

A highway behind the wall socket

April 6th, 2017



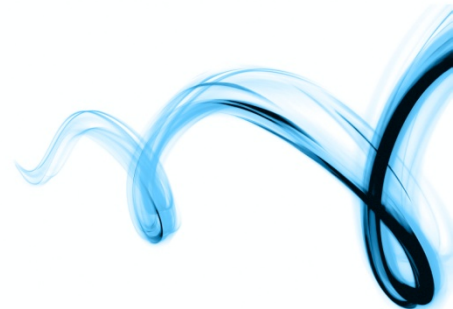
A highway behind the wall socket

Museu de les Ciències. Ciutat de les Arts i les Ciències

The Museu de les Ciències of Valencia and Red Eléctrica de España present the exhibition entitled **'A highway behind the wall socket'**.

The Museu de les Ciències hosts this travelling exhibition as part of its objective of disseminating knowledge on science, technology and the environment via interactive means.

The exhibition will be in Valencia from April 2017 to January 2018.



A highway behind the wall socket

Electricity from the power station to your home

A highway behind the wall socket is an interactive exhibition produced by Red Eléctrica de España whose purpose is to explain how electricity manifests itself, how it is produced and transported, and how electricity systems are operated; in short, what happens from the moment electricity is generated until it reaches our homes.

Also, from the side of the consumer, the exhibition reflects the importance of the user in the electricity supply process and offers ideas to make the citizen aware of the need for energy to be used both efficiently and responsibly.

A highway behind the wall socket

Electricity from the power station to your home

The exhibition is comprised of three sections which take visitors to a journey from the physical principles of electricity to the role played by each citizen as protagonist in the electricity supply process.



**The physical
principles of
electricity**

+



**The electricity
supply
process**

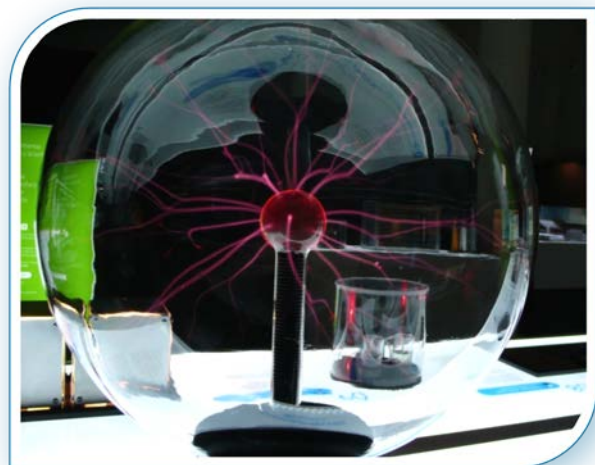
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**Responsible
consumption**

A highway behind the wall socket

The physical principles of electricity



The first section of the exhibition is dedicated to the physical principles of electricity, to the thousand and one faces of this phenomenon: its properties, its origin and its applications.

The section has a laboratory for experiments that invites visitors to discover the different ways in which this physical phenomenon is manifested, such as the electric arc, the plasma sphere or the Tesla coil.

1. Laboratory of electricity

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The electricity supply process



The second section of the exhibition explains the electricity supply process: how electricity is generated, how it travels through electricity grids, how it reaches our homes; in other words, it explains what the electricity system is and how it works.

2. Where does electricity come from?
3. Factories of light
4. A high-voltage grid
5. Transmission grid
6. Mesh grid
7. Red Eléctrica in the Valencian Community
8. Ready for emergencies
10. Electricity system model

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The electricity supply process



Electricity cannot be stored in large quantities, so it is essential to balance generation and consumption. The exhibition shows how the Electricity Control Centre works through a virtual visit to this centre and explains why it is necessary to develop transmission grid infrastructure and electricity interconnections.

- 11. The challenge of balance
- 12. Electricity Control Centre
- 13. International interconnections
- 14. "Interconnections" game
- 15. Submarine interconnections



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The electricity supply process



Heavily involved in the development of a sustainable energy model, Red Eléctrica also explains its commitment to biodiversity and the fight against climate change by making electricity facilities compatible with the territory, applying preventive and corrective measures, to minimise possible impacts on the environment.

- 16. The posidonia forest
- 17. The Red Eléctrica forest
- 18. Committed to biodiversity
- 19. “Connect and respect” interactive
- 20. Birds and power lines
- 21. Our commitment to the territory

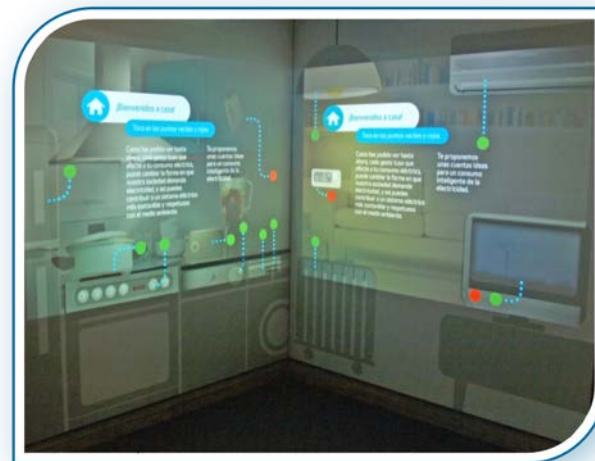
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Responsible consumption



In this section, the visitor, as both a citizen and consumer, becomes the protagonist.

Through various interactive exhibits it is possible to learn how our society uses electricity and the impacts our consumption habits have on the electricity system as a whole.



- 22. How do we consume?
- 23. Voluntary Price for the Small Consumer (PVPC)
- 24. And you... how do you consume?
- 25. In your home
- 26. R&D+i
- 27. The electric car
- 28. A show of responsibility

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Stay connected



In this space, visitors can find useful information related to this exhibition.

Videos, graphic display panels, touch screens, games, and multimedia spaces allow the visitor to enjoy the exhibition in an interactive way.

- 29. Electrical parts and equipment
- 30. "Controla" game
- 31. "entreREDes" game
- 32. Videos
- 33. Photo booth
- 34. About us
- 35. Tweetwall
- 36. Surveys
- 37. To know more

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An example of disseminating about the electricity system



The Directorate-General for Energy of the **European Commission** has chosen this exhibition as one of the five best practices of European TSOs and a prime example of dissemination that is transferrable to all Member States of the European Union, to improve citizens' knowledge on how the electricity system works and their understanding of the need to develop electricity transmission infrastructure, as well as to promote their social acceptance.

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A travelling exhibition: 2010-2018

The exhibition has already been on exhibit in the following science museums: Parque de las Ciencias in Granada, the Casa de las Ciencias in Logroño, the Museo de la Ciencia in Valladolid, the Museo Elder de la Ciencia y Tecnología in Las Palmas de Gran Canaria, the Casa de la Ciencia in Seville, the Museo Abierto in Mérida, el Museu de la Ciència i de la Tècnica de Catalunya in Tarrasa and the Casal Solleric-Fundació Palma Espai d'Art in Palma de Mallorca.



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A travelling exhibition: 2010-2018



The exhibition is now paying a visit to Valencia and can be visited in the Museu de les Ciències, located in the Ciutat de les Arts i Ciències, until January 2018.

An interactive and educational tour with the latest audio-visual technologies

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A travelling exhibition: 2010-2018

More than
370,000 people
have already visited
the exhibition



More information
in www.ree.es





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