



## EXPERTISE

### ENERGY SOLUTIONS

#### 1. Energy Audit

The Energy Audit is defined as a systematic, documented, and periodically evaluation of the efficiency of the power management system. It `s one of the key components within a program of energy efficiency, is based on collecting and analyzing all the data coming from the energy use of the various users; Measurements are made on the basis of specific economic criteria. The measurements carried out then become part of the "Action Plan" (Action Plan), which then create a report for the Energy Audit, which collects all sizes and all the parameters needed to make a decision.

Its aims are:

- Define the energy balance of the structure;
- Identify any waste or improper use;
- Suggest interventions technological retraining (Action Plan);
- To evaluate for each intervention the technical and economic opportunities;
- Improving comfort and safety;
- Reduce management costs.

#### 2. Energy Management

- Contract consultancy for the minimization of the cost of supplying: the service consists in the analysis



several commercial offers for the electricity supply and in the identification of the cheapest. The analysis and the solution are the result of a careful study of the consumption features of sites, of the machines in there and any other factors which affect the choice.

- Minimizing the transport cost: identification of the best pricing option that is applied to the transport service from the retailer of electricity.
- Electric power factor: designing interventions to processors to eliminate the removal of reactive energy in order to clear the cost of power factor correction in the electricity bill paid.
- Optimizing connection voltage: analysis of convenience in changing the voltage of connection, investment prospectus and policy of depreciation over the years.
- Minimization of imbalance cost: estimates of the charge of electricity of the site in order to minimize the cost of dispatching paid in the electricity bill.
- Energy contracts management: relation with the competent authorities AEEG, GRTN, checking for consistency between the consumptions billing and the supply agreement, analysis of the cost of energy.
- Interruptibility service: consulting and assistance for the preparation necessary for the interruptibility requirements required by GRTN.

### 3. Plant Design:

Photovoltaic Solar Plants:

“No Cost” photovoltaic plant, turnkey services: Ippocrate AS is able to follow the customer, as General Contractor, during all the steps necessary for the plant development, including:

- Analysis of electricity consumption;
- Site analysis and technical and economic feasibility study to search the best solution systems to meet the client;
- Implementation of Business Plan;
- Consulting in the evaluation and activation of the financing channels, FTT (third party financing);
- Development of preliminary project and submission of application for connection to the electricity grid;
- Implementation of the final project;
- Implementation of the executive project;
- Implementation of security plan for the site;



- Implementation of a time-program for implementation of works;
- Preparation of D.I.A. (Denuncia Inizio Attività) for the site opening;
- Works Management;
- Supply and plant set up;
- Testing of building and accessory masonry works;
- Management of all documentation required for the activation of the energy account until the approval of the incentive fee and the connection to the network;
- post-installation consulting and management of relations with the GSE.

#### Solar Thermal Plants:

Analysis of convenience of investment cost and of time of recovery of the same, identification of the fee part of the energy produced locally.

#### Aeolic Plants:

Ippocrate AS designs and develops wind turbines with vertical axis and horizontal axis, and assists the client in the following phases:

- Qualification of the site;
- Study of technical and economic feasibility of the investment;
- Authorization process;
- Building of the plant;
- Connecting to the network.

#### Biomass and Biogas Plants:

Ippocrate AS offers the following services:

- Preliminary feasibility study;
- Support for funding applications;
- Executive Planning;
- Supply and equipment assembling;
- Assistance and plants management.



Cogeneration plants:

Analysis of convenience for the construction of plants producing electricity and heat locally.

Identification and requirement of the heat energy and assessment of the convenience and the recovery times of the investment.

#### 4. Scouting and Project Development

Ippocrate AS manages a series of optimal agricultural fields on which to develop projects for photovoltaic installations.

Soil Characteristics:

- Type: agricultural field;
- Dimension: min. 3 ha – max 100 ha;
- Plan or hilly, tilted towards the south;
- Sun-exposed;
- Without any shadow: no trees, buildings, nor mountains in the vicinity;
- Linked to the electricity network – medium voltage max 350 m;
- Based in a zone without any environmental, landscape, archeological constraints;
- Access road traveled by truck;
- Without charges on the ground.

Project development is the activity executed by Ippocrate AS for big photovoltaic plants and it consists of the following activities for the issuance of all permits:

- Preliminary design, in order to obtain all permits and authorizations Administrative;
- Writing of final project documentation in accordance with IEC – 02;
- Screening EIA and technical assistance - organization for issuing the measure ARTA on

The assessment of environmental compatibility;

- Report geology, geomorphological, hydrogeological and botanical-fauna;
- Preliminary Report for requesting the connection point



- Retrieval and routing of the necessary documentation and requests authorization;
- Relational activities at all institutions involved in the collection of opinions, clearances and anything necessary for the Conference of the Services provided in the proceedings "Authorization Only".
- Anything necessary

When the project execution has been authorized Ippocrate

AS takes care of all technical activities for the construction of photovoltaic installations.

## **5. Energy certification of buildings**

Ippocrate AS provides energy certification, drafting of the plate energy production and energy certification of the award, which are mandatory for new buildings and for costly transfer of property, pursuant to Italian Decree Law, 19/08/2005 No. 192 and Italian Legislative Decree No. 311 of 29/12/2006.

Energy certification is a certificate which you can understand how it was made the building in terms of isolation of the insulation and then let us know how the building can contribute to energy savings.

It consists of an evaluation of the integrated energy requirements of a building resulting in certification and the assignment of a certain energy class.

## **6. Energy Manager Services for external storage and the rational use of energy**

Under Article 19 of Law 10/91 all consumers of energy entities, public or private natural or legal persons, entities and associations are required each year to make the appointment of technical manager for saving and rational use of energy if the annual energy consumption exceeds the following levels:

- Industrial sector: 10.000 toe per year;
- Civil and transportation sector: 1000 toe per year.

The legislation in force identifies, as the ideal figure, an engineer with experience in the field of energy management, with expertise in the area where he works and in feasibility studies, with good knowledge



of advanced technology and organizational capacity of its structure. Of course, apart from the statutory obligations, an Energy Manager can be in any reality for which it is useful to identify actions to rationalize the use of energy. The appointment may be made even if consumption is below the threshold law.

The value added of having an Energy Manager in its Corporate is reflected through the reduction of energy costs through interventions aimed at improving energy efficiency and the monitoring duty.

## **ENVIRONMENTAL CONSULTING**

- Check-up of the main environmental criticalities of your Company;
- Drafting of the Environmental Impact Assessment (EIA) and of the Strategic Environmental Assessment (SEA) documents;
- Assistance as internal experts in the relations with inspectors;
- Sustainable development: environmental education, professional training and information;
- Assessment and planning for the acquisition of atmospheric emissions (former D.P.R. n° 203/88) and acoustic emissions authorization (Legislative Decree 626/94);
- Legislative Decree 81/08 (RSPP, Risk Assessment Document, Training and Information);
- Legislative Decree 81/08 (Coordination of Safety in construction work);
- Management Systems UNI EN ISO 9001, 14001 and OHSAS 18001;
- Certification EUROGAP, ECOLABEL, ISO 22000;
- EMAS Certifications.

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