



MOBI.E
ELECTRIC MOBILITY



ELECTRIC MOBILITY

PORTUGAL
SHOWCASE
TO THE WORLD

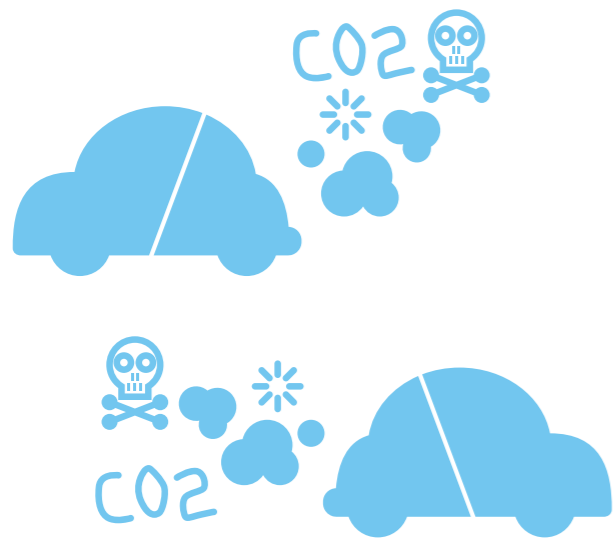
INSTITUTIONAL PRESENTATION



“PORTUGAL AIMS AT BEING A LABORATORY FOR FUTURE ELECTRIC CARS”

PRIME MINISTER JOSÉ SÓCRATES
JULY 8TH 2008

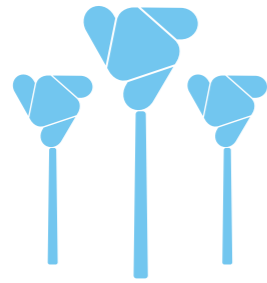
THE CHALLENGE OF SUSTAINABLE MOBILITY



IN PORTUGAL, EMISSIONS FROM ROAD TRANSPORTATION ACCOUNT FOR AS MUCH AS 900 MILLION TON CO2 /YEAR (30.2% OF TOTAL)

ENERGY CONSUMPTION IN THE ORDER OF 18.5 MTOE / YEAR, 38.5% FROM TRANSPORTATION

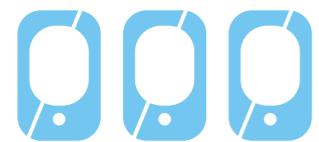
BUT...



RENEWABLE ENERGIES ACCOUNT FOR 43% OF ELECTRICITY PRODUCTION IN 2009 AND 60% IN 2020



TECHNOLOGY ENABLES NEW ENERGY MODELS (SMART GRIDS)



DIGITAL ENVIRONMENTS PUSH TOWARDS NEW MOBILITY MANAGEMENT MODELS AND SYSTEMS

ELECTRIC MOBILITY PROGRAM GOVERNANCE AND STRUCTURE

PROGRAM FOR ELECTRIC MOBILITY		
ELECTRIC MOBILITY SYSTEM	INDUSTRIAL AND R&D CLUSTER	INTERNATIONALIZATION
CHARGING NETWORK	TECHNOLOGICAL CONSORTIA	MOBI.E MODEL
EV MARKET PENETRATION	R&D	MOBI.E TECHNOLOGY
		ELECTRIC MOBILITY POLICIES



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ELECTRIC MOBILITY

PORTUGUESE ELECTRIC MOBILITY PROGRAM MILESTONES

➤
8 JUL 2008
“ZERO EMISSION MOBILITY” AGREEMENT



➤
5 FEB 2009
LAUNCH OF “PROGRAM FOR ELECTRIC MOBILITY”

29 JUN 2009
2009 INTERNATIONAL CONFERENCE
“RECHARGING PORTUGAL”
MOU WITH MUNICIPALITIES
MOU FOR CONSTITUTION OF MANAGEMENT AUTHORITY

20 AUG 2009
POLITICAL FRAMEWORK FOR MOBI.E ELECTRIC MOBILITY MODEL

21 SEP 2009
CONSTITUTION OF RENER

➤
MAY 2010 LEGISLATION

JUN 2010
MOBI.E INTERNATIONAL

➤
JUL 2010
INSTALLATION OF PILOT NETWORK

DEC 2010
PILOT NETWORK
320 SLOW

➤
JUN 2011
PILOT NETWORK COMPLETE
1 300 SLOW + 50 FAST



INSTITUTIONAL PRESENTATION

PORTUGUESE ELECTRIC MOBILITY PROGRAM

MOBI.E MODEL PRINCIPLES

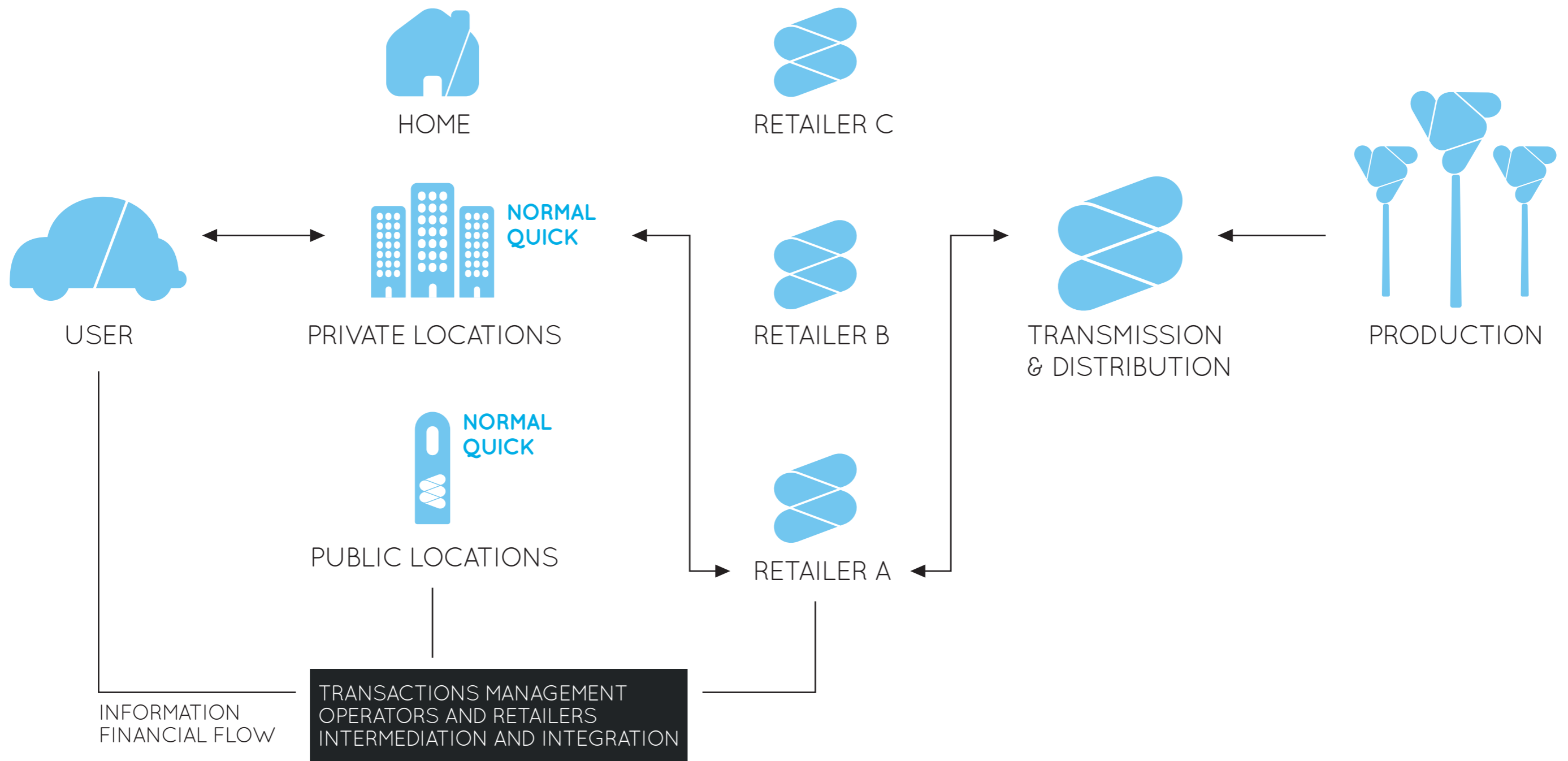


MOBI.E[®]
ELECTRIC MOBILITY

- **FOCUS ON THE USER** / CITIZEN
- FAIR, ADVANTAGEOUS AND **COMPETITIVE PRICING** WHEN COMPARED TO ICE VEHICLE
- **UNIVERSAL ACCESS**
OPEN TO EVERY MANUFACTURER, UTILITY, PRIVATE OPERATOR
- **INTEGRATION** OF INFORMATION, ENERGY AND FINANCIAL FLUXES
- ATTRACTION OF **PRIVATE INVESTORS**
- TRULY **NATIONAL SCALE**, ANTICIPATING MASSIFICATION OF ELECTRIC VEHICLES.

MOBILE

WHO'S WHO IN THE INTEROPERABLE MODEL





MOBI.E

WHO'S WHO IN ELECTRIC MOBILITY

USER

CITIZEN / ORGANIZATION

ELECTRIC MOBILITY ELECTRICITY RETAILER

SELLS ELECTRICITY FOR EV VEHICLE CHARGING

CHARGING NETWORK OPERATOR

OPERATES CHARGING NETWORK ACCESS POINTS, MAKING THE CHARGING SERVICE AVAILABLE TO ITS USERS THROUGH DIFFERENT ELECTRIC MOBILITY RETAILERS

MANAGING AUTHORITY

ENSURES INTEGRATION BETWEEN ALL STAKEHOLDERS AS WELL AS THE INTEGRATED MANAGEMENT OF INFORMATION AND ENERGY FLOWS WITHIN THE ELECTRIC MOBILITY FRAMEWORK

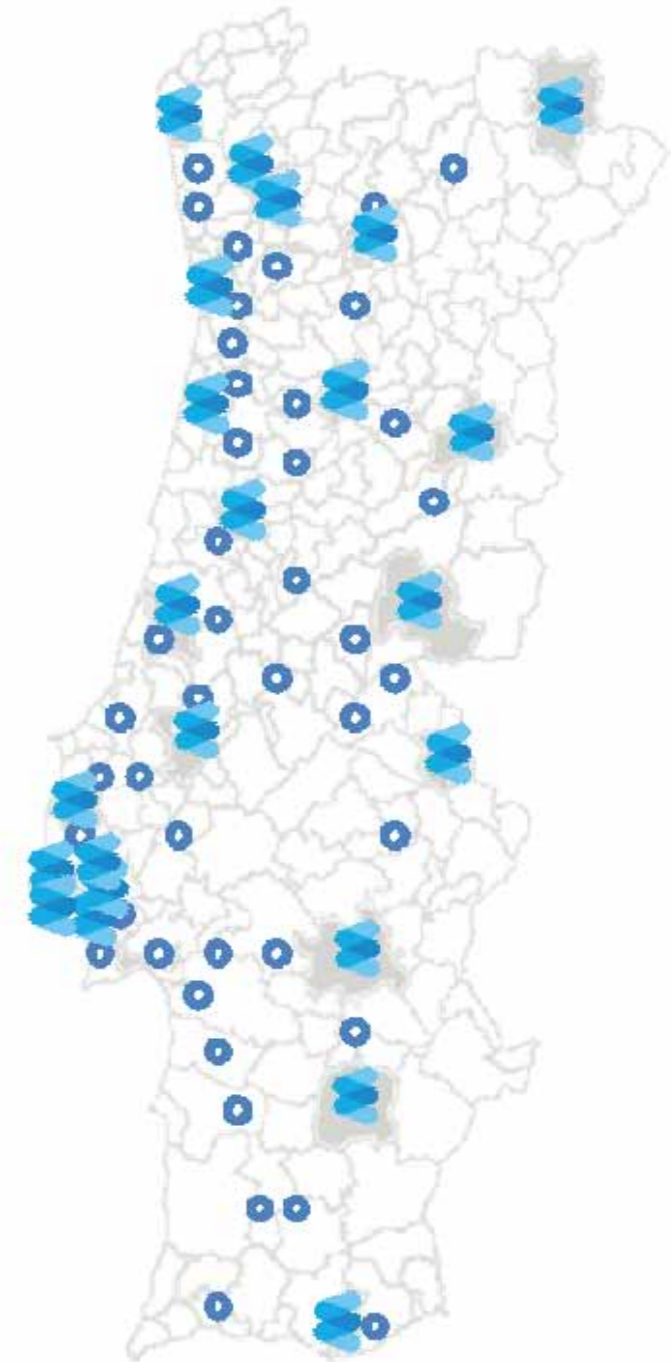
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FIRST NATIONAL SCALE INFRASTRUCTURE

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



PORTUGUESE ELECTRIC MOBILITY PROGRAM INITIATIVES

MAIN INITIATIVES

- PUBLIC PROCUREMENT: 20% ANNUAL RENEWAL OF PUBLIC CAR FLEET
- USE OF EV PRIORITY LANES AND PARKING SPACES
- PUBLIC PILOT INFRASTRUCTURE FUNDING
- INCENTIVES TO INFRASTRUCTURE IN NEW / EXISTING BUILDINGS
- COMMUNICATION AND EDUCATION

LEGISLATION

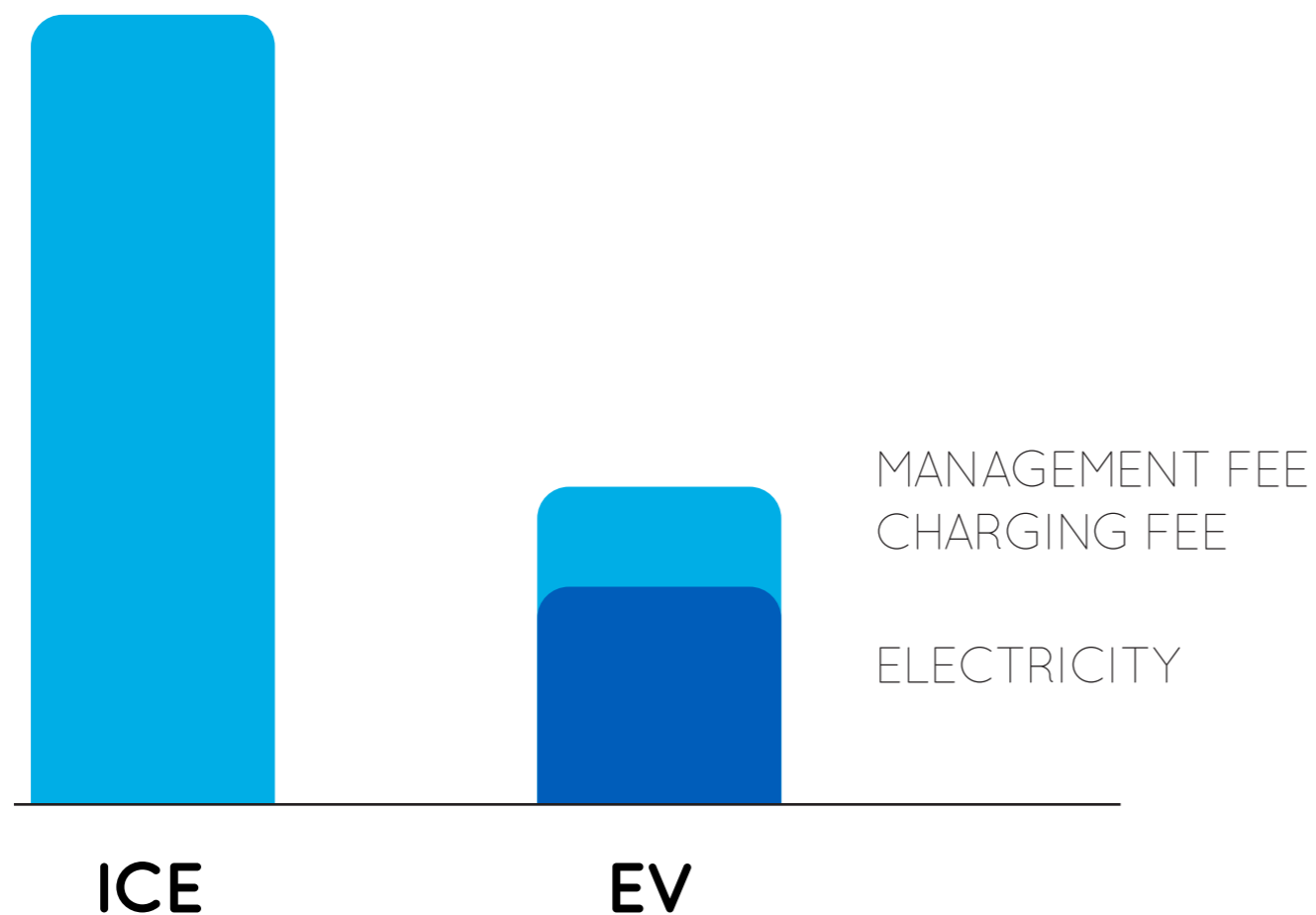
- PLAYERS AND ROLES
- ARCHITECTURE, BUSINESS AND SERVICE MODEL
- TECHNICAL SPECIFICATIONS

INCENTIVES

- EV ACQUISITION AND CIRCULATION TAX EXEMPTION
- TAX REDUCTION FOR PRIVATE CUSTOMER AND COMPANY FLEETS
- €5000 DIRECT SUBSIDY ON PURCHASE + €1500 FROM ELV PROGRAM
(FIRST 5000 EVS SOLD UNTIL THE END OF 2012)

ELECTRIC MOBILITY COMPETITIVE COSTS

OPERATING COSTS [EUR/100km]



**LOW OPERATING COSTS
(<50% ICE)**

**BALANCED
TOTAL COST OF
OWNERSHIP
FROM INTRODUCTION
PHASE**

PORTUGUESE ELECTRIC MOBILITY PROGRAM USER CENTRIC FUNCTIONALITIES



- VISÃO GLOBAL
- ABASTECIMENTOS
- HISTÓRICO
- FACTURAÇÃO
- PERSONALIZAR

MOBI.E MOBILIDADE ELÉCTRICA

PROJECTO VEÍCULOS PRODUTOS VANTAGENS **ÁREA PESSOAL**

Home > Área pessoal > facturação > factura

FACTURAÇÃO

Conta Mobi-E: 00001000110
Marta João Silva
Rua de Dona Estefânia, nº10, Lisboa
1100-155 Lisboa

Limite de Apoio: 800 000 000
(9h às 20h - dias úteis)

Factura: 1000000001 de Junho de 2009 (01/06/2009 a 30/06/2009) Data de Emissão: 01 de Julho de 2009

Data limite de pagamento: 11 de Julho de 2009 Valor a pagar: €16,48

Abastecimento	Quantidade(Kw)	Preço/Kwh	Valor(€)	IVA(%)
Tarifa 1	80	0,10	8,00	5
Tarifa 2	55	0,14	7,70	5
IVA (5%)			0,78	
Total a pagar			16,48	

Gráfico de Facturação

Conta Corrente

De 01/06/2009 a 30/06/2009

Movimentos	Saldo
Saldo Anterior	12,40
Pagamentos efectuados	-12,40
Valores facturados	16,48
Saldo actual	16,48

Cobrança por débito directo

BANCO: LOREM IPSUM DOLOR, SA

Autorização de Débito em Conta (ADC): 00001000101

Identificação do Credor (IC): 042012

Conta Mobi-E: 00001000110
Marta João Silva
Rua de Dona Estefânia, nº10, Lisboa
1100-155 Lisboa

Estimado(a) Cliente

A Mobi-E informa, nos termos do artigo do Banco de Portugal, nº 10/2005, publicado no DM 1 Série B nº120, de 24 de Junho de 2005, relativo ao Sistema de Débitos Directos, do dever de obter em conformidade do Multibanco/ATM do Banco, as indicações de Autorização de Débito em Conta (ADC) aqui apresentadas.

ROAMING

BETWEEN ELECTRIC MOBILITY
ELECTRICITY RETAILERS

WEB-BASED MULTI-ACCESS

PC, PDA, CELL PHONE
CREATION OF PERSONAL AND
BUSINESS ACCOUNTS

SERVICE AND BILLING

INTEGRATION
PARKING, PUBLIC
TRANSPORTATION,
DOMESTIC ELECTRICITY

PORTUGUESE ELECTRIC MOBILITY PROGRAM BUSINESS ORIENTED FUNCTIONALITIES

REAL-TIME MANAGEMENT CHARGING STATIONS, INCLUDING STATUS AND VACANCY INFORMATION

REMOTE MONITORING CHARGING PROCESS

MULTI-RETAILER / MULTI-OPERATOR

OPEN ACCESS LIVING IN THE CLOUD

Local: Lisboa Centro | Estado: Todos | Pesquisar

Mapa | Satélite | Earth

REGISTO DE EVENTOS

```
authorizeCard(000000001;pole3);
authorizationOK();
endChargingEvent(000000002;pole3)
consumptionDone(23.9923 kWh;
1.56€);
showDisplayUser();
releaseStation(pole1);
sleep();
-----
sleep();
authorizeCard(000000002;pole4);
authorizationOK();
startChargingEvent(000000002;pole4)
chargingEventOK();
authorizeCard(000000006;pole5);
authorizationOK();
startChargingEvent(000000006;pole5)
chargingEventOK()
sleep();
-----
authorizeCard(000000002;pole4);
```

Estado Poste	Consumo Actual	Comercializador	Total Consumo	Média Consumo	Nº Cartão Cliente
✓	9 kWh	CEME 1	317 kWh	39 kWh	00002
✓	17 kWh	CEME 1	346 kWh	42 kWh	00001

PORTUGUESE ELECTRIC MOBILITY PROGRAM CHARGING SYSTEMS: FLEXIBLE SOLUTIONS





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**THE STANDARD
FOR ELECTRIC
MOBILITY**

ENJOY THE MOBI.E EXPERIENCE

INSTITUTIONAL PRESENTATION



CONTACTS

WWW.MOBI-E.PT
GAMEP@MEID.GOV.PT
+351 21340 4213



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