

WORKSHOP ON LOW EMISSION ZONES

European Commission TAIEX  
Ministry of Environment Protection in Israel

# The Lisbon Low Emission Zone Enforcement Methods and Procedures

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# Plan of the presentation

- Where is Lisbon?
- How did the Lisbon LEZ come to life?
- The life of the Lisbon LEZ (so far)
- Conclusions (for Portugal)
- To know more

# Where is Lisbon?





# Where is Lisbon?



# How did the Lisbon LEZ come to life

## 1. Directive 96/62/CE – Air Quality Framework Directive

- Established objectives for ambient air quality in the European Union.
- Aimed at maintaining ambient air quality where it is good and improve it in other cases.
- Member States (MS) would take measures to ensure compliance with limit values for air pollutants (set by Directive 99/30/CE for sulfur dioxide, nitrogen oxides, particulates and lead).
- MS would draw Action Plans with measures to reduce the risk of limit values being exceeded.
- Such Plans could provide for measures to suspend activities, including motor vehicle traffic.

# How did the Lisbon LEZ come to life

## 2. Decree-law 276/99 of July 23

- One year after the deadline (May 1998) the Air Quality Framework Directive is complied with in Portugal.

## 3. Decree-law 279/2007 of August 6

- As no Air Quality Action Plan was approved so far, the new law insists they should be prepared, brought into force and executed.

# How did the Lisbon LEZ come to life

## 4. Ordinance 715/2008 of August 6

**PRESIDÊNCIA DO CONSELHO DE MINISTROS E MINISTÉRIOS DA ADMINISTRAÇÃO INTERNA, DO AMBIENTE, DO ORDENAMENTO DO TERRITÓRIO E DO DESENVOLVIMENTO REGIONAL, DA ECONOMIA E DA INOVAÇÃO E DAS OBRAS PÚBLICAS, TRANSPORTES E COMUNICAÇÕES.**

**Portaria n.º 715/2008**

- Involving the ministries of Environment, Economy, Public Works and Transport and Home Affairs the ordinance approves the Air Quality Improvement Plan for the Lisbon and Tagus Valley Region.
- In the city of Lisbon the concentrations of particulates (PM10) and nitrogen dioxide are above the limit values.

# How did the Lisbon LEZ come to life

## 4. Ordinance 715/2008 of August 6 (cont.)

- In order to reduce these concentrations a large number of measures was studied, such as:
  - Increase the number of natural gas buses in Lisbon;
  - “Cash for Clunkers” Program (2000 -2010);
  - Increase taxes on gasoline and gasoil;
  - Extend the Lisbon Underground network;
  - Courses for professional drivers on “defensive driving”;
  - Better enforcement of parking regulations;
  - Upgrade emission control systems of older buses (EURO 1); Renovate bus/ taxi fleet;



# How did the Lisbon LEZ come to life

## 4. Ordinance 715/2008 of August 6 (cont.)

- In order to reduce these concentrations a large number of measures was studied, such as (cont.):
  - Introduce alternate-day driving system;
  - Establish a LEZ;
  - Establish a toll zone in downtown Lisbon; Introduce a variable toll system;
  - Introduce High Occupancy Lanes on major access roads to Lisbon;
  - Increase the number of bus lanes;
  - Increase street cleaning frequency;
  - Promote spatial planning that reduces house-work trips.

# How did the Lisbon LEZ come to life

## 4. Ordinance 715/2008 of August 6 (cont.)

- The best (as studied) measures were the following:
  - Increasing the number of bus lanes;
  - Introduction of variable tolls (according to the hour of day and number of users of the vehicles) in highways which have toll systems already;
  - Creation of High Occupancy Lanes on major access roads to Lisbon;
  - Substitution of all old buses and taxis (EURO 0) for new (state of the art) ones;
  - Better enforcement of parking regulations.
- An Execution Programme for the Air Quality Improvement Plan (AQIP) should be prepared no later than 6 months after the publication of the Ordinance.

# How did the Lisbon LEZ come to life

## 5. Order 20763/2009 of September 16

- By the same ministries of the previous Ordinance, approves the Execution Programme for the AQIP of the Lisbon and Tagus Valley Region.



*Programa de Execução do Plano de Melhoria da  
Qualidade do Ar na Região de Lisboa e Vale do  
Tejo*

Junho 2009



# How did the Lisbon LEZ come to life

## 5. Order 20763/2009 of September 16 (cont.)

- Once again, a large number of measures deemed to be applicable are included in the Executive Programme.



PROGRAMA DE EXECUÇÃO DO PLANO DE MELHORIA DA QUALIDADE DO AR NA REGIÃO DE LISBOA E VALE DO TEJO

Tabela 3: Classificação das P&M constantes do programa de execução do PMQA-LVT

Políticas e Medidas (P&M)	Âmbito da P&M	
	municipal	supra-municipal*
<b>GESTÃO E ACALMIA DE TRÁFEGO</b>		
Introdução de "Zonas 30"	X	
Pedonalização de determinadas rodovias e/ou zonas	X	
Introdução de uma Zona de Emissões Reduzidas (ZER) na cidade de Lisboa	X	X
Criação de Vias de Alta Ocupação, conjugadas com corredores bus e circulação de veículos eléctricos (VAO+BUS+E) nos principais corredores de acesso a Lisboa		X
<b>OPTIMIZAÇÃO E MELHORIA DO DESEMPENHO AMBIENTAL DE VEÍCULOS E FROTAS</b>		
Renovação parcial de frotas	X	X
Optimização e melhoria do desempenho ambiental da frota da CARRIS (parcialmente****)		X
Abate de veículos com reduzido desempenho ambiental em frotas cativas	X	
Instalação de sistemas de "fim-de-linha" (retrofit) em frotas cativas	X	
Incentivo à instalação de filtros de partículas em veículos pesados de mercadorias	X	X
Aquisição de veículos movidos a combustíveis alternativos	X	X
Introdução de critérios ambientais na reformulação do modelo de gestão e regime jurídico do Parque de Veículos do Estado (PVE) ***		X
Apoio ao abate de veículos pesados de mercadorias***		X
Renovação das frotas da Transtejo e CP		X
Implementação do sistema energético a bordo dos catamarãs da Transtejo		X
Apoio à renovação de frota de veículos pesados de passageiros***		X
Simplificação do procedimento de concessão do incentivo fiscal ao abate a automóveis ligeiros em fim de vida ***		X
<b>PROMOÇÃO DA UTILIZAÇÃO DOS TRANSPORTES COLECTIVOS</b>		
Criação de estacionamento gratuito ou com tarifação reduzida junto a interfaces de Transporte Colectivo	X	
Introdução do passe 4_19@escola.pt e sub23@superior.pt ***		X
Introdução e/ou extensão de infra-estruturas de Transporte Colectivo Ferroviário e/ou Rodoviário (corredores BUS, p.ex.)	X	X
Renovação das centrais de gestão de pedidos de serviço de táxis		X
<b>PROMOÇÃO DE "MODOS SUAVES" DE MOBILIDADE</b>		
Criação ou ampliação de ciclovias	X	
Promoção da utilização dos "modos suaves" de mobilidade	X	
<b>GESTÃO DA OFERTA E PROCURA DE ESTACIONAMENTO</b>		
Redução do número disponível de lugares de estacionamento tarifados ou não tarifados	X	
Alteração na política de preços associada ao estacionamento tarifado	X	
Aumento do esforço de fiscalização (enforcement) do estacionamento ilegal	X	X
<b>PROMOÇÃO E SENSIBILIZAÇÃO AMBIENTAL</b>		
Campanhas de sensibilização ambiental dedicadas à problemática da qualidade do ar	X	
Campanhas e cursos de eco-condução em frotas de transporte de passageiros e de mercadorias e para ligeiros de passageiros (parcialmente****)	X	X
Desenvolvimento de websites dedicados e/ou contendo elementos sobre qualidade do ar e mobilidade sustentável	X	
<b>OUTROS TIPOS DE P&amp;M**</b>		
Alargamento da área dedicada a espaços verdes e/ou planos de arborização	X	
Desenvolvimento de projectos de partilha do veículo (carpooling ou carsharing)	X	
Aumento da frequência de lavagem de ruas	X	
Aumento do esforço de fiscalização de processos de queima de Resíduos Sólidos Urbanos (RSU)	X	X
Planos de deslocações escolares e/ou ped-bus	X	
Fixação de novos valores limite de emissão de aplicação geral para fontes fixas e para instalações de combustão***		X
Certificação de equipamentos de combustão residencial		X
Outras P&M	X	

# How did the Lisbon LEZ come to life

## 5. Order 20763/2009 of September 16 (cont.)

- Among the measures listed there appears: the creation of a LEZ in Lisbon.
- The entities involved in the study and proposal of the LEZ:
  - Lisbon Municipality;
  - Cabinet of the Secretary of State for the Environment;
  - Road Safety Authority;
  - Regional Development Commission for Lisbon and Tagus Valley;
  - New University of Lisbon – Environment Department;
  - National Institute for Inland Transport.



# How did the Lisbon LEZ come to life

## 5. Order 20763/2009 of September 16 (cont.)

- And the stakeholders formally consulted:
  - National Road Haulage Association;
  - National Road Passenger Transport Association;
  - Lisbon Public Transport Company;
  - Taxis Owners and Operators Association.

# The life of the Lisbon LEZ (so far)

## 1. The 1<sup>st</sup> Phase of the Lisbon LEZ

- Was approved by the Lisbon Municipality on May 19, 2011. Entered into force on July 4 2011.
- The LEZ is restricted to the axis Av. Liberdade/Baixa in downtown Lisbon – 1% of city area.



# The life of the Lisbon LEZ (so far)

## 1. The 1<sup>st</sup> Phase of the Lisbon LEZ (cont.)

- Operates 8:00 – 20:00 on weekdays.
- Vehicles that do not respect EURO 1 rules (manufactured before July 1992) cannot circulate.
- Exceptions for public transport, emergency vehicles, classic vehicles and residents.
- With all the exemptions, only 10% of the target vehicles usually circulating in the LEZ were affected.
- Enforcement by Traffic Police, on a random basis.
- Fines between 25 and 125 euros.
- *Circa 20 fines/month.*
- Portuguese Auto Club challenged the LEZ presenting a complaint before the Portuguese Ombudsman. It was rebuffed.

# The life of the Lisbon LEZ (so far)

## 2. The 2<sup>nd</sup> Phase of the Lisbon LEZ

- Was approved by the Lisbon Municipality on February 29, 2012. Entered into force on April 1.
- The LEZ has now 2 Zones: Zone 1 (the same as Phase 1 LEZ) and Zone 2 encompassing all central Lisbon (33% of city area).



# The life of the Lisbon LEZ (so far)

## 2. The 2<sup>nd</sup> Phase of the Lisbon LEZ (cont.)

- Operates 7:00 – 21:00 on weekdays.
- Inside Zone 1 vehicles that do not respect EURO 2 rules (built before January 1996 – light – or October 1996 - heavy) cannot circulate.
- In Zone 2 restrictions apply to non EURO 1 vehicles.
- Exceptions for emergency and classic vehicles, residents in Zone 1 (for Zone 1) and residents in Lisbon (for Zone 2).
- No exception for public transport, but taxis could still circulate till December 31, 2012; in December 2012 the exemption for taxis was extended *sine die* (till Government approval of rules for upgrading vehicle exhaust systems).
- Enforcement by Traffic Police, as on Phase 1.
- A trade union complained about Phase 2 because “thousands of jobs” could be lost in the taxi sector!



# The life of the Lisbon LEZ (so far)

## 3. The 3<sup>rd</sup> Phase of the Lisbon LEZ

- Has not started yet (was scheduled to July 2013).
- Geographically there will be no changes.
- Inside Zone 1 vehicles that do not respect EURO 3 rules (built before January 2000) will not be allowed.
- In Zone 2 restrictions will apply to non EURO 2 vehicles.
- Same exceptions as in Phase 2 (will the exemption for taxis end?).
- Main difference concerns enforcement.
- A network of license plate reading cameras will be installed all around Zone 2.

# The life of the Lisbon LEZ (so far)

## 3. The 3<sup>rd</sup> Phase of the Lisbon LEZ (cont.)

- The automatic plate reading system will be associated with the database of the National Institute for Inland Transport containing the information regarding EURO standards of each vehicle.
- In order to facilitate the action of Traffic Police it is foreseen that the “vehicle inspection card” will have different colors according to the EURO standard that the vehicle complies with.
- Lisbon Municipality points to a late authorization (October 2013) of the reading system by the National Commission for Data Protection as a reason for the delay of Phase 3.
- The election for Lisbon City Council in September 2013 may also help to explain the delay.

## Conclusions (for Portugal)

- Establishing a LEZ is a difficult and long process.
- Needs the cooperation of a large number of institutions – national, regional and local.
- Faces powerful vested interests (e.g. taxi and bus operators).
- Results may be slow to show up.
- (In 2012 the average concentration of particulate matter (PM10) was reduced 16% and of nitrogen dioxide (NO2) 6% compared with 2011 in Zone 1).
- (But in 2013 preliminary monitoring results point to much lower concentrations for PM10 in Zone 1; NO2 results continue to lag).

**Needs patience and persistence!**

## To know more:

- Francisco Ferreira *et ali*, Evaluation of the Implementation of a Low Emission Zone in Lisbon, Journal of Environmental Protection, 2012, 3
- Nunes da Silva *et ali*, Low Emission Zone: Lisbon's Experience, Journal of Traffic and Logistics Engineering, June 2014

Thank you  
Obrigado  
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