



Virtual Power
Solutions



Popular

BUSINESS CASE



Sector

Bank

Popular CHALLENGE

Banco Popular Portugal S.A.



Project

Improve Energy Efficiency in the branch network.



Goals

- ▶ Reduce energy consumption and related costs
- ▶ Raise awareness across the organisation about energy efficiency and its economic impact
- ▶ Provide the company with an online and centralised energy management system..



Expected Savings

- ▶ 1st year - 14%
- ▶ 2nd year - 15%
- ▶ Remaining years - 18%



168
Branches



EPC
Project

ROI 6 years



Investment

ZERO

VPS €420 000

Initial Situation

Banco Popular has a branch network and a set of geographically dispersed buildings with heterogeneous structural and energy characteristics, including different types of electricity supply contracts. This reality makes energy management very complex, time-consuming and sometimes inefficient.

This financial institution has been pursuing a path for optimise its energy consumption, making the organisation more environmentally sustainable. Virtual Power Solutions has developed and presented an energy management solution in the branch office based on an EPC* contract.

* EPC - Energy Performance Contract



Virtual Power Solutions' proposal consisted of a continuous monitoring of energy consumption and a permanent energy management service of Banco Popular branches, allowing a global, centralised and aggregated view of the entire energy structure.



The Virtual Power Solutions technical solution is based on a centralised architecture that receives information directly from the devices installed at each monitoring point and acts remotely on the main consumers (e.g., Air Conditioning systems and Illuminated Signs).



Previous energy assessments were performed to sample the efficiency of equipment, processes and buildings.



Site typologies were identified and created so that the equipment was suitable for each agency or building.



Through continuous monitoring, additional forms of energy savings are presented, such as changing behaviour without additional investment (Quick-wins), replacing inefficient equipment with an attractive payback, and renegotiating tariffs.



The Implementation Phase

of the project was divided into two parts. The first one involved carrying out energy assessments, where a survey was made on the consumption of 15 agencies selected by VPS. After installing the system in two test agencies and making the necessary adaptations, VPS installed the system for monitoring and controlling energy consumption in all the 168 branches defined by Banco Popular. This process, due to its size and the diversity of sites, was completed in 6 months.

The second phase consisted in the elaboration and execution of the strategic plan of actions to reduce electric consumption throughout the universe of monitored agencies, to implement the necessary measures to increase Energy Efficiency. During the project, the savings have been measured through the monitoring of the agencies' consumption, and the monitoring system has also been maintained.



Project Success

- Possibility to gather on a platform the whole park of agencies
- Introduction of functionalities such as "key status" monitoring that indicates the opening and closing of the agency
- Possibility to switch on lighting at a distance to increase safety
- Analysis of data collected to adjust contracted power in agencies and load shifting to ensure the correct operation with lower power
- Adjust the functioning of the illuminated signs with seasonal sunrise and sunset



Most Valued Features

- Segmentation of electricity costs
- Consumption track record
- Real-time monitoring
- Energy Manager
- Customisable reports



Return On Investment

VPS assumed the full investment by establishing an Energy Performance Contract (EPC) with a 6-year duration. Contractually, the rules of sharing savings have been defined as well as the remaining amount to be requested in case any branches were closed. In the first year of the contract, savings of 509,000 kWh were generated, meaning something around € 75,000.



Upcoming Challenges

- Study the behaviour of agency staff with the implementation of a new feature that allows the air conditioning to be switched on and off for periods of one hour.
- Carrying out competitions to promote savings based on behavioural changes.
- Implementation of incentives, such as an exclusive tariff for Banco Popular employees.

VPS

is an innovative, market leader in the design and operation of dynamic connected platforms, providing real-time granular data to consumers, network operators and utilities. Minimising consumption by increasing energy efficiency, optimising the time of use and realising the monetisation of loads.

With over 10 years of experience, VPS has a proven team of experts with a strong track record of providing significant benefits to all stakeholders in the modern energy network. Our aim is to become the largest builder and operator of Virtual Power Plants in Europe.

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