

2018 Benchmarks of excellence



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Sintra

The municipality of Sintra is located in the region of Lisbon (NUTS II) and Greater Lisbon sub-region (NUTS III), belonging to the district of Lisbon.

The municipality extends in an area of about 319 km², limited to the north by the municipality of Mafra, to the east by the municipalities of Loures, Odivelas and Amadora, to the southeast by Oeiras, to the south by Cascais and to the west by the Atlantic Ocean.

The municipality of Sintra has about 379,756 inhabitants (year 2013), which are distributed by eleven parishes: Agualva and Mira-Sintra Freguesias Union, Algueirão - Mem Martins, Union of Parishes of Almargem do Bispo, Pêro Pinheiro and Montelavar, Union of the Parishes of Cacém and São Marcos, Casal de Cambra, Colares, Union of Freguesias de Massamá and Monte Abraão, Rio de Mouro, Union of Queluz and Belas Freguesias, Union of Parishes of São João das Lampas and Terrugem and Sintra (

figure).

Figure 1 - Geographic location of Sintra municipality



Commitments

Governance

Good governance is a priority at all levels of governance. On the part of the rulers it is urgent to obtain a greater involvement of the citizens in the political and social life, since it is impracticable to solve the complex current problems without an active, enlightened and cooperating intervention of the civil society. However, this involvement requires the governor to be prepared to provide quality information, be transparent, and know how to value the results of participation. It is increasingly important for citizens to be able to intervene legitimately in the decisions that affect their lives, to be heard and to see their initiatives properly considered. However, this need implies being prepared to perform a conscious participation of the implications. Sintra Municipality has developed a number of partnerships, both at European and national level, in the areas of sustainability, energy efficiency and new technologies. This allows it to be easier to implement the SEAP and the and the commitments of the Covenant of Mayors.

Covenant of Mayors

Following the EU Climate and Energy Package, the European Commission launched the Covenant of Mayors in 2008 to involve local and regional authorities in increasing energy efficiency and the use of renewable energy sources in their territories. Through their commitment, the signatories intend to meet and exceed the European Union's objective of reducing CO₂ emissions by 20% by 2020 by reducing energy consumption - both public and private - and by increasing the use of renewable energy sources. represents a significant effort both for municipalities and private ones. The adhesion of the Municipality of Sintra to the Covenant of Mayors represents another step of the municipality with a view to promoting the sustainable development of the county.

In the context of joining the Covenant of Mayors, Sintra carried out the Sintra Action Plan for Energy Sustainability (PAES de Sintra). The Sintra PAES is part of the set of energy sustainability measures that will be implemented in compliance with the commitment to reduce CO₂ emissions by 20% by 2020. Table 1 shows the main goals to be achieved with the implementation of Sintra PAES .

Table 1 - main goals to be achieved with the implementation of Sintra PAES .

	Reduction of energy consumption [%]	Reduction of CO ₂ emissions [%]	Energy invoice reduction [%]
PAES targets for 2020	21%	20%	22%

Benchmarks of Excellence

Sintra PAES integrates a set of municipal projects and private initiatives, in a complementary and integrated strategies. The projects and strategic objectives have been implemented in different areas of activity.

Benchmarks of Excellence are the most relevant examples of the strategies and initiatives implemented by the municipality of Sintra in order to promote sustainable development. This is a set of successful experiences that the municipality intends to share with other local authorities, regions or networks, aiming at knowledge sharing and integrated sustainable development.

In Sintra we highlight the requalification of the Public Lighting Network with LED technology, the Alfouvar Photovoltaic Park and the Urban Bicycle Network.

***UPGRADING THE PUBLIC
LIGHTING NETWORK WITH
LED TECHNOLOGY***

Lighting is one of the end uses of energy in which the introduction of energy efficient solutions more compensates, both in terms of energy billing and comfort level.

Sintra Municipality proceeded to the requalification of the public lighting, through the installation of LED luminaires in some places of the municipality. With this type of interventions, the municipality intends to continue the measures aimed at improving public lighting and reducing the energy bill and the ecological footprint, in order to become more sustainable and efficient in this area.

This intervention is an investment of the Municipality of Sintra with the implementation of EDP and contemplates the replacement of degraded and inefficient luminaires, reinforcing the public lighting with the introduction of equipment with LED technology, of high energy efficiency and low consumption, thus valuing this space public security, as well as enhancing the passive security of citizens during the night time period. This technology improves visual acuity and is much more resistant than conventional lamps, which allows to reduce the cost of maintenance. It also allows a high degree of efficiency and greater resistance to impacts and vibrations.

With LED technology applied to public lighting, light pollution is minimized because light is directed optimally and, by operating at low voltage, reduces the risk of accidents.

The project is based on the replacement of 1,330 SAP-T lamps, obsolete, damaged and high power LED luminaires, in various places of the municipality, namely in the parishes of Colares, Sintra, Algueirão - Mem Martins, Union of the

parishes of Almargem , Pêro Pinheiro and Montelavar, Casal de Cambra, Union of Queluz and Belas Freguesias, Union of Cacém and São Marcos Freguesias, Agualva and Mira Sintra Freguesias Union, Union of Massamá and Monte Abraão Freguesias and Union of Freguesias de São João das Lampas and Terrugem.

Investment

The project of Rehabilitation in Public Lighting with LED technology represented an investment of around € 399,000.

Summary Table

Intervention area	LEDs and eficiente luminaires in public lighting
deadline	From 2014 to 2016
Entity in charge	Sintra Municipality
Description	The municipality of Sintra has carried out the requalification of public lighting through the installation of luminaires with LED technology, which constitutes a project of relevant impact in terms of the improvement of sustainability.
Key indicators	<ul style="list-style-type: none"> • Energetic consumption reduction: 687 MWh/year • Reduction of CO₂ emissions: 254 t CO₂/year • Investment: 232.500 € • Job creation : 16 jobs¹² • Installed equipment : 1.330 lamps with LED technology
Financing source	Municipal budget

Impact on sustainability

- GEE emissions: medium/high
- Territorial qualification: high

Impact on innovation

- Knowledge: medium / high
- Qualification: medium / high
- Technology: high

¹ Full-time equivalent employment.

² Estimated value based on the size and typology of the project executed. considering all phases of the project, from planning to completion of implementation.

Pictures



© Câmara Municipal de Sintra - Rua Mário de Sá Carneiro



© Câmara Municipal de Sintra - Largo Francisco Cordeiro Batista e Largo Vasco da Gama

Brochure

REQUALIFICATION ON THE PUBLIC LIGHTING NETWORK WITH LED TECHNOLOGY



The Municipality of Sintra carried out the requalification of public lighting through the installation of luminaires with LED technology, with a significant impact on the improvement of sustainability.



INSTALLED EQUIPMENT
1330 lamps with LED technology

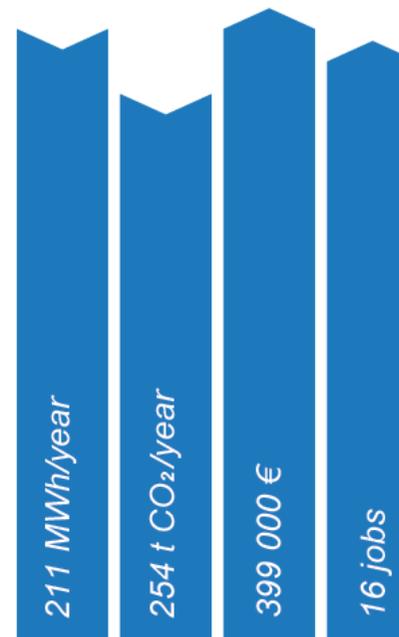


INVESTMENT
399 000 €



KEY ASPECTS

- ◆ Installation of luminaires with LED technology;
- ◆ Improvement of public lighting and respective reduction of the energy bill and the ecological footprint;
- ◆ Strengthening citizen safety, reducing maintenance costs and high energy efficiency.



KEY INDICATORS

Reduction of energy consumption
211 MWh/year

Reduction of CO₂ emissions
254 t CO₂/year

Investment
399 000 €

Job creation
16 jobs

***PHOTOVOLTAIC PARK
DE ALFOUVAR***

The Photovoltaic Park of Alfouvar is located in Almargem do Bispo and has a total power of 2.2 MW. This park occupies an area of about 3.2 hectares and consists of about nine thousand and two hundred photovoltaic panels of crystalline silicon, mounted on fixed structures, with a unit power of 240 W (watts).

With an average production of 3.2 GWh / year of renewable electricity, which is sold to the public utility grid, the Alfouvar Photovoltaic Park contributes significantly to the improvement of energy sustainability.

In addition to contributing to the improvement of the city's energy sustainability, Cometa em Relevo, Lda company leases the land of the Parish of Almargem do Bispo, Pêro Pinheiro and Montelavar, which will receive more than 500 thousand euros annually , for a period of 25 years.

Under management of Cometa em Relevo, Lda, Alfouvar Photovoltaic Park was inaugurated on January 15, 2015, representing an investment of around 4.5 million euros.

Sustainable Development

The focus on endogenous energy production systems contributes to the positioning of the municipality of Sintra as a territory with low energy and carbon intensity and with greater energy independence.

Sintra has been committed to promoting sustainable development, supporting investments with a strong environmental component and contributing to economic growth and job creation, such as the Alfouvar Photovoltaic Park.

Investment

The Photovoltaic Park of Alfouvar represented an investment of about 4.5 million euros by the company Cometa em Relevo, Lda.

Summary Table

Intervention area	Integrated renewable generation
deadline	From 2013 to 2014
Entity in charge	Cometa em Relevó, Lda
Description	The Alfouvar Photovoltaic Park has about nine thousand and two hundred photovoltaic panels, totaling 2.2 MW of installed capacity, which will produce 2 GWh of renewable electricity annually.
Key indicators	<ul style="list-style-type: none"> • Energy consumption reduction : 3.200 MWh/year • CO₂ emissions reduction : 1.248 t CO₂/years • Investment: 4.500.000 € • Job creating: 141 jobs³⁴ • Installed equipment : about nine thousand and two hundred of 240 W photovoltaic panels
Financing source	Cometa em Relevó, Lda

Impact on sustainability

- GEE emissions: medium/high
- Territorial qualification: medium

Impact on innovation

- Knowledge: high
- Qualification: high
- Technology: high

³ Employment equivalente to full-time.

⁴ Estimated value based on the size and typology of the project executed. considering all phases of the project, from planning to completion of implementation.

Pictures

© RENTeci Lda – photovoltaic park of Alfouvar



© CidadeVIVA - photovoltaic park of Alfouvar





© Luís Galvão/Tudo sobre Sintra

© Tudo sobre Sintra photovoltaic park of Alfouvar

Brochure

PHOTOVOLTAIC PARK OF ALFOUVAR



The alfouvar photovoltaic park has about nine thousand and two hundred photovoltaic panels, with a total of 2.2 MW of installed capacity, which will annually produce 2 GWh of renewable energy



INSTALLED EQUIPMENT
3200 MWh/year

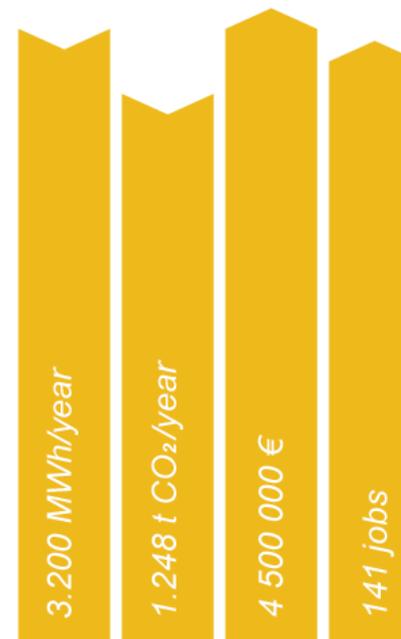


INVESTMENT
4 500 000 €



KEY ASPECTS

- ◆ 3,2 hectares covered with 9200 photovoltaic panels;
- ◆ Average production of 3.2 GWh / year of renewable energy;
- ◆ Private investment with high environmental, economic and social benefits for the municipality.



KEY INDICATORS

Reduction of energy consumption
3.200 MWh/year

Reduction of CO₂ emissions
1.248 t CO₂/year

Investment
4 500 000 €

Job creation
141 jobs

***URBAN CYCLE PATH
NETWORK***

The municipality of Sintra intends to set up a network of 39-kilometer bike lanes, which is part of a plan to improve road safety conditions and promote improved mobility through a less polluting means of transport - the bicycle.

In August 2016, the first phase of this project was inaugurated, the first urban cycle route in the municipality of Sintra, the cycle route Portela de Sintra - Ouressa.

This section presents about 3,000 meters and connects Portela from Sintra to Ouressa in Mem Martins. This first section aims to create cycle paths that allow connecting residential areas to areas of green and leisure services.

The creation of this cycle path arises from the need to encourage the use of more economical and sustainable soft modes of travel in articulation with pedestrian and other modes of transport (intermodality).

In the execution stage is the first phase of the cycle network of the Agualva - Queluz axes (Agualva - Cacém to Massamá railway station section), approximately 4,500 meters long. This extension aims to promote articulation with the public transport network and create access to the modal mode of collective transport composed of the rail and road passenger mode and crossing two predominantly urban parishes is expected to adapt to new forms of mobility.

Sustainable development

The creation of cycling paths allows citizens and visitors to have better choices of accessibility and mobility with safe and comfortable journeys at more affordable, efficient costs and with reduced environmental impacts.

This project stands out, therefore, for the advantages associated with the improvement of the quality of life of the citizens, through the adoption of healthier behaviors, a greater enjoyment and living of the green spaces and against the tourist seasonality.

The project thus promotes the adoption of soft modes in a consistent and gradual way, given the current and future limitations of individual motorized transport, which ensures the pursuit of goals such as reducing carbon emissions, improving air quality, the reduction of energy consumption and noise.

Investment

The cycle route of Sintra represented an investment of approximately € 2,295,000.

Summary Table

Intervention area	Increase the use of bicycle
deadline	2016
Entity in charge	Sintra municipality
Description	Creation of cycle paths, with an extent to 39 kms, inserted in a plan to improve the conditions of road safety and promote the improvement of mobility through using less pollutant means such as the bicycle.
Key indicators	<ul style="list-style-type: none"> • Energy consumptions reduction: 1.400 MWh/year • CO₂ emissions reduction: 366 ton CO₂/year • Investment: 2.295.000 € • job creation: 105 jobs⁵⁶ • Built infrastructures: cycle paths
Financing source	Municipal budget

Impact on sustainability

- GEE emissions: high
- Territorial qualification: medium/high

Impact on innovation

- Knowledge: medium/high
- Qualification: medium
- Technology: medium

⁵ Employment equivalent to full-time.

⁶ Estimated value based on the size and typology of the project executed considering all phases of the project, from planning to completion of implementation

Pictures

© Câmara Municipal de Sintra – Cycle path of Sintra - Ouessa



© Câmara Municipal de Sintra – Cycle path of Portela de Sintra - Ouessa





© Câmara Municipal de Sintra – Cycling área of Eixos Agualva-Queluz (Aqualva - Massamá)

Brochure

NETWORK OF URBAN CYCLE PATHS



The creation of a network of 39-kilometer cycle paths, which is part of a plan to improve road safety conditions and promote mobility through using cleaner means of transport such as the bicycle.

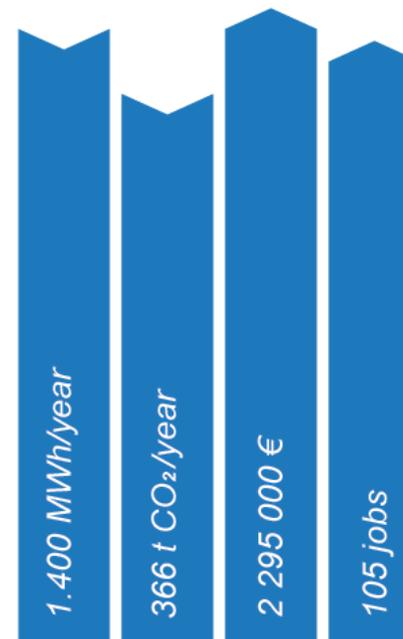


BUILT INFRASTRUCTURES
Cycle path for bicycles



KEY ASPECTS

- ◆ Cycling routes that allow a connection between residential areas and the area of green and leisure services;
- ◆ Promoting the adoption of more economical and sustainable modes of travel;
- ◆ Improvement of road safety conditions and improvement of mobility.



KEY INDICATORS

Reduction of energy consumption
1.400 MWh/year

Reduction of CO₂ emissions
366 t CO₂/ano

Investment
2.295.000 €

Job creation
105 jobs

Developed by:

