spots (public and private), namely through the development of domestic charging solutions. Other solution is the demonstration of electric vehicles and scooters use advantages, highlighting the technologies' benefits namely when comparing with the growing costs of conventional fuels and associated environmental impacts. Electric vehicles have a fiscal differentiation translated into the total exemption of the environmental component of the Tax over Vehicles' Circulation IUC and the exemption of the ISV, approved by Law n° 22-A/2007, of June 29<sup>th</sup>.

### **Tp2m1 – Sustainable mobility promotion and good practices adoption**

This measure intends to encourage public transportation use in detriment of individual transportation, particularly in urban areas. The development of public transportation infrastructures, associated with better offer and services, has been a catalyzer for the users increasing number. This should be articulated with an effort to improve planning and mobility management, which combined with restrictive measures to private vehicles circulation and parking, will contribute to increase public transportation and soft modes use.

### **Tp2m2 – Use of more energy efficient transport and mobility solutions**

This measure intends to increase energy efficiency through the introduction of more efficient vehicles in the public transport sector. It is divided into three sub-measures: Minibus and flexible transport services (Tp2m2-1); Fleet management centrals and automatic attribution of taxis' services (Tp2m2-2); Bikes and soft transport modes use (Tp2m2-3).

Tp2m2-1: The minibus and flexible transport services sub-measure intends to promote the use of minibus fleets that can contribute, in an autonomous way or integrated in a conventional bus fleet, to better adequacy of passengers' demand during off-peak hours in urban public transport fleets or rural space with low demographic density. The measure also plans the implementation of innovative solutions that can answer to the population mobility needs through flexible public transports (TPF), which offer services with variable itineraries, stops and schedules. This will better adequate public transport services to the existing demand, improving the performance levels (reduction of consumptions, paths and distances) and reducing the use of individual transport.

Tp2m2-2: Regarding the introduction of fleet management centrals and automatic attribution of taxis' services, new organization solutions for taxi services are thought, namely its integration with TPF. The taxi use is an intermediate solution between collective transport and private vehicle, allowing to better reply to specific transportation needs. It is also recommended the development of fleet management centrals and automatic designation of taxis' services, which will allow to locate all taxi vehicles and evaluate their availability, encouraging taxis to wait for the service assignment in their parking lots and therefore reducing the services attained when circulating. The decreasing of the routes made with no passengers has the immediate result of reducing fuel consumption, traffic jams, vehicles' maintenance costs, pollutants' emissions, etc.

Tp2m2-3: After the elaboration of the "Plan to Promote Bikes and Other Soft Modes Transports – 2013-2020" it was created an action program that proposes the development of a strategic, coherent and articulated set of measures in order to promote the daily use of bikes, as well as the adoption of sustainable mobility solutions. This was also associated with the creation of better and safer conditions to soft modes use, and behavior changes to favor the reduction of motorized individual transportation use. The reinforcement of daily bike utilization, besides the leisure and sports component, is linked with the growing number of municipalities that have been implementing bike sharing solutions and constructing bike lanes. The recent conclusion of the action plan and the Government's initiative to gather a team to elaborate the "Light Mobility Chart" should likewise promote the increase of soft transport modes use and its input in the modal share.



### **Tp3m1 – Restructuring the passenger railway transportation offer**

This measure was already considered in the previous National Plan for Climate Changes, approved by the Ministries Council Resolution n° 104/2006, of August 23<sup>rd</sup>, and intended to promote the change of the travel offer of CP (national railways company) through the reduction of travelling times between Lisbon-Porto, Lisbon-Castelo Branco and Lisbon-Algarve trips. The activities developed within this measure's scope are connected with exploration efficiency, improvement of service quality, reduction of travelling time and demand increase.

### **Tp3m2 – Regulation for Energy Management in the Transport Sector**

This measure intends to perform the evaluation of the current Regulation for Energy Management in the Transport Sector (RGCEST) approved by the Ordinance n° 228/90, of March 27<sup>th</sup>, and altered by the Law n° 7/2013, of January 22<sup>nd</sup>, and the corresponding impacts of energy consumption reduction on the transport sector. The measure is directed to fleets managers' and vehicle fleets that have an annual fuel consumption above a predetermined referential (the current Regulation sets the referential at 500 toe). These fleets must conduct an audit procedure (that should be performed at least once every 3 years) and elaborate rationalization plans (PREn) in order to reduce the specific energy consumptions or improve the energy intensity of the fleet. The rationalization plan should describe all the actions to be developed, place them in a time frame and name the subsequent costs. The audit should account for the conditions and use of the vehicles, namely: (a) fleets' composition (technically, usage and age), (b) fleets' management procedure, in particular, maintenance, (c) production, i.e tonne-kilometers (tK), (d) control of fuel supply (liters, l), (e) energy balance, (f) assessment of the usage conditions, and (g) assessment of the specific energy consumptions of the last 3 years. The energy audit reports and the energy consumption rationalization plans must be submitted to the General Directorate of Energy and Geology (DGEG) for its approval.

### **Tp3m3 – Support to the installation of equipment to inflate tires with nitrogen**

This measure intends to promote nitrogen generator systems placement in passengers and freight operators' workshops, as well as private fleets' workshops (private companies and municipalities), assuring priority to heavy duty vehicles fleets. The use of tires with wrong pressure values, apart from other consequences (as decreasing security, comfort and tire life expectancy), result in vehicles' fuel consumption increase, with the associated air pollutant emissions. One way to efficiently assure the reduction of the vehicles' number that are circulating with wrong pressure tires is to evaluate the possibility to support transporters and business fleets with the acquisition of nitrogen generator systems to inflate tires. In a second stage, public inflating stations and repair and assistance workshops could be also contemplated in this measure. The fact that tires are inflated with nitrogen will allow, besides other advantages, to reduce pressure loss. No matter the drivers' pressure checking habits, the use of nitrogen assures for a longer period of time that the pressure used is adequate.

### **Tp3m4 – Promotion of fleet management systems and eco-driving**

This measure intends to promote the adoption, by passenger and freight transporters, of professional drivers' performance monitoring systems that can enforce the correction of inadequate driving behaviours, good practices adoption, introduction of drivers coaching tools, as well as technical solutions compatible with open operative systems, which can help drivers and allow information gathering on driving and vehicles' performance. This measure will be completed with training in eco-driving based on the attained results.

## Impact evaluation

The Ministries Council Resolution n° 20/2103 established that it should be given the responsibility to monitor and execute the NEEAP to the Government member in charge of the energy area, the Energy Secretary of State. Additionally, it was created an Executive Commission to manage the measures' implementation. Therefore, in the NEEAP 2013-2016 the targets and results expected for each measure are the following:

Fig. 1 - Impact of the transport sector on the NEEAP 2016

Measure Code	Energy saved (toe)		Target 2016 (toe)		Execution 2016 (1)	Target 2020 (toe)		Execution 2020 (2)
	Final	Primary	Final	Primary		Final	Primary	
Tp1m1	40,017	40,017	47,326	47,326	85%	54,055	54,055	74%
Tp1m2-1	2,061	2,061	8,024	8,024	26%	16,082	16,082	13%
Tp1m2-2	1,565	1,565	3,678	3,678	43%	5,158	5,158	30%
Tp1m3	0	0	1,861	1,506	0%	8,077	6,478	0%
Tp2m1	98,817	98,817	98,817	98,817	100%	98,817	98,817	100%
Tp2m2-1	785	785	1,745	1,745	45%	2,617	2,617	30%
Tp2m2-2	5,329	5,329	25,635	25,635	21%	53,208	53,208	10%
Tp2m2-3	0	0	1,806	1,806	0%	2,779	2,779	0%
Tp3m1	45,659	45,659	60,000	60,000	65%	60,000	60,000	65%
Tp3m2	2,885	2,885	25,343	25,343	11%	25,343	25,343	11%
Tp3m3	0	0	3,866	3,866	0%	6,282	6,282	0%
Tp3m4	0	0	10,096	10,096	0%	20,155	20,155	0%

(1) Comparing with final energy

(2) Comparing with primary energy

## Interaction of measures

This measure interacts with the measure described in the General Cross-Cutting, namely: POR7 - National Action Plan for Energy Efficiency (NEEAP), 2013-2016.

## Historical data

It was in 2013 April 10<sup>th</sup> that the Ministries Council Resolution n° 20/2013 approved the National Energy Efficiency Action Plan (NEAP 2013-2016).

## References

- Ministries Council Resolution n° 20/2103, of April 10<sup>th</sup>: <https://dre.pt/application/file/260476>