



**SIDERMI**

*INTEGRALS BUILDING SERVICES  
REFORMS MAINTENANCES AND INSTALLATIONS*

*PROPOSAL OF EFFICIENCY  
ENERGY IN THE  
HOTEL SECTOR*

- INTEGRAL MAINTENANCE OF BUILDINGS
- RENEWABLE ENERGIES
- AIR CONDITIONING
- VENTILATION
- ELECTRICITY
- CENTRALIZED MANAGEMENT
- FLUIDS
- COMMUNICATIONS
- FIRE SYSTEM
- ENGINEERING AND PROJECTS



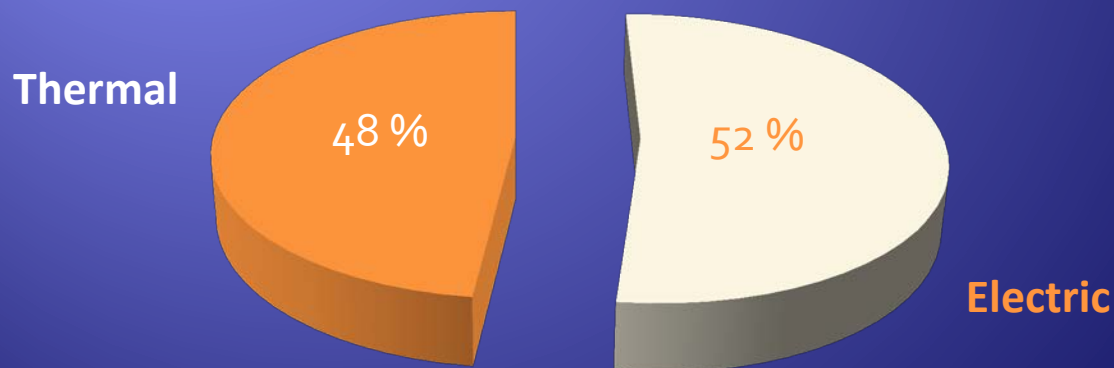


*INTEGRALS BUILDING SERVICES  
REFORMS MAINTENANCES AND INSTALLATIONS*

*PROPOSED IMPROVEMENTS  
IN ENERGY  
FOR HOTELS*

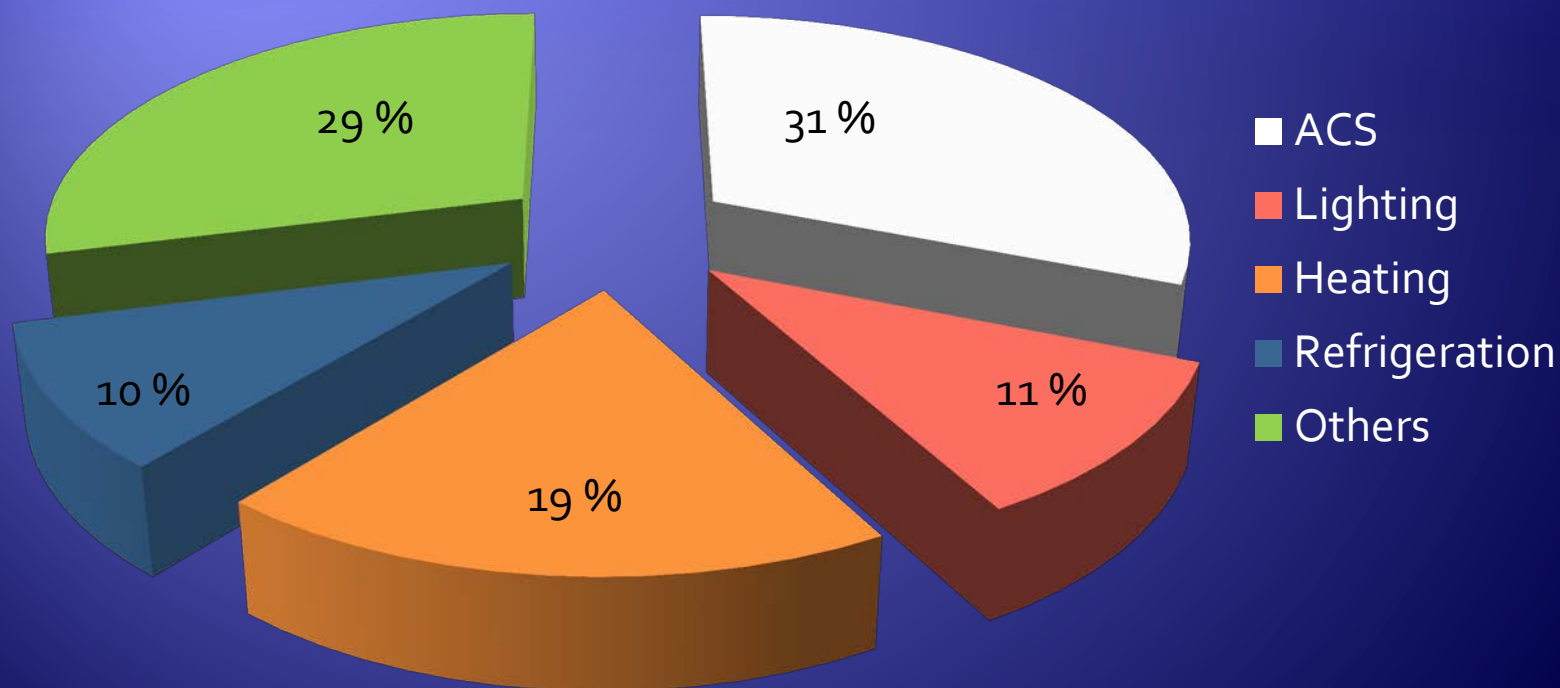
*Energetic characteristics of the hotel sector in Spain*

- The hotel sector is a major consumer of energy with more than 14.000 establishments distributed throughout the spanish geography, consumed more than 6.000 GWh / year in electricity and heat.



*Energetic characteristics of the hotel sector in Spain*

- The distribution of energy consumption by sector is detailed in the following graph.



*Energetic characteristics of the hotel sector in Spain*

- Energy consumption are not uniform in all establishments, be affected by a set of variables:

Size and age of the establishment



Energy consumption is directly related to the size of the hotel and the antiquity of the machines. In general as many rooms as many services.

Category of the establishment



Energy consumption varies depending of the category of the establishment, offering greater comfort, the higher the category.

Location of the establishment



Energy consumption varies depending on the location of establishment, especially affecting the air conditioning and the sanitary hot water consumption.

Typology of the establishment



There are two main typologies of hotel (business and leisure), According to the typology of the hotel varies the behavior of users.

*Energetic characteristics of the hotel sector in Spain*

- It can be set an average consumption in the hotels establishment.



- But every hotel establishment is very special from the point of view of energy efficiency and has to study in a specified way.



## INTEGRALS BUILDING SERVICES REFORMS MAINTENANCES AND INSTALLATIONS

### *Energy solutions for the hotel industry*

- There are multiple solutions for energy improvement in hotels establishment.

### *solutions for energy efficiency in the production of energy*

- Fuel substitution
- Renewal of boilers and chillers
- Utilization of residual heat for heating generation and sanitary hot water
- Thermal solar energy
- Renewal of pumping systems
- Implementation and management of telecommunication systems and control of consumption.





## INTEGRALS BUILDING SERVICES REFORMS MAINTENANCES AND INSTALLATIONS

### *Energy solutions for the hotel industry*

- There are multiple solutions to improve energy in hotel establishments.

### *Solutions for efficient energy consumption points.*

- Replacement of lighting
- Equipments.
- Insulation improvements.
- Optimization of water of consumption points.
- Reusing of greywaters.
- Reusing of rainwater.
- Protocols for operation and maintenance, preventive and predictive.
- Implementation of energy management and control systems.



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*Energy solutions for the hotel industry*

- all energetic solutions are available into a model of gestion integral energy, developed by a.

*Energy Services Company  
(ESC)*



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**ENERGY SERVICES COMPANY  
(ESC)**

- An energy services company, has as main objective to perform services of improved energy efficiency in the customer' s premises.
- The energy service company is responsible for ensuring the results of energy management in order to get the performance and energy saving.
- In order to obtain the expected energy yields, the Energy Service Company implements an energy performance contract.



# INTEGRALS BUILDING SERVICES REFORMS MAINTENANCES AND INSTALLATIONS

## PHASES OF ENERGY SERVICES

- The implementation of an energy services contract is developed in 4 phases:

PHASE 1

COMERCIAL

PHASE 2

PRE-ENERGY AUDIT.

PHASE 3

DETAILED ENERGETIC STUDY.

PHASE 4

IMPLEMENTATION MONITORING.



# *INTEGRALS BUILDING SERVICES REFORMS MAINTENANCES AND INSTALLATIONS*

## *PHASE 1. COMERCIAL*

- Presentation of energy services.
- Customer request for information.
- Visits to facilities.
- According to the pre- energy audit.



## PHASE 2. PRE-ENERGY AUDIT

- Analysis of documentation.
- Visits to facilities.
- Presentation of the results of the pre-audit.
- According to the detailed energetic study  
Análisis de la documentación.



## PHASE 3. DETAILED ENERGETIC STUDY.

- Measurement and technical analysis.
- Forecast risk and amortization study.
- Client presentation of the results of detailed energetic.
- Contract signing of energy efficiency.





# *INTEGRALS BUILDING SERVICES REFORMS MAINTENANCES AND INSTALLATIONS*

## PHASE 4. IMPLEMENTATION AND MONITORING

- Implementation of agreed improvements to the customer.
- Control energy and follow-up the results.







# INTEGRALS BUILDING SERVICES REFORMS MAINTENANCES AND INSTALLATIONS

## BENEFITS OF ENERGY MANAGEMENT MODEL

**INTERLOCUTOR  
UNIQUE**

SIDERMI only serves as interlocutor to the customer to manage energy needs.

**ENSURING THE  
EFFICIENCY OF  
FACILITIES**

SIDERMI is responsible for ensuring the optimum performance of developing and operating a facility maintenance plan.

**CONTROL OF ENERGY  
EXPENDITURE**

SIDERMI, manages the control of energy expenditure using appropriate development tools and personalized customer.

**CONTROL AND  
MONITORING**

SIDERMI is responsible for auditing the facilities and determine the actions necessary for optimization, according to the client to achieve greater rationalization in the power consumption.



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**Central Delegation**

C/ Guillerias, 12 Bjs 2

17300 Blanes (Girona)

Phone number: 618.97.81.23

e-mail: [central@sidermi.com](mailto:central@sidermi.com)

**Jamaica Delegation**

69, Barnett street Montego Bay

St James (Jamaica)

Phone Number: 0018764288229

0018767966741

e-mail: [jamaica@sidermi.com](mailto:jamaica@sidermi.com)

*[www.sidermi.com](http://www.sidermi.com)*





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## ***WE ARE IN:***



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C/ Guillerries, 12 Bjs 2  
17300 Blanes (Girona)  
Phone number: 618.97.81.23  
e-mail: [central@sidermi.com](mailto:central@sidermi.com)

### **Jamaica delegation**

69, Barnett street Montego Bay  
St James (Jamaica)  
Phone number: 0018764288229  
0018767966741  
e-mail: [jamaica@sidermi.com](mailto:jamaica@sidermi.com)