



**PUBLIC
ADMIN.**



**300
BUILDINGS**



**1.514.572€
ANNUAL
SAVINGS**

The Spanish Ministry of Justice has a governing body, the Secretary General of the Ministry of Justice, which is responsible for promoting the modernisation of the institution.

This modernisation includes the management and improvement of the use of both human and material resources, among which you will find energy.

This success story arises after an exhaustive energy management plan was deployed **in almost 300 buildings** of this institution. The plan has met the security requirements of the Ministry of Justice and **has reached savings of more than 1.5 million euros.**

Project implemented by:



"We use DEXCell as our reference software in the sector, both for compatibility with the bulk of hardware manufacturers in Spain and for its usability and recognition in the sectors in which we work."



IVÁN MORANCHO
Energy Services Manager
Energy Consultant
CIAS COM



The Energy Challenge of the Ministry of Justice

Initially, the Ministry **didn't provide effective or sufficient human or technical resources** to carry out an adequate control of its energy expense and consumption, due to the lack of qualified personnel and the organisational and territorial structure of the Ministry, present throughout the national territory.

The main problem was the **lack of a global vision on energy expenditure** and the existing difficulties in the ability to **validate the electrical bills** for the different payment boxes in each Territorial Manager's Office. As a result of these issues, and due to the change in rates and regulations in recent years, **it has been very difficult to predict the energy costs that increase year after year.**

When the energy management system was introduced, it was primarily intended to **quantify and control this budgetary item for later optimisation of contracting and energy consumption.**



On this map you can see the complexity of the project by the level of locations. With the functionality of integrated maps in DEXCell Energy Manager, the energy manager can quickly see an overview of the performance of all buildings, no matter where they are found.



The CIAS COM Solution

To start, **CIAS COM** made an inventory of all existing supply points spread throughout Spain, studying the current contractual conditions. Once all the characteristics of the centers were gathered, a bidding request was made, **grouping together the purchase of electricity** and unifying the several providers into one sole provider.

After optimising the contracting, the second step was to implement an energy management system to centrally control the whole supply and validate the monthly billings of the centres.

To automate the collection of consumer data and monitor the facilities they opted to use the **DEXCell Energy Manager platform**, for being the software of reference and with strong technical performance.

“We are very satisfied with the support with which the CIAS COM consultant provides us to control and optimise the management of the general service contracts in the almost 300 judicial buildings which make up the Regional Offices of the Ministry of Justice, which has enabled us significant cost savings and improved the quality of the services of facility maintenance, energy supplies, cleaning buildings, elevators, security and surveillance, and others.”

JUAN JOSÉ DE LA PEÑA

Head of Procurement -
SG of Economic Resources of the Administration of Justice

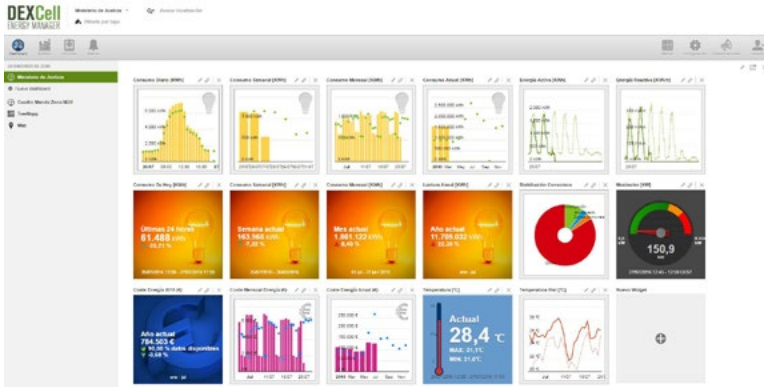


The implementation of the installation of the Energy Management System meters was conducted in two phases:

1. In the first phase, **monitoring systems were installed with submetering** of the various consumer lines in the twelve principal buildings using DEXGate and Carlo Gavazzi or Circutor analyzers.
2. In the second phase, **the monitoring system was incorporated into forty more buildings**, taking advantage of the telemetry systems of the **company's fiscal meter** pre-existing in the centres.

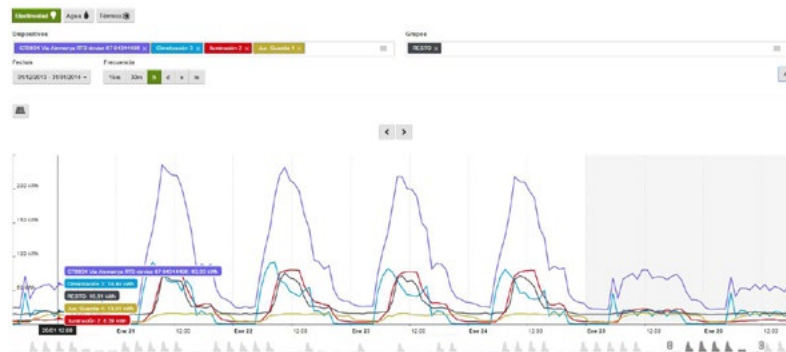
The main difficulty at this point of the project was the use of the existing communication network of the client. It is **a high security network** and was very difficult to obtain the permits by the information security department and log in to the systems.

To solve this, **a parallel communications network was created** using DEXGate2 and GSM technology.



To the left: One of the dashboards created for the project, which provides the technicians and managers of the Ministry of Justice relevant information and updated electricity consumption of the buildings.

Example of the level of detail of analysis that was obtained with the use of metering and submetering.





Results

The first notable result is that, thanks to the project, **the Ministry of Justice monitors and manages 70% of its energy consumption.**

During the project, contracting was optimised, arriving at better prices and an adjustment of the contracted power. They also installed capacitor banks to correct the penalties for excess reactive energy.

They detected **misuses in the consumption centers and the management system was implemented** to control and audit energy expenditure.

Thanks to the new management system they have an **exact knowledge of the consumption and costs of each location.** This, with the alarm system and the custom reports, permits the Ministry to react much more quickly against consumption incidents.

The software, accessible from anywhere via the internet, has allowed them to **involve the rest of the stakeholders in the project**, giving access to the maintenance technician's tool of both internal and external companies managed by specialised centers.

The project has allowed the Ministry to control its energy consumption and costs, **saving more than €1.5M (22%) of the energy expense on electricity.**

DEXCell Energy Manager advantages used in the project:

Scalability: Deployment in nearly 300 buildings without service interruption.

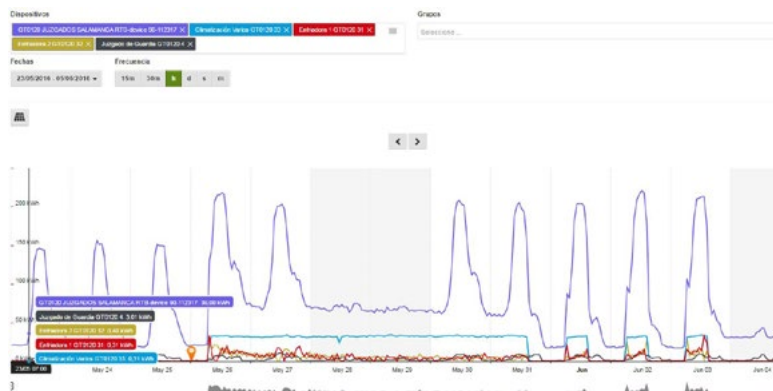
Speed: Quick data integration which allows the performing of cross-analysis. The average loading time is less than 1 second in DEXCell Energy Manager.

Modularity: The solution is applied in a controlled manner according to the project, from the fiscal counter to the sub-metering.

Communication: 35 Ministry of Justice users access the platform, ensuring good internal communication.


Security: It has been possible to integrate the platform within a highly secured environment, the Ministry of Justice.

Detail of the analysis applied to resolve an incident with the air conditioning system consumption.






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Other Project Facts:

35 GWh

Annual Energy Consumption
(35.000 MWh/year)

€6,9M

Annual Energy Cost
(€6.900.000€ per year)

22%

Percentage of Total Savings
achieved with the project

€1.514.572

Total Cost Savings

ABOUT CIAS COM:



CIAS COM is a Facility Management consultant, specialising in projects to improve general services management in large public administrations and private organisations.

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ABOUT DEXMA:



DEXMA offers **energy analysis technology** for energy management for energy managers who want energy savings.

Contact us if you need help with your projects. You can also try the **free DEMO** of our platform.

