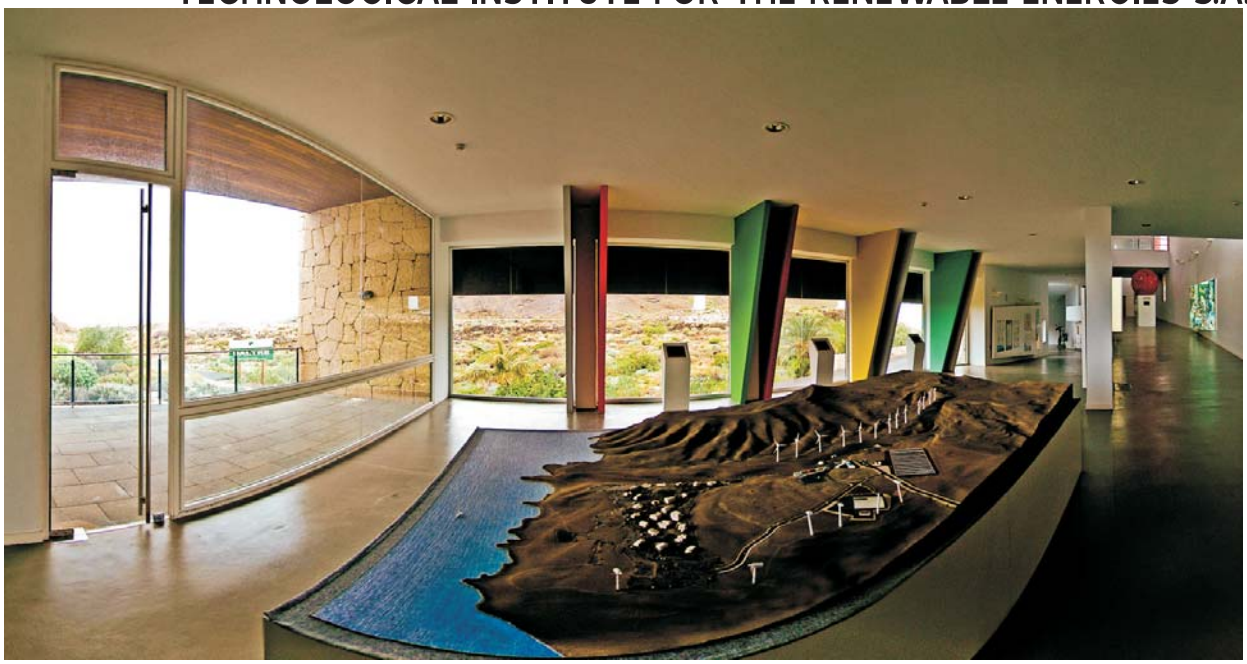
2008

INSTITUTO TECNOLÓGICO Y DE ENERGÍAS RENOVABLES S.A.

ACTIVITIES REPORT

2008

TECHNOLOGICAL INSTITUTE FOR THE RENEWABLE ENERGIES S.A.



ACTIVITIES AND MANAGEMENT REPORT

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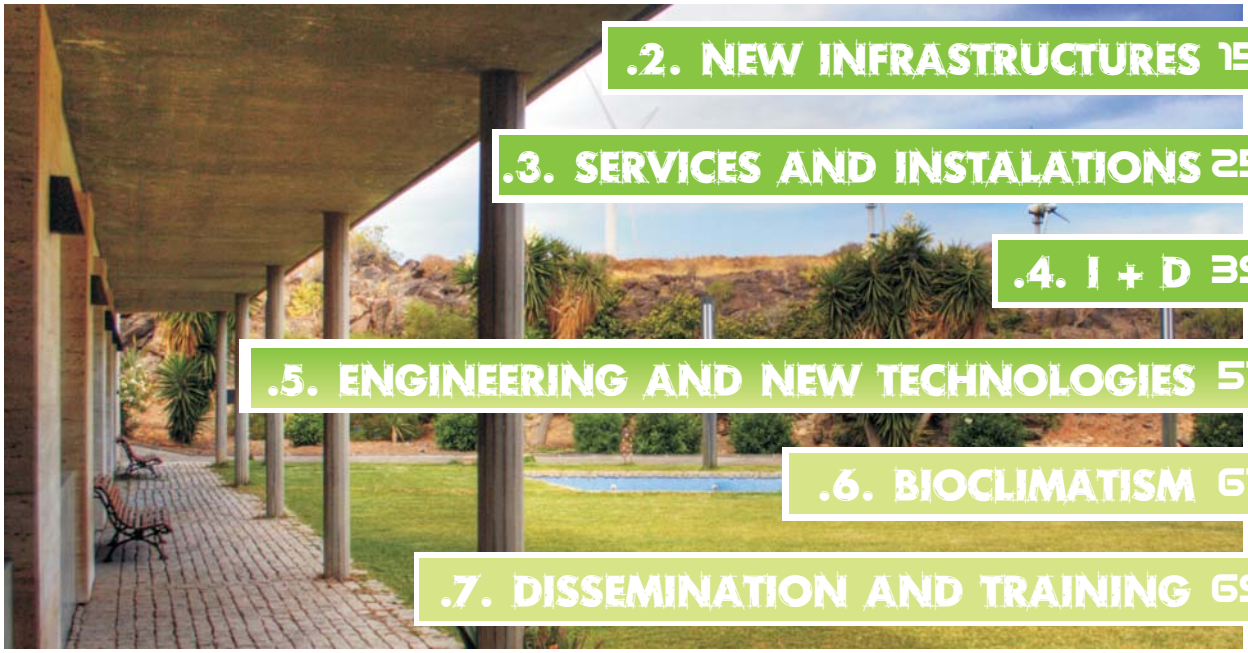


1.

INTRODUCTION

1 INTRODUCCION

The Technological Institute of Renewable Energies, ITER S.A., was founded in 1990 by the Cabildo Insular de Tenerife, the island's administrative authority. It was aimed to cover the need of starting a new research field in the islands in order to reduce the dependence from the exterior energy supply and to allow a cleaner and sustainable development.

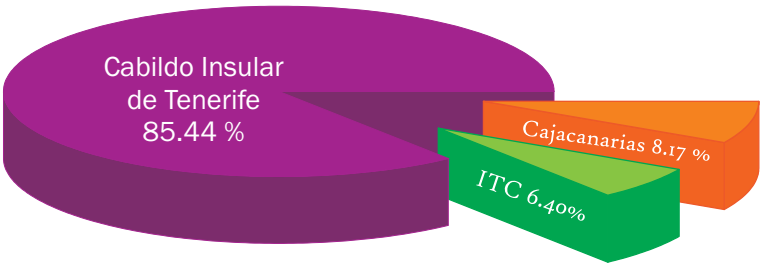
To fulfil this aim, its objectives are to promote research activities and technological development related with the use of the renewable energies, as well as other interests aspects for the regional social-economical development: subterranean hydro resources, seismic-volcanic prediction and surveillance, environmental control, and development of communication and information technologies.

Since the beginning, the Institute counts with two main action lines: electricity generation with renewable energies and the execution of investigation projects related with renewable energies, environment and engineering. Within these lines, the activities developed in the Institute can be classified within these action lines and are specially entrusted in its social purpose:

a) To implement and promote renewable energies applied researches.
b) To develop technological systems for renewable energies uses.
c) To coordinate energy D+R projects in the Canary Islands.
d) To create the needed infrastructure for the development of local research activities, engineering and industry.
e) To develop results for the local industry and export the know-how to other countries and archipelagos.
f) To promote the relation with the scientific community at national and international level.
g) Scientific personnel training in all renewable energies fields.

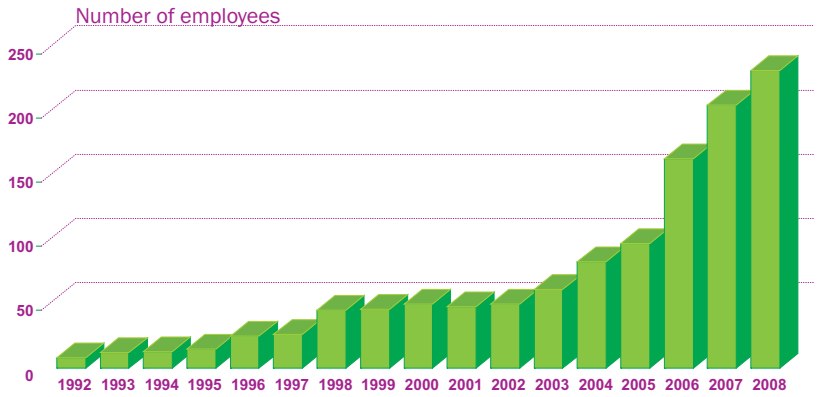
Shareholders

After several additions of shareholders, ITER´s capital share is divided as follows:



Staff

At the present time, the institute has a multi-disciplinary team of more than 232 professionals, comprising of three R&D areas such as Renewable Energies, Engineering and Environmental Sciences, which are complemented by a Diffusion Department. The staff has been increasing exponentially since the Institute started with its activities.



Organization Structure

The Institute is organized into three areas: renewable energies, engineering and the environment research Division. It counts as well with a Diffusion Department that gives support to all of these departments.

Renewable Energies Area

Wind Energy Department

The Wind Energy Department takes over the management of the three wind farms existing in ITER, as well as the proposals for the installation of future wind farms.

It develops investigation projects related with wind energy, the design and management of the wind tunnel and the meteorological forecasting of the Mm5 model.

Bioclimatism Department

Investigates and develops architectural techniques that allow the design and construction of buildings according to the climate, geomorphology of the territory, vegetation and water, so that there can be a decrease in energy use and an increase in the thermal comfort. Furthermore, the Bioclimatism department offers and supplies technical advice in other projects and activities developed by the Institute.

Photovoltaics Department

Manages and carries out the maintenance, operation and invoicing of photovoltaic plants both of ITER and of private investors.

Submits proposals and projects for the installation of new photovoltaic plants. Manages the installation and implementation of the assembly PV panel plant of ITER. Studies and develops projects in the field of photovoltaic solar energy in hybrid systems and hydrogen.

Environmental Area

Reduction of Volcanic Risks

Works on the two major scientific and technical actions recommended by the international scientific community for reducing volcanic risk: elaboration of volcanic hazard maps, useful to perform a better plan for the use of the territory; establishment of a multidisciplinary approach for the volcanic monitoring program to strength the early warning system.

Underground Water Resources

Performs research activities assigned to gain knowledge about the way the underground water systems work to improve the management important economic and natural resource for sustainability in ocean volcanic islands.

Environmental Quality

Develops measurement systems based in remote optic sensors to improve the estimations of atmospheric contamination emissions from natural and anthropogenic sources.

Engineering Area

Information Technology Department

Provides support in the implantation of Information Systems both to ITER departments and the consortiums in which it is involved.

Conducts research, development and dissemination projects in the field of Information Technologies.

Participates in International projects with the design and development of telematic platforms.

Electronics Department

Researches and develops electronic equipments for renewable energies, mainly inverters and regulators applied in photovoltaic energy, microprocessors for the control and regulation of systems, programmable robots, thermostats and meteorological stations.

Gives support for activities of other ITER departments and projects, for example, the development of acquisition and monitoring systems in bioclimatic houses, or the help during the installation and start off and maintenance in SOLTEN plants.

Transversal Area

Diffusion Department

Coordinates the diffusion activities that take place at ITER, such as conferences, workshops, courses or publications, along with the training activities of the institute.

It manages ITER Diffusion facilities, such as the Technologic Walkway, the Visitors Centre, and the 25 Bioclimatic Dwelling.

Gives basic assessment about installation companies, courses and other information of interest related with the activities of the Institute.

.2.

NEW INFRASTRUCTURES

Medium-Voltage Underground Line for the connection of the Photovoltaic Installation of Arico.

Electric Substation 66/20kV of 50MVA and general infrastructures to evacuate the energy generated in the 7MW and 4MW at ITER

PV module Factory

Generation Control Centre Connected with Spain Electric Grid, for Energy Generating Installations in Special Regime.

New Wind farms

2 NEW INFRASTRUCTURES

ITER is expanding the infrastructure to support and promote activities developed by the Institute, assisting in the management of the installations. The creation of this new framework is necessary and vital for the development of research, engineering and local industry.

Medium-Voltage Underground Line for the connection of the Photovoltaic Installation of Arico

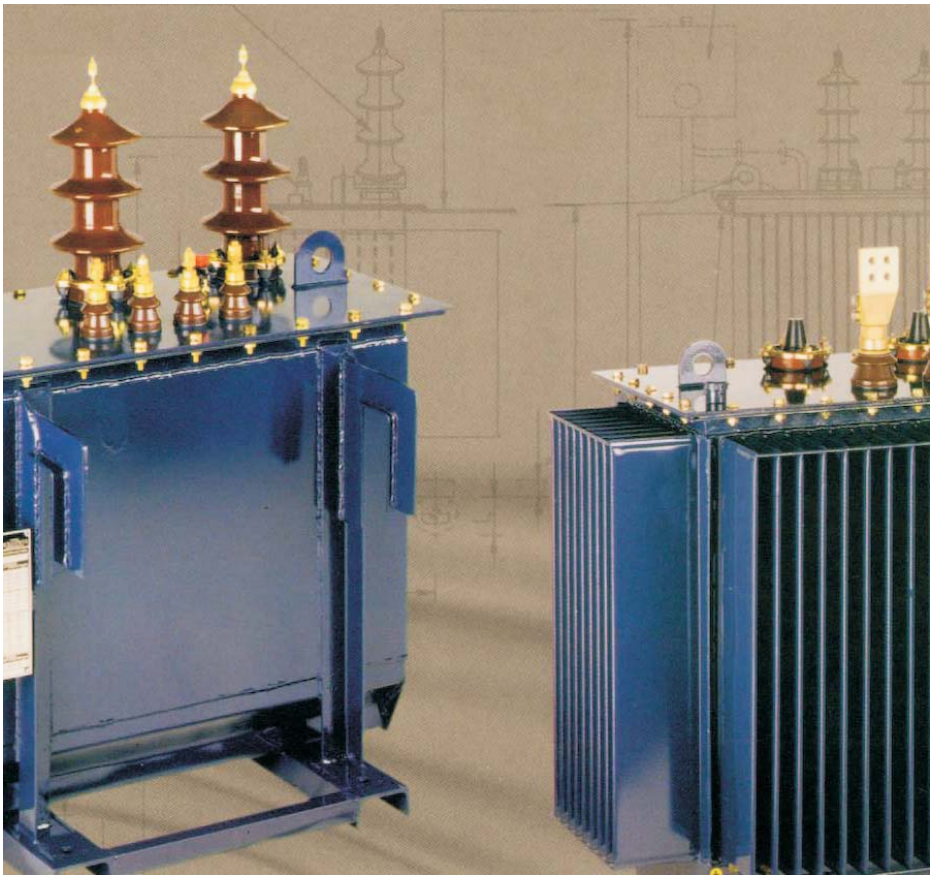
This project consists of the drafting and implementation of the plan for a MT underground line for the connection of photovoltaic installations in the Municipal Term of Arico.

This project arose from the need to connect different photovoltaic promoters (including Finca VERDE 9MW and y Finca Roja 3,6 MW) in the town of Arico, to the distribution network in the future UNELCO substation "Arico II" in the area known as Finca Mogán, in order to evacuate the power generated in these plants.

For the implementation of the infrastructure, the promoters of the photovoltaic systems which are connected to the new substation have made up an Economic Interest Group called "Línea Soterrada Arico Sur, A.I.E.". This association has entrusted the drafting of the project to ITER, along with its execution through the turn key mode.

The prompt completion of this project has been of vital importance for the viability of the photovoltaic projects which have developed a total 52MW approximately in the area.

Based on the energy that had to be evacuated through this line, six independent circuits were considered necessary, gathering in each of them the different installations. The total length of the channelling route is of approximately 5 kilometers.



Electric Substation 66/20kV of 50MVA and general infrastructures to evacuate the energy generated in the 7MW and 4MW at ITER Photovoltaic plants

The construction of the solar photovoltaic plant of 7MW and 4MW in ITER lands requires the evacuation into the network of the power generated. A new access to the transport net in Granadillas´s Substation had to de made due to the limited capacity of the UNELCO ENDESA electric distribution line.

A new high tension substation had to be built in the Institute in order to allow the access to the 66KV transmission network. In order to achieve this, ITER has undertaken the drafting of the project that defines the infrastructure needed to execute a transformer substation 66/20Kv of 50MVA, along with the high tension line, that will connect the existing substation of the Industrial Estate of Granadilla.

This project will also include the underground mid tension lines that connect the existing transformation centres at the head for the photovoltaic plants mentioned before with the substation, to allow the evacuation of the energy generated in both plants of 7MW and 4MW, along with the corresponding power to the rest of the projects that will develop in the area as well as those done previously.

The land on which the electrical substation is located has an area of 1200 m^2. These installations will occupy a total of 605 m^2 approximately. The mid tension pipes will run along roads and pavements within the grounds of ITER, whereas the high tension pipeline will run parallel to the road inside Industrial Estate of Granadilla.

According to the characteristics of the area and location a conventional type of transformer substation has been chosen with internal processor to the open. All the channels, both in high and mid will go underground as established by the Industrial Estate regulations.

During this year, a series of steps have been taken to obtain the permits necessary for its execution and is waiting for them to start their implementation.

PV module Factory

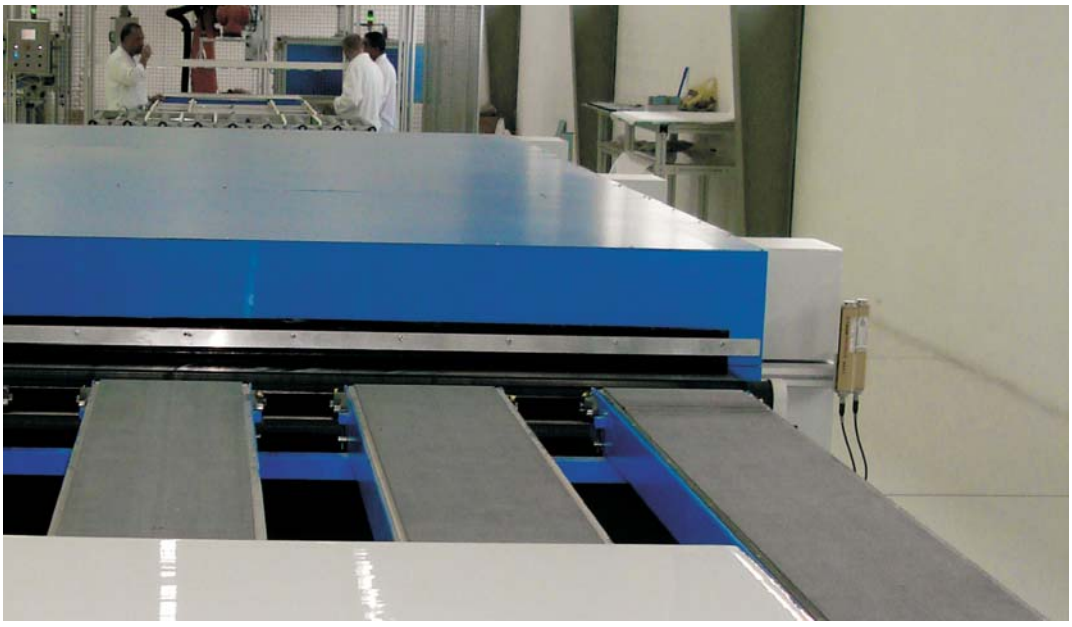
The creation project of a PV module factory in ITER installations was originated by the need to continue and extend the investigations in this work area that have been carried out in the Institute through the past years.

The project included three different sections within the warehouse, one intended for the storage of the raw materials, a second one dedicated for the actual manufacturing, and a third one corresponding to the storage of the finished PV modules. There are 2500m^2 available, 1500 appointed for storage and 1000 to the manufacturing area, where two parallel assembly lines north and south. Each line has two cell welding machines (tabber & stringer); a cell positioning robot; glass positioning and module revision tables and a laminator to finish the module. Both line meet in a machine designed to test and classify the modules before attaching the aluminium frame and packing the modules.

During the year 2008, the PV module factory has started working in ITER installations. During the first eight months of the year, the machinery was received and the warehouse has been equipped. The training procedures for the staff started in September and towards the end of the year started the actual manufacturing of the first modules.

During the three training months, where the north line was used, 200KW were produced and used for ITER´s installations and projects. Subsequent staff incorporations allowed the south line to start working in December, fact that allowed improvements in the performance of the factory.

During the year 2009, the factory is thought to be working at full yield, eight hours a day and producing 60MW per year.



Generation Control Centre Connected with Spain Electric Grid, for Energy Generating Installations in Special Regime

As the Royal Decree 1454/2005 and, afterwards the Royal Decree 661/200 states, the electricity generating installations in special regime must be appointed to a Generation Control Centre (CCG). These centres must have an adequate connexion with the control centres of Electric Grid, as to be able to send control commands, orders and tracking of the generation of these installations.

The centres must guarantee a secure live dialogue with Electric Grid and its functions 24 hours a day, 365 days a year. ITER Wind Energy and Information Technologies departments have followed, during the year 2008, the process to remain connected to a future control centre associated to the wind and photovoltaic plants that it will manage.

In order to adapt the measurement equipments of the three parks, the let meters were substituted for ones owned by ITER, with the sensibilities required by the regulations, along with their telemeter equipments.

New Wind Farms

A public contest was announced on May 4th 2007 to assign power in the category of new wind farm installations appointed to pour all their energy in the Canarian insular electric systems, as stated in the Order of April 27th of the General Directorate in Industry published in the BOC89.

ITER presented three wind farms to this contest:

- Wind Farm of the Environmental Complex of Arico, with a power of 18.4 MW, to de installed in the Municipal Term of Arico, promoted by ITER.

- La Roca Wind farm with 18,4 MW, to be installed in the Municipal Term of Granadilla, promoted by the Economic Interest Group "Parques Eólicos de Granadilla", of which ITER is part.

- Areté Wind farm, with 18,4MW, to be installed in the Municipal Term of Granadilla, also promoted by the Economic Interest Group "Parques Eólicos de Granadilla".

Likewise, ITER provided advisory and project writing services for two installations submitted to the contest for the allocation of power in the form of installation or expansion of wind farms with associated consumption in the Canary Islands electric system, convened on May 22nd 2007, through Order of May 17th from the Directorate- General for Industry published in BOC102.

The assignment of wind energy power on the island of Tenerife is still pending a decision, and in 2008 the correction of errors of the submitted projects was made.

With the publication of the Royal Decree RD661/2007 a change in the billing of wind farms has been made, which until now had been invoiced as established in Royal Decree RD436/2004. The fundamental difference of this new decree lies in the obligation of invoicing the costs of deviation for wind farms of more than 1 MW of installed power. The option of billing the energy at a fixed price or in the electricity market is still current.

The wind farms of Granadilla are selling the produced energy at fixed tariff, being the distributing company their representative. The cost of representation is 5€/MWh.

During 2008 the decision of selling the energy produced by the wind farms in the market option as reflected in that decree was made. Although the final amount received per produced kWh will depend on the market price, taking into account the trend in recent years, it seems an advantageous option. Another benefit of having a different representative than the distributor is that the costs of representation are divided by 15.

Among the existing options, it has been decided to sale through a distributor contract, for which several contacts with various companies offering such service have been made and the various alternatives discussed.

3.

INSTALLATIONS AND SERVICES

9MW Finca verde

3.6 MW Finca roja

SOLTEN II (7+4 MW)

Metropolitano of Tenerife

(100 kW + 100 kW) in Mercatenerife

80KW Photovoltaic Plant in Valle Guerra

Casa del Ganadero Project

TITSA Solar photovoltaic installation of 900kW

10 MW of the Dump and 10 MW Industrial Estate of Granadilla

Collaboration Agreement between ITER and Cabildo de Tenerife for the development of the web portal Tenerife Local and the web pages of the Municipalities

Connectivity Project for AMPAS (Parent students associations), youth associations and women associations in Tenerife

Installation and monitoring of a Sharp Photovoltaic Concentrator

Wind Tunnel Tests for Marine DataWind Tunnel Tests of the “Cyclist Aerodynamic Study”

3 INSTALLATIONS AND SERVICES

Installations

The photovoltaic solar energy promotion and implementation of projects and studies, the maintenance of the plants, and research in this area are some of the most important tasks carried out by ITER during the year 2008. The activities developed in this type of projects by the Institute, were increased largely by the change in legislation that took place in September. The Institute, which has been engaged in the promoting of these projects, will also be in charge of the operation and maintenance of the installations for the next 25 years, as established in contracts.

9 MW Finca Verde

During the year 2008 a 9MW photovoltaic plant with connexion to medium voltage grid has been installed in Finca Verde, in the location known as “Las Esquinas”, in the Municipal Term of Arico.

This installation is owned by a unique holder, EVM 2 Energías Renovables S.L., a trading company shared by ITER among others.

The 9MW photovoltaic plant with connexion to mid voltage grid consists in ninety 100kW units. These plants have been installed with a 10º inclination and S-SW orientation.

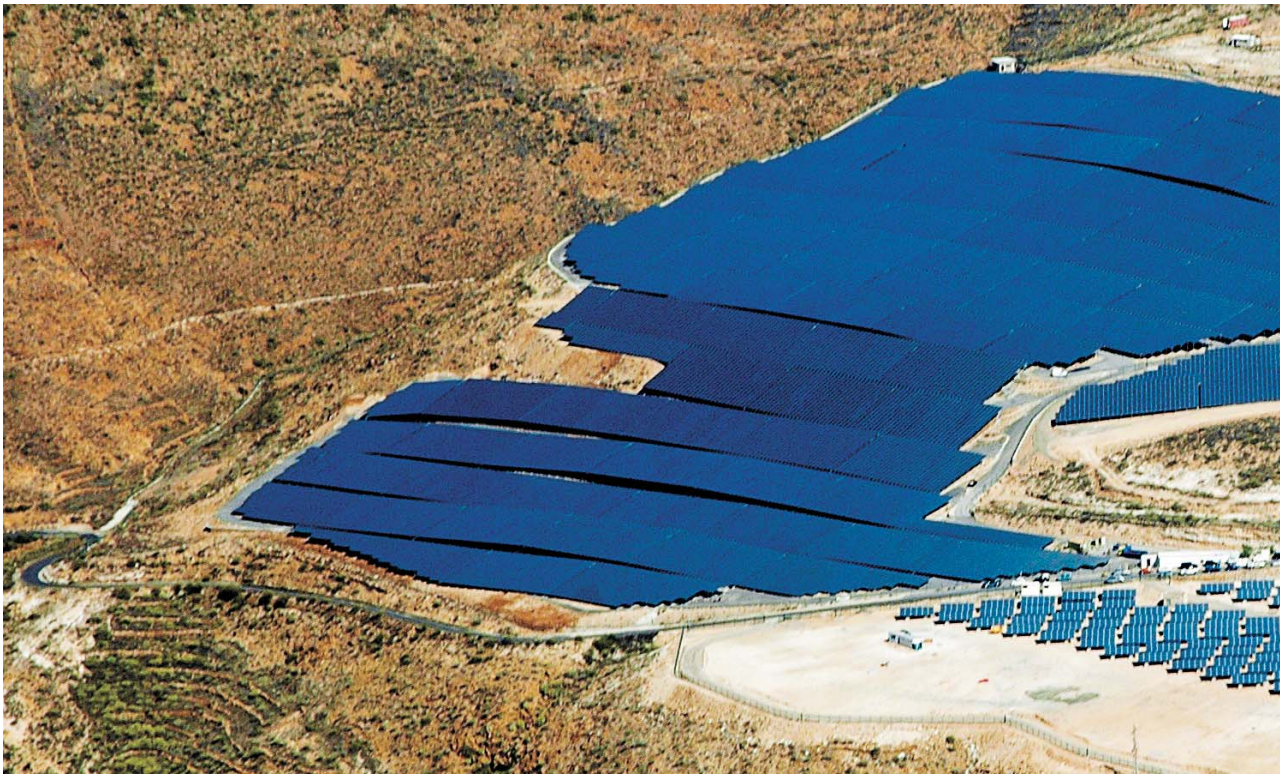
Each 100kW unit consists of 648 modules with a 23x28 geometry. The solar module used for this project is the model ST 162 P, manufactured by the Japanese company Sharp for ITER.

The inverter used for the connexion to the grid is TEIDE 100 model, designed and manufactured by

ITER and has already been used in previous projects. Generated energy is evacuated to grid trough four transformation centres of 2 MVA and one of 1MVA.

The plant includes a complete control and monitoring system, also designed and implemented by ITER. Monitoring is remote from ITER installations in Granadilla.

The plant was finished in August, and finally in September the definitive description in Administrative Register of Installations in Special Regimen was obtained.



3.6 MW Finca Roja

Finca Roja Project has been installed during the year 2008, consisting in its first stage in a 3.6 MW photovoltaic plant with grid connecting system of medium voltage. The whole plant involves the installation of two 5 MW stages each. The plant is located in the 204 plot of the area 7 of Arico in a place known as “Las Esquinas”.

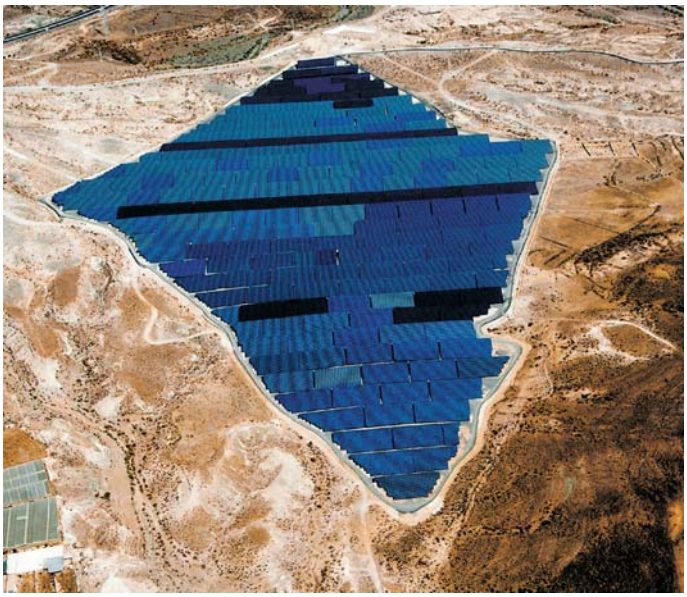
This installation belongs to one unique holder, EVM 1, Energía Verde de la Macaronesia S.L., shared by ITER among others.

The installation is made up of 36 photovoltaic plants of 100kW, with a southern orientation, above a 10º inclined aluminium structure.

The technology used is the same as in Finca Verda, located in the plot next to it and described before.

The installation of the first stage of the plant ended at the beginning of September, and the final registration in the Administrative Register of Installations in Special Regime was obtained during the same month.

The rest of the installation, the 1.4 MW, is thought to be undertaken during the year 2009. In order to achieve this, the proper register has been presented to the Pre-assignation Fare Register, as established in the new legislation by the RD 1578/2008.



SOLTEN II (7+4 MW)

SOLTEN I enlargement, called SOLTEN II, consists of three PV solar installations with a total nominal power of 11MW. This PV solar platform, located in Granadilla Industrial Estate, will be constituted by one PV plant of 7MW and two of 2MW.

The 7 MW installation is organized in units of 100kW, each connected to the mid tension electric grid and located in the same plot of SOLTEN I in Granadilla Industrial Estate (at 1.5 kilometres away from ITER).

Each100kW unit occupies 800 m^2 and is composed by PV panels assembled on a light aluminium modular structure. The 70 units that make up this project are connected to the medium voltage connection point of the electricity distribution company, UNELCO-Endesa, being the plant only connected to one medium voltage meter.

The 4MW installation is divided in two areas: 2MW above the ITER new warehouses, and 2MW ground-mounted, south of the maintenance building made up of twenty 100kW units each, bound for electric energy generation, through a medium voltage electric grid connexion.

The photovoltaic 7MW installation was already finished in the year 2007(seventy 100 kW units), located in the lands of the industrial estate next to SOLTEN I, obtaining the Final Administrative Register of Installations in Special Regime in the month of September

The installation of the 4MW photovoltaic plants was finished during the year 2008 (2MW and 2MW), obtaining the Final Administrative Register of Installations in Special Regime in the month of September, too.

Metropolitano de Tenerife

ITER has developed and executed the project of a photovoltaic installation on the roof of the workshops and depots of the Metropolitan, in the Cardonal, owned by the Metropolitan Society of Tenerife.

The system covers an area of 4.700 square meters and produces 644 kW of peak power.

The plant is made up of 3.680 solar Shangai Chaori modules, distributed along 20 rows in 6 groups of 100 kW of nominal power each. These solar modules are mounted on a light aluminium structure designed by ITER.

Six Teide 100 three-phase inverters of 100 kW have been used in this project. The photovoltaic plant has been connected in mid tension to the electric grid, injecting the electricity produced into it. The necessary modifications have been carried out in the Distribution Centre of the Electric Company Unelco-Endesa.

This installation was finished in September 2008, obtaining the final register and is now being expanded with 280kW more. This enlargement will be finished in January 2009.

100 kW + 100 kW Mercatenerife

ITER has carried out the installation of two photovoltaic plants of 100kW each in Mercatenerife.

Each of the 100 kW, which are located on the roof of the warehouses 1 and 2 of Mercatenerife are made of polycrystalline silicon panels of model KC175 of the Japanese manufacturer Kyocera, with a power peak of 107.8kW each.

Each installation covers an area of 786.69 meter square and the technology used in this project is the same as in those carried out by the Institute, with modular aluminium structures and TEIDE100 inverters both developed and manufactured by ITER.

IITER, which has participated as the installer of the project, owns one of the 100kW plants, being Mercasa the other owner.

80KW Photovoltaic Plant in Valle Guerra

Another of the photovoltaic projects concluded during this year has been the installation in the roof of a building bound for agriculture use in Valle Guerra, in the Municipality of San Cristóbal de la Laguna.

This 80 kW powered plant connected to low tension grid, is made up of 504 panels of the model CS170 manufactured by ITER, distributed in 28 lines of 18 panels, so that the peak power is 85.680 Kw.

The inverter used is the three-phase TEIDE 80 model and the panels are mounted in a light aluminium, wholly modular, and removable structure, both designed by ITER. The installation covers a total surface of 940m^2 on the roof.

ITER has taken part drafting the project and installing the plant, being the Orchid Lycaste the company holder.

Casa del Ganadero project

This project consists in a photovoltaic plant with a total power of 17.670 kW installed in the roof of the Casa del Ganadero which belongs to the Cabildo Insular of Tenerife, in the Municipal Term of San Cristobal de La Laguna. The Cabildo subscribed an agreement with ITER for the construction and exploitation of the photovoltaic installation.

Following the designs, the 17.670 kW photovoltaic platform is made up of 114 photovoltaic modules of crystalline silicon, bound for electric energy generation. The installation covers a surface of 148m^2, and the panels are mounted in light aluminium, wholly modular structure designed by ITER.

The plant is distributed in six groups of nineteen panels each, which are manufactured by SolarWorld. The inverter installed has been designed and manufactures by ITER and the installation is connected to the low tension grid.

The request for the final connexion was made during the year 2008, obtaining the Definite Entry in the Administrative Register in Special Regime in the month of September.

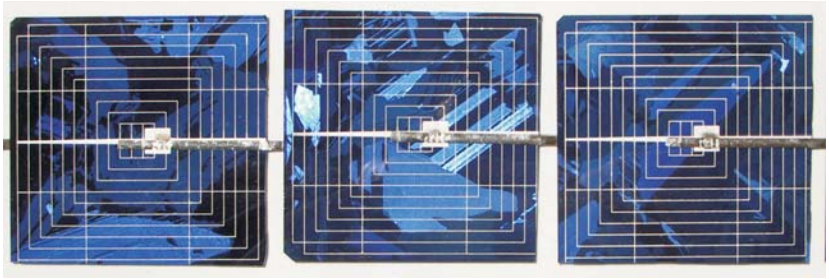
TITSA Solar photovoltaic installation of 900kW

The installation of a photovoltaic solar plant of 900kW of nominal power started this year to generate electric energy in the roof of one of TITSA´s warehouses in Arona.

After the concession of the connexion point by the electricity company Unelco-Endesa, the administrative authorization was presented and is expected to be solved in the beginnings of the year 2009 and proceed with the installation.

This facility will be located on TITSA´s S.A. depot, covering approximately 5.706,36 m^2 of the 9.909m^2 available. The plant will be made up of 5.544 panels and each unit will count with 616 panels manufactured by ITER.

The plant is distributed in 9 units of 100kW, and the technology used will be the same as the ones used in previous projects of thelinstitute.



10 MW of the Dump and 10 MW Industrial Estate of Granadilla

In addition to the projects that are being completed during the year 2008, the photovoltaic department is drafting two more projects for the installation of photovoltaic plants.

These two new projects of 10 MW in the Insular Dump found in the municipal term of Arico and 10MW in the Industrial Estate of Granadilla will be carried out during the year 2009.

Services

The Institute offers different services, both through the facilities it has as well as through the different departments. Between the services offered to other entities during this year are for example the activities carried out by the Wind department in the Wind Tunnel and the different agreements signed with the Information Technologies Department.

Collaboration Agreement between ITER and Cabildo de Tenerife for the development of the portal web Tenerife Local and the web pages of the Municipalities

ITER has reached an agreement with Cabildo de Tenerife to develop and coordinate Tenerife Local website, oriented to provide web presence within the web page (www.tenerifelocal.es) and e-administration capabilities to the different municipalities of the island.

This project lies within the framework of the PMC, a Plan for the Modernization of the Municipalities of the Island. During the year 2008, the pilot web portal of the town councils of (Santiago del Teide and Buenavista del Norte) and the global web site have been published.

New town councils have joined the initiative, and now their web portals are being finished or tested. These new municipalities are San Miguel de Abona, El Sauzal, Arafo, Guía de Isora, Garachico and Puerto de la Cruz.

Connectivity Project for AMPAS (Parent students associations), youth associations and women associations in Tenerife

The Information Technologies department has been working for a few years now offering connexion services to youth associations, woman associations and AMPAS of Tenerife. After defining a connectivity model that did not depend of its physical location, choosing a mobile phone technology 3G HSDPA. During the year 2008 this service has continued.

Installation and monitoring of a Sharp Photovoltaic Concentrator

Fulfilling with an agreement signed between the SHARP Company and ITER S.A. at the beginning of the year 2008, a prototype of a photovoltaic Concentrator was installed in the tryout camp for Renewable Energy Mechanisms which was developed by the Japanese company.

The prototype consisted of 27 modules, each articulated in 10 high efficiency cells of triple union, with a concentration optics type Fresnel and a passive system of heat evacuation.

The set goes mounted on a two axis supporter, which allows a maximum exposure to solar radiation during the whole year.

The concentrator's power is of 2,922 kW and to have a reference system, a photovoltaic plant was installed on a fix structure oriented 21º south, made up of 19 conventional photovoltaic modules, achieving a 2.916 kW power.

Both mechanisms, the concentrator and the conventional plant, were provided with the same type of inverter, a Sunplug model SPO 3000, along with a monitoring system developed ex profeso by ITER, which automatically connects with ITER meteorological plant and to a ftp server entitled specially for this.

This monitoring system allows the working parameters of the mechanisms involved to be stored and sent in real time to Japan with the meteorological conditions of the moment.

Wind Tunnel Tests for Marine Data

The Marine Data Service Company develops oceanic buoys, data buoys and meteorological stations, and owns a complete R&D program for the development and improvement of new products. Within this program, the company hired the wind tunnel to make a comparative study of two sonic anemometers and a cup anemometer.

This study was to analyse the precision of the different anemometers both in the speed measurements as in the direction. The influence of the location of the anemometer with respect to the lecture of the weather vane and the variations in the measurements of the anemometer when it is tilted 4 degrees with respect to the horizontal line were also examined.

Wind Tunnel Tests of the "Cyclist Aerodynamic Study"

Two different studies were carried out; one with one cyclist and two different bicycles to measure which had a best yield, and the second one with a group of 10 cyclists taking measurements in different positions.

4

R+D

Euro-Solar Programme

WAVENERGY Project

HYRESS, Hybrid Renewable Energy Systems for the Supply of Services in Rural Settlements of Mediterranean Partner Countries (HYRESS)

Feasibility Study to develop a Solar Plane and manufacture its first prototype

Development of an Inverter for Energy Storage in New Generation Batteries

Weather Forecast

Implementation and calibration of the six component balance in the wind tunnel

Extremely Large Telescope Design Study

Global CO2 Emission from Volcanoes

TEIDE 2010

Geothermal Prospecting in the Canary Islands 2008

TENAIR 2008

Strengthening the prompt warning systems facing the volcanic phenomena in Nicaragua, Philippines and Cabo Verde

TRANSREG

4 R + D

One of the main activities carried out by ITER is the development of R&D projects. A big amount of the projects developed are oriented towards studying and improving the process to obtain clean energies from the main natural energetic resources and applying this knowledge in the development of European and national projects. The different departments combine efforts beginning with the electronic prototypes up to the final generation of clean energies. The area of Environmental Sciences energetically participates in scientific research and development with its projects.

Euro-Solar Programme

The EURO-SOLAR Programme is a pioneering initiative from the European Commission's EuropeAid Cooperation Office at world level. The main goal of the Programme is to foster the use of renewable energy as a driver of human development in Bolivia, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru, the eight poorest countries in Latin America.

The Programme involves the installation of 600 generating kits using 100% renewable energy sources. The equipment consists of photovoltaic panels and, in some cases, a back-up wind generator. It is estimated that the Programme will benefit more than 300,000 people living in around 600 villages that currently lack any connection to the electricity grid. These rural communities will be the eventual owners of the kits.

ITER gives technical assistance to the Commission specifically participating in the implementation of the program, proposing a high standing technical expert report and developing visibility actions internationally.

After publishing the tender of the project, ITER cooperated with the European Commission in two different aspects of the evaluation procedure of the offers presented, that ended with a provisional adjudication, after which the companies chosen have had to demonstrate their technical capacity by installing a prototype of each of the systems suggested in ITER´s facilities.

WAVENERGY Project

The Wavenergy Project is framed within the communitarian program Interreg IIIB Atlantic Space and is aimed to the development of systems and methodology that allow certain Atlantic regions the generation of clean energy independently, taking advantage of the ocean's resources. This project has an innovator approach that consists in making use of the wave's energy.

In the year 2008 the execution of the project was finished, having the technical and the economic justification and the activities of the project. The members involved have shown their intention in continuing the collaboration submitting suggestions for the financing in Europe.

HYRESS, Hybrid Renewable Energy Systems for the Supply of Services in Rural Settlements of Mediterranean Partner Countries (HYRESS)

The HYRESS Project (Hybrid Renewable Energy Systems for the Supply of Services in Rural Settlements of Mediterranean Partner Countries), is a project financed the 6th Framework Programme (FP) of the European Commission, International co-operation (INCO) inside the specific measures in support of international cooperation involving Mediterranean countries (MPC) which aims to design and install small electric grids that will supply energy to the selected isolated rural populations in countries of northern Africa.

In May 2008 there was a meeting in Tunisia, with the National Agency for the Preservation of Energy, with the aim of reinforcing the coordination activities and to visit the village of Ksar Ghilène, one of the places where the installations will be developed. This visit was used to check the life and work conditions in the Sahara, to strengthen the starting data and optimize the installation designs. With the data obtained in the visit, ITER technicians have kept on working in the design of the different systems as well as in the logistic aspects.

Later the last modifications were made in the design and the agenda was defined for the acquisition and installation of the elements that will make up the system. The village of Lkaria was also visited. A mini-grid will be installed for the combined generation of electricity and drinking water.

Feasibility Study to develop a Solar Plane and manufacture its first prototype

The Feasibility study to manufacture a Solar Plane has started after receiving the grant within the Aerospace Subprogram in the frame of the National Plan of Scientific Research, Development and Technological Innovation. Due to the speed with which this sector is progressing and so that the company can apply to the results of this investigation line and be competitive, the prototype will be manufactured parallel to the development of the results of the research.

The ultimate goal of the project, once the Feasibility study has ended is to build a complete non polluting plane with Earth observation and vigilance applications.

In order to develop the prototype, Agencia Canaria de Investigación, Innovación y Sociedad de la Información will help within the call to carry out R+D projects for companies and research groups that still has not been decided.

The prototype, that is now being developed, is 6.3 meters wide and the photovoltaic cells laminated over the wings provide a total power of 400 watts. The fuselage of the plane was built in epoxy resin and Kevlar fibre, the wings and tail will be made out of Fiberglas and carbon fibre with a structure of balsa wood and Styrofoam. Both wings on the bottom, as the whole tail, will be covered with transparent polyester film.

The aircraft is equipped with an autonomous navigation system so as to be capable of maintaining both a predefined path and take the most appropriate strategies for flight with the energy available, depending on the environmental conditions of solar radiation. The navigation system receives data from various inputs: GPS, available power, gyroscopes, accelerometers, etc.

From this information, the aircraft will undertake the necessary actions to maintain stability and direction. This navigation system is also equipped with a telemetric radio link, so that the flight parameters can be tacked from a ground station, indicating changes in them if necessary.

Development of an Inverter for Energy Storage in New Generation Batteries

At the end of the year 2008, after obtaining a grant from the Ministry of Industry, Tourism, Commerce, ITER has begins with the elaboration, development and implementation of the project “Development of an Inverter for Energy Storage in New Generation Batteries”.

The aim is to support renewable energies in its penetration in the electrical system, which implies the need of a stored energy of high-capacity system, thus eliminating the significant impact on the operation of the electricity network these sources of renewable generation are increasingly present.

The tasks for the year have been to study the state of art of different storage technologies and existing applications for renewable energies, to choose the accumulation system and to define the nominal inverter power grid connection that has to be developed.

These technologies include vanadium redox flow (VRB) batteries, sodium-sulfur (NAS) batteries and Lithium-Ion batteries (Li-Ion). The last ones have been chosen as energy storage system due to the cost prices, specific energy (Wh / kg), power density (W/m^3) and future expectations for the Lithium-Ion batteries.

The nominal power is 1MW and storage time is between 1 and 5 hours, depending on the capacity of the batteries.

This project is the first step in the evaluation of the capacities and costs of such storage systems for its implementation on a larger scale.

Weather Forecast

Throughout the year 2008, ITER has continued working on the launch of the Institute's weather forecasting system. Changes were made so that now the forecasting is done with the WRF model (“Weather Research and Forecasting Model ") that has updated applications with more efficient tools for the selection of domains, prediction of wind, etc.

Nowadays, the department is in process of programming the model to make local and regional forecasts and to develop an online service of weather information. The first data on wind predictions and solar radiation is being collected and compared with the real data from ITER weather station, to verify its accuracy and correct the possible deviations.

Implementation and calibration of the six component balance in the wind tunnel

As established in the agreement that the Wind Energy Department made with the Aeronautical Engineering School of the Polytechnic University of Madrid, the six component balance was started to measure global forces and momentums in the wind tunnel. The students of the School participated in the calibration of this balance which was previously designed and manufactured by ITER.

Extremely Large Telescope Design Study

The ELT Design Study is a technology development programme carried out by several institutions and companies from Europe, Israel and Australia and co-financed by the Sixth Framework Programme of the European Commission.

This project, in which ITER participates in the work package on Wind Studies, started in 2005.

The final reports of the project were written in the year 2008, and the staff assisted to the meetings regarding the tracking and checking of the tests carried out in the Boundary Layer Wind Tunnel in Aachen.

Global CO_2 Emission From Volcanoes

The goal of this project is to re-evaluate the global CO_2 emission to the atmosphere coming from sub-aerial volcanism. The estimated value is of 250 million tons per year, nonetheless, this value is underestimated now that is does not take into consideration the diffuse emission of CO_2 to the atmosphere due to the volcanic activity. In consequence ITER is carrying out diffuse emission studies of CO_2 in several active volcanoes in Papúa Nueva Guinea, Indonesia, Philippines, Japan, Ecuador, Galapagos, Iceland, Nicaragua, Germany, France, Cabo Verde and Chile. During the year 2008 scientific campaigns have been going on in volcanic lakes in Atitlan, Amatitlan, Laguna de Calderas and Ixpaco (Guatemala), along with volcanoes in Cerro Negro (Nicaragua) and Etna (Italy).

Teide 2010

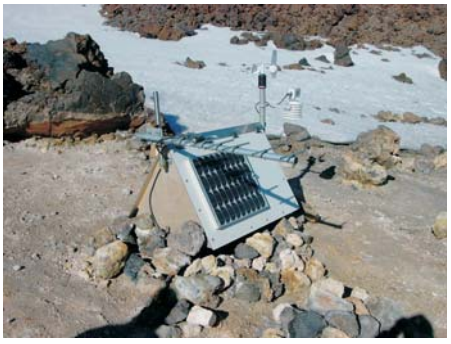
Since 1997, ITER has been carrying out works to optimize and improve the volcanic surveillance in the island of Tenerife providing a multidisciplinary approach to the volcanic phenomena monitoring. Nine geochemical stations and nine more geodesic ones are operated and maintained within the frame of this project for the volcanic surveillance of Tenerife. Three of the nine GPS antennas have been handed by the Nagoya University which collaborates actively with the surveillance task. Beside these geochemical and geodesic surveillance tasks in continuous mode, other geodesic surveillance work is done in discreet mode with the goal of optimizing the volcanic surveillance in the island of Tenerife.

Geothermal Prospecting in the Canary Islands

Aiming to carry out geothermal prospecting works in the Canary Islands, ITER signed in October of 2007 an agreement with the Spanish subsidiary of the Australian company PETRATHERM. As part of this agreement and since then, ITER has developed several researches for the geothermal resource exploration in Tenerife and Gran Canaria.

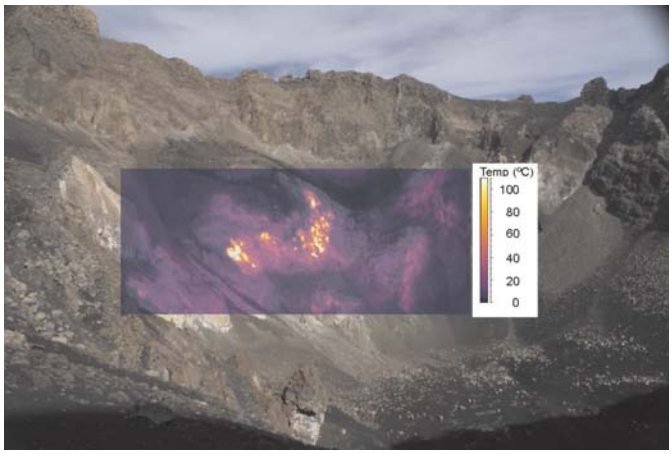
Tenair 2008

The environmental quality of air and the improvement of our knowledge about atmospheric pollution emission sources in Tenerife as well as their inmission levels is the goal of this project. To materialize this goal, there is a mobile unit equipped with sensors, that includes sensors to measure in continuous mode atmospheric polluting agents (particles, SO_2, NO_x, O_3, CO and CO_2), as well as a canister and an electrovalve system to take air samples and periodic analysis of volatile organic compounds (VOCs) in the environment air of Tenerife. They also count with remote optical sensors (COSPEC y OPFTIR) that allow the evaluation of pollutants from fixed sources and form the air quality.



Strengthening the prompt warning systems facing the volcanic phenomena in Nicaragua, Philippines and Cabo Verde

The main goal of these three international cooperation project financed by the AECI of Nicaragua is to provide the Instituto Nicaragüense de Estudios Territoriales (INETER), the Philippine Institute of Volcanology and Seismology (PHIVOLCS) and the Laboratório de Engenharia Civil de Cabo Verde (LEC), the University of Cabo Verde (UNICV) and the National protecção Civil Service (NCPS) of the Government of Cape Verde capabilities and technical resources needed to strengthen the volcanic monitoring in Nicaragua, Philippines and Cabe Verde by incorporating the works on diffuse carbon dioxide (CO_2)measurements as a scientific-technical tool to enhance the detection of early warning signs of volcanic adverse events (seismic-volcanic crisis and volcanic eruptions) in these three countries.



Transreg

The Environmental Area of ITER participates and collaborates in this Project of Fundación Centro de Estudios Ambientales del Mediterráneo (CEAM) financed by the Science and Innovation Ministry (MICINN), whose main goal is the characterization of the seasonality of the metrological processes that rule in the regional dispersion and transport of pollutants along the Mediterranean coasts of the Iberian Peninsula, along with the feedbacks and synergies associated with them.

.5.

ENGINEERING AND NEW TECHNOLOGIES

Agreement between ITER and Cabildo de Tenerife to develop R&D in Information and Communications Technologies and to develop electronic applications of the e-administration

Production of triphasic-power Inverters Teide 100 model for SOLTEN II Project

Design of Triphasic-power Inverter Teide100 model for grid connection in Casa del Ganadero

Production Triphasic-Power Inverter Teide100 model for grid connection in FINCA VERDE, FINCA ROJA, MERCATENERIFE, METROPOLITANO DE TENERIFE y ORQUIDARIO LYCASTE

I-V Curve tracer for the photovoltaic plants and the Tracker Sharp

Remote control to start and stop the Made Wind turbines

Monitoring and display for the Ofra-Ingenieros Park

Development of applications and Websites

ITER Information Systems Management Monitoring System for Photovoltaic Plants

CE labelling of the Teide100 inverter

5 ENGINEERING AND NEW TECHNOLOGIES

ITER cooperates in the development of Information Technologies, offering services related to the New Technologies, developing web Communications and carrying out several projects and agreements to provide access to the network. The implementation and promotion of applied research in the field of renewable energies, along with the development of the technological systems needed to make use of these energies is one of the goals of the Institute.

Agreement between ITER and Cabildo de Tenerife to develop R&D in information and Communications Technologies and to develop electronic applications of the e-administration

In the year 2008 the activities carried out within the frame of the existing agreement have been directed towards the development of different activities within the development of e-administration projects. Likewise, ITER has been involved in the studies done for the implementation of a Software Technologies Centre in the Island of Tenerife, in collaboration both with the private and the public sectors.

Production of triphasic Inverters Teide 100 model to the injection into the grid for SOLTEN II Project

The production and installation of 40 inverters of 100kW (4MW), corresponding to the last phase of SOLTEN II were completed at the beginning of the year 2008.

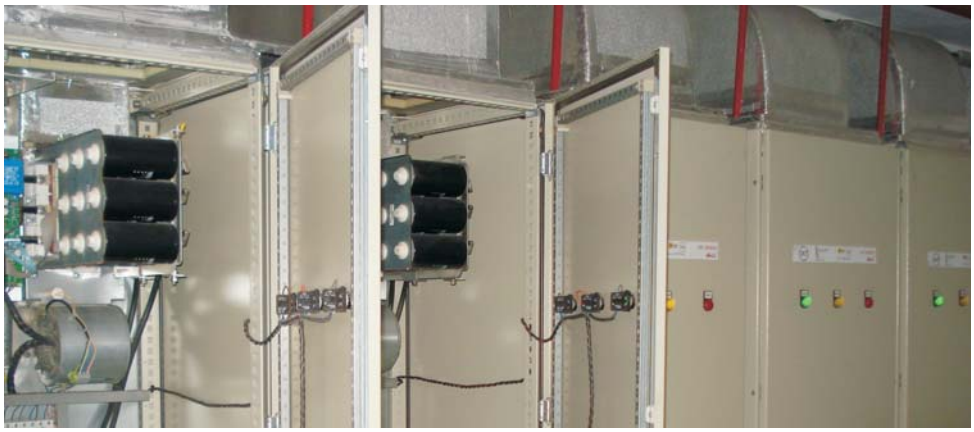
The Teide 100 inverter was designed for the photovoltaic plants of SOLTEN project. It is a revision of the previous TEIDE inverter, designed and manufactured by ITER for the Euclides project. Essentially, the modifications were made in the redesigning of the control, changing it from analogical to digital, and making it easier to operate. The power stage and the filters were resize to adequate it to the one required by the 100 kW.

It is an energetically efficient device that takes up the least energy possible. This requires an electronic design of small losses.

Design of Triphasic-power Inverter Teide100 model for grid connection in Casa del Ganadero

The Cabildo Insular de Tenerife signed an agreement with ITER for the manufacturing and running of a photovoltaic installation with a power of 17kW in the Casa del Ganadero.

The electronic department made the necessary modifications to the TEIDE100 inverter to adapt it to the photovoltaic plan installed in the roof of the Casa del Ganadero. These adaptations mainly include several changes in the filters and electronics. An inverter modified in this way can operate in installations with up to 20kW of power.



Production Triphasic-Power Inverter Teide100 model for grid connection in FINCA VERDE, FINCA ROJA, MERCATENERIFE, METROPOLITANO DE TENERIFE y ORQUIDARIO LYCASTE

All the inverters installed and built are TEIDE100 model, manufactured at ITER.

For Finca Verde (Arico), ninety 100kW photovoltaic inverters were manufactured and installed to be connected to the grid. It is a 9MW ground-mounted photovoltaic installation connected to the grid, made up by 90 photovoltaic plants of 100kW each.

For Finca Roja (Arico), thirty-six 100kW photovoltaic inverters were manufactured and installed to be connected to the grid. It is a 3.6MW ground-mounted photovoltaic installation connected to the grid, made up by 36 photovoltaic plants of 100kW each.

For Mercatenerife, two 100kW photovoltaic inverters were manufactured and installed to be connected to the grid. It is a 200kW roof-mounted photovoltaic installation connected to the grid.

For Metropolitano of Tenerife, six 100kW photovoltaic inverters were manufactured and installed to be connected to the grid. It is a 600kW photovoltaic installation built on top of the tram depot, owned by Metropolitano of Tenerife.

For Orquidario Lycaste S.L., one 100kW photovoltaic inverters were manufactured and installed to be connected to the grid. It is a 80kW roof-mounted photovoltaic installation connected to the grid. The maintenance activities of the inverters, that have been installed, have been also carried out. The I-V measurement equipment, developed by the Electronic Department, has been used to verify the whole plants.

I-V Curve tracer for the photovoltaic plants and the Tracker Sharp

Portable equipment has been developed that allows the characterization of the photovoltaic plants while they are being tuned once they are installed. This characterization consists in recording the voltage-current curve for photovoltaic plants of up to 100Kw (1000V, 200A).

This portable equipment also has a control and acquisition system of data based in a microprocessor responsible of controlling the charge and the data capturing that make up the voltage-current curve. Additionally, it has a LCD screen and it is capable of communicating with a PC for the presentation and storage of data.

The data obtained will allow:

- Determine if the photovoltaic plant's behaviour matches the one predicted based on the distribution of the panels and the data given by each manufacturer for each panel.

- Detect the wiring errors.

- Determine the peak work point and of maximum power of the whole plant and check the inverter's equipment adaptation to this point.

In relation with the Tracker, portable equipment is also used and in this case it allows the characterization of a solar tracer made by Sharp. This characterization includes the register of the tension-current curve for material up to 20 amps and a series of temperature measurements of the tracker cells throughout 4 T type thermocouples.

It counts with a control and data acquisition system based on a microprocessor in charge of taking the measurements that make up the tension-current curve. In addition it is able to communicate with a PC for the presentation and storage of the results.

Remote control to start and stop the Made Wind turbines

An electronic card has been developed to allow the start and stop remote control of several wind turbines. Nowadays, these cards are being used to start and stop eight MADEAE-46 wind turbines of 600kW.

It is a control system based in a microprocessor that actions the wind turbine through a series of distance relays and communicate with a personal computer by means of the MODBUS RTU communication protocol for Rs485 ports.

Monitoring and display for the Ofra-Ingenieros Park

The Ofra-Ingenieros Park is the first public park dedicated to the renewable energies in Tenerife.

ITER, throughout a collaboration agreement with the town council of La Laguna, has participated in the design and implementation of the wind and photovoltaic installations with which the park is energetically supplied, and in the renewable energy demonstration installations that make up the didactic rout.

The Electronic Department has developed and installed the electronics demanded for several information posters, where several physical parameters are required to be measured and visualized. Additionally, big sized LCD numerical displays adapted for day vision have been designed and manufactured.

This department has also carried out maintenance tasks of the information posters installed in the park. These posters give information about the following installations: meteorological station (wind speed, environmental temperature, relative humidity, and solar radiation), solar clock (date, real time and solar time), solar oven (environmental temperature, temperature of the air and water in the container), thermo-siphon equipment (environmental temperature, accumulator's temperature, hot and cold water temperature), photovoltaic plant (generated energy) and wind turbines (generated power and battery voltage).

Development of applications and Websites

During 2008, aside from the development efforts of web pages and software applications above mentioned, various activities of application development and web pages have been carried out as general support to ITER needs and other projects:

- Improvements in the application for shareholder management of SOLTEN II shareholders

- Application for the control and update of photovoltaic inverters using the MODBUS protocol.

- Photovoltaic plant production search web site

ITER Information Systems Management

The server structure of applications and connectivity has been updated during the year 2008, basing it mainly in the virtualization use with the goal of optimizing the available hardware resources. Redundancy systems have been implemented for the critical applications of the servers, taking advantage of the virtualization.

The renovation has also allowed the update of the net electronics, and the optical fibre wiring both in the ITER buildings and in the different transformation centres of the photovoltaic centres.

Telephony has also been improved by the starting of a new switchboard that combines traditional technologies with new telephony standards by IP nets.

Monitoring System for Photovoltaic Plants

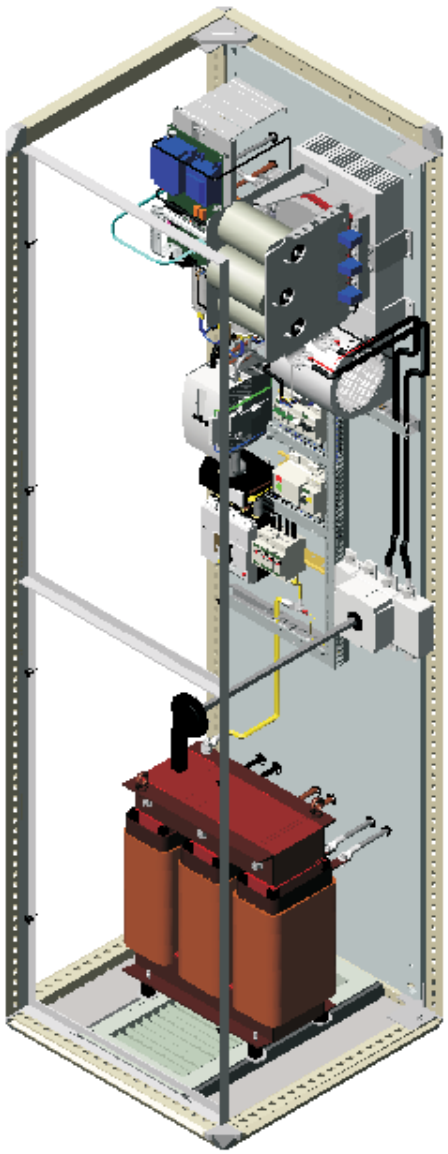
During the year 2008 there has been a big qualitative and quantitative jump with respect to the control capacity of the photovoltaic plants, motivated greatly by the increase of the installed capacity. Improvements have been made especially in the communication system that exists between the plants, unifying both the communication protocols used and the monitoring software. ITER has become an authorized integrator of Wonderware, a prestigious and internationally recognized brand for the development of SCADA applications.

CE labelling of the Teide100 inverter

Several certification tests were carried out along with the development of the Conformity Declaration and the Technical File to achieve the requirements established in the EU Directives to be applied and proceed to the CE labelling of the Inverter.

To achieve this, the tests were carried out in situ in the AT4 Wireless lab, along with the electronic and mechanic revisions and the development of several documents by ITER.

Between the documents written, the Inverter's Handbook of Installation and Maintenance along with the detailed diagrams must be highlighted.



BIOCLIMATISM

.6.

25 Bioclimatic Dwellings

Design Patterns to optimize energy consumption and the sustainable energy generation in single-family houses in warm climates

Renewable Energy Integration in buildings

6 BIOCLIMATISM

Based on the needs identified by the Institute in recent years and following the lines of inquiry in favour of the environment, ITER created the Bioclimatism Department with the aim of researching and developing architectural techniques to design and construct buildings according to the climate, geomorphology, vegetation and water in order to reduce the energy consumption and increase thermal comfort. Another of its functions is to cover the need for technical advice for other projects and activities developed by the Institute.

25 Bioclimatic Dwellings

This project aims to the design and implementations of an urban complex developed under the criteria of bioclimatic architecture, capable of being self-sufficient in terms of energy and optimize the adaptation to surrounding conditions of the environment. It will be an autonomous, non-polluting and with open spaces inspired by ecological principles.

In December 2008, most projects are materialized. Work continues on the final completion integrating renewable energy systems in the outside and inside of each dwelling as well as fitting out the entire estate.

Within the integration of renewable energy sources several fields are being developed:

a) Installation of small wind turbines integrated into houses and directly connected to the net consumption of the housing, with the fundamental premises of reducing transmission of vibration to the structural system, reducing the noise impact and the maximum power generation within the small scale wind turbines.

b) Integration of curtain walls and glass ceilings with photovoltaic glass to glass self- production panels.

c) Integration of photovoltaic panels as shade elements to control the solar radiation that affects the dwellings.

d) Integration of high yield solar panel systems and recycling of the energy redundancy.

The outer conditioning is strongly influenced by the climatic conditions that are wanted to be promoted in each case, so that the gardens are adapted to specific lush and moisture to achieve determined parameters for comfort. At the same time, the gardening is selected taking into account the unique characteristics of the area.

On the one hand, low rainfall, which determines the choice of species that require little input of water, avoiding unnecessary consumption after this appeal and on the other hand, the proximity of the natural environment of the Montaña Pelada, determines that only non invasive plants are used.

The design of the dwelling is complete. Currently works are going on in small recreation areas related to the bioclimatic housing that will provide support to future activities to be developed in the complex.

The fundamental premise for the interior of the housing is that the operating conditions of each household remain unchanged. Most houses have the furnishing projects complete, these projects are specific for each residence, always coordinated with their architects in order to respect the spirit of the original idea as much as possible, keeping in mind the principles of energy saving.

Design Patterns to optimize energy consumption and the sustainable energy generation in single-family houses in warm climates

The main goal of the project is to find the factors that affect energy consumption in each of the houses that make up the 25 Bioclimatic Dwelling and develop a diagram of the most favourable design patterns for our climatic conditions.

The first stage of the project is being executed, consisting in the analysis of the 25 houses and determining the need monitoring to parameterize the different types of constructions, conditioning techniques and renewable energy yields.

Similarly, the domotic systems chosen were established and the types of units where they will be used. The following stages will belong to the installation and data take in, the design pattern development and the dissemination of the results of the bioclimatic lab.

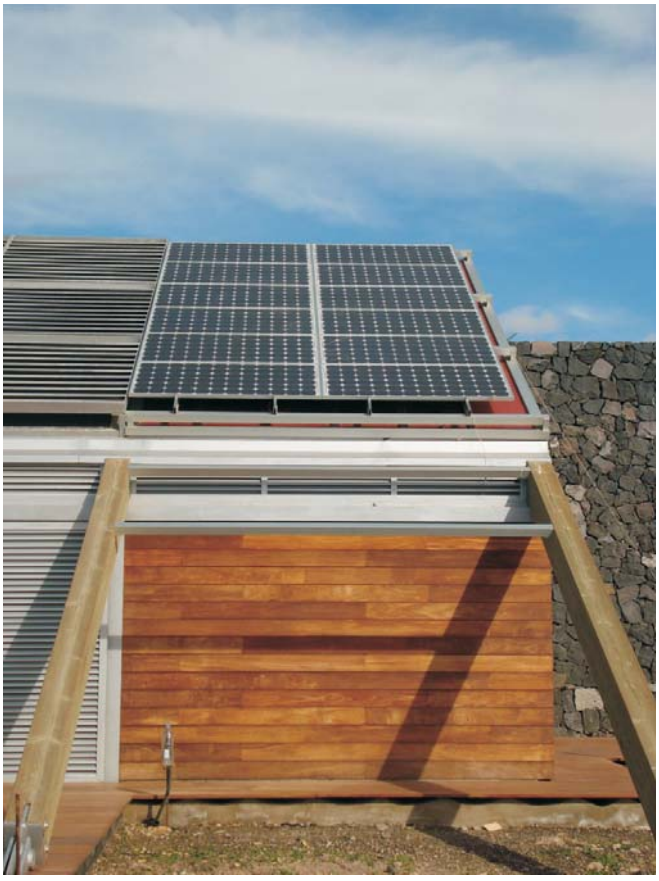
The “Design Patterns for the optimization of energy consumption and the sustainable energy generation in single-family houses in warm climates” project is being developed with the grant of the Ministry of Science and Applied Innovation. The help received is 50% of the total cost of the Project, with a two-year execution deadline which started in the year 2008 and lasts until 2010.

Renewable Energy Integration in buildings

The department covers the needs of technical advice for other projects and activities developed by the institute. Mainly, the activities are divided into two fields: the energetic evaluation of buildings and the design of renewable energy installations.

The energetic evaluations are made by simulations or real working conditions throughout the implementation of inside and outside sensors for its later monitoring and interpretation. Once the evaluation has been made, we will proceed to disclose the energetic functioning of the different buildings to contribute in the users and group consciousness.

The design of renewable energies includes both their integration in buildings and in big installations: optimizing designs, energy models and elements used in buildings, defining models to integrate passive and active solar energy strategies in small and big scale and optimizing the integration techniques, planning and building big renewable energy installations.



DISSEMINATION AND TRAINING

7.

Web page www.iter.es

Master's Degree in Renewable Energies

Open Doors Day / Eólica Festival

Management of dissemination-education facilities

General dissemination Activities

Projectos

Planeta Vivo Radio

Latin American Volcanology Network

7 DISSEMINATION AND TRAINING

The Technological Institute for Renewable Energies makes big efforts to the dissemination of the investigation tasks and projects carried out by the Institute.

Not in vain, the Institute counts with a specific department assigned for this tasks. ITER carries out dissemination, education and awareness tasks related with energy, in order to inform Tenerife's population and ITER visitors about the investigation tasks, promoting new technologies for energy saving and renewable energies.

Awareness and training is another important activity carried out by this department. Since 1998, ITER counts with one of the first educational facilities bound to renewable energies in Spain. It is managed nowadays, by the Dissemination department, and in addition, different investigators of all the departments participate in several training activities, such as the Master's Degree in Renewable Energies, courses and conferences.

Between the tasks carried out by the department stand out those related with the management and refreshment of the Webpage, the dissemination and educational publications such as the Trimester Bulletin LESS CO2, Open Door Days, collaboration with media and the support given to the other departments in mater of project dissemination.

Web page www.iter.es

The Dissemination Department has been working together with the Information and New Technologies Department in the development of a new Web page, improving the navigation and accessibility.

Its contents have been extended and updated; its appearance has been completely redesigned obtaining a more dynamic and easy-to-use web page.

The web page, that isn't still finished entirely, is already operational in both English and Spanish, offering an explaining route about the task carried out by the different departments as well as updated news of the activities which are being carried out buy the Institute. There is possible to download ITER publications and legislation about the sector.

Master's Degree in Renewable Energies

The main aim of the master's degree in renewable energies is to train university graduates in technical, scientific, economic and business degrees in the renewable energies area. The students may come from the Canaries and any other place to study this master's degree.

The degree offers three different specialities, allowing students to specialize in one of these three areas: Solar energy, Wind energy, or Enterprises and economy of energy.

ITER collaborates in the master's degree with the presence of several technicians and researches form the departments of Wind energy, photovoltaic and electronics as teachers and with its facilities, where the solar speciality is given taught.

The Tenerife Energy Agency also participates in the teaching, collaborating with ITER, which is one of its foundational members. Besides, the solar energy speciality is given in ITER facilities.

All the tasks related to this degree, both in teaching as those relating to the accommodation of students, the delivery of the solar energy specialty and the carrying out of the practices, are coordinated by the Dissemination Department.

The first Edition of the Master's Degree, which was closed on July 2008, had 24 graduates. In the month of September began its second edition 2008-2010.

Open Doors Day / Eólica Festival

The Open Door Day in the scientific installations becomes fundamental to promote the scientific culture within the population. ITER is aware about this and bets for celebrating the Open Door Day every year, where visitors can see the installations, which are normally not available for the public, and know about activities and projects carried out by the Institute, learning and participating in them.

The Open Door Day matches the celebration of the Eolica Festival in the grounds of the Technological Institute of Renewable Energy. This festival, celebrated since 2003, combines musical performances with environmental awareness, and each year attracts more than 15,000 people. This fact allows a large number of people to enjoy the planned activities within the Renewable Energy Day. Such events have great potential for teaching children and adults new issues related with renewable energies with games or practical experience, combining entertainment and awareness.

The programmed activities carried out during the Renewable Energy Day in Tenerife are carried out in collaboration with Tenerife Energy Agency, which celebrates the Renewable Energy Day in Tenerife. The organization of the Eolica Festival is developed by the Dissemination Department, which is also in charge of designing the activities that will take place during the Open Door Day.

ITER staff participates in these activities. Some of the activities that took place in the 2008 Eolica Festival are: Renewable Energy Workshops; Solar Cooking Exhibition; Solar Kitchen Assembling Course; Ecodrive Virtual Trainer; Alexander Dang Exhibition "The Field of Dang´cing Sunflowers"; Guided Visits to the photovoltaic plant SOLTEN, Wind Tunnel, Bioclimatic Dwellings; and Lectures.

Management of dissemination-education facilities

The educational-dissemination facilities described are part of a very ambitious, large-scaled and complex project that can be divided into: the Visitors Centre, Technological Walkway and the Bioclimatic Dwellings. The Technological Walkway, in operation since 1998, was supplemented in 2004 with the opening of the Visitors Centre and the project will culminate with the inauguration of the next 25 Bioclimatic Dwellings.

The management of these facilities is conducted by the Dissemination Department which is responsible for informing the public about these facilities and the services offered, carry out and coordinate visits, and works continuously to improve and update the content and the development of supplementary materials such as brochures, guides and videos on energy problems, energy efficiency and adequate use of some sources of energy. Moreover, the department manages requests made to visit other facilities which are not specifically designed for information dissemination, such as the photovoltaic platform SOLTEN.

The first equipment developed for this purpose was the Technological Walkway, which was the first outdoor installation where visitors can actually see how renewable energy is generated in Spain. During the year 2008 the walkway received 8500 visitors including students and other groups. Furthermore, the walkway can be visited without the guide service so this number can be enlarged with an important number of people who decide to visit the Technological walkway on their own also considering the attendants of the Open Day ITER, which are about 15,000 each year.

In the year 2008, the Walkway was extended with a collaboration agreement with the Area of Sustainability, Territory and Environment of the Cabildo Insular de Tenerife where the rout is complemented a visit to the Environmental Complex of Arico along with the visits to the Visitors Centre. This agreement between different organizations tries to join forces to achieve a common aim, to develop responsible and respectful social conscience with the Environment. Sixteen visits were attended with these characteristics.

The visitors centre is a bioclimatic building which belongs to the 25 Bioclimatic Dwellings, and is the precursor for the visit to the rest of the facilities. Visitors are greeted here and their specific rout is designed, depending of the time they want to dedicate, the type of audience etc. Moreover, the building itself is part of the visit, now that it includes an exhibition rout about energy. It also has a selection of posters presented to the "25 Bioclimatic Dwellings for the island of Tenerife" international contest, as well as the CLARITY exposure about Climate Change, Impacts, Causes and Solutions.

In the conference room of the Visitors Centre various events are organized and hosted, the ones carried out during the year 2008 are: *The International Renewable Islands. New Future Markets and the European Policy on Energy and Climate Change. An island vision* Conference organized by the Tenerife Energy Agency. Another of the events of interest that took place was the visit of the European Commissioner for Regional Policy Danuta Hübner who visited the Canary Islands to start the regional program 2007-2013, and highlighted ITER´s labour in favour of the sustainable development of the islands.

One of the main goals of the 25 Bioclimatic Dwellings project is the dissemination of the term bioclimatism, to bring this type of construction closer to society and above all to the sector directly related with building activities and urban planning.

To achieve this, the department coordinated technical visits to the dwellings which are arranged with a previous appointment and depend on the availability of the Bioclimatism Department's technicians. They can also be visited during the open door day celebrated within the frame of Eolica Festival that during the year 2008 received 2000 people.

In addition to the facilities mentioned above, ITER throughout an agreement with the city hall of la Laguna, participated in the design and implementation of the first public park bound to renewable energies in Tenerife, the Ofra-Ingenieros Park. This participation was executed with wind and photovoltaic installations that feed the park energetically and with the demonstrative renewable energy installations and information panels that complete the educational rout, along with advice on the development of educational actions. These tasks were carried out by the dissemination, Electronics, Information Technologies and Photovoltaic Departments.

General dissemination activities

The Dissemination Department provides support to other ITER departments with the dissemination of their projects or in the design of informative publications at educational level. In addition, there is a continuing search for announcements and grants of interest to all of ITER departments and is internal and external dissemination is carried out.

During 2008 the Dissemination Department has released numbers 20, 21, 22 and 23 of the ITER brochure LESS CO2, which have been distributed by mail to over 400 regional and national organizations, as well as European institutions. They are also available for download on ITER website and are distributed directly in our facilities and events. In addition, ITER released the 2007 Activities Report, both in English and Spanish, available for download on the website and other publications such as posters or leaflets.

ITER makes big efforts addressing external consultations, conducted by telephone, in person or via e-mail enabled for this purpose on the website. The Dissemination Department responded to incoming queries, directly or directing them to the Department concerned.

ITER, in most cases through the Dissemination Department, participates in fairs, courses and conferences conducting lectures and workshops on renewable energies and on the different projects carried out by ITER. Likewise, ITER technicians were involved in the Work Group of "Responses from the Education and Communication on Climate Change" of the Environment Ministry of the Spanish Government and in its annual meetings. In the year 2008 the most important were: *23rd European Photovoltaic Solar Energy Conference and Exhibition*, *Science Fair Orotava*; *IV Meeting of the Network of Spanish Volcanology*; *EUSEW 2008; EU Sustainable Energy Week 2008, 1st Conference of Canarian Cities of Towns Santa Ursula* and *Interinsular Days on Environmental Education*. Many of these actions are carried out in collaboration with the Tenerife Energy Agency.

The result of collaborations with other entities have been translated in being able to carry out many other activities, such as the celebration of the 2008 European Solar Days in the ITER facilities, support and advice to design the stand of the island of Tenerife in the Expo Zaragoza 2008 and the reception of trainees in the environmental education monitor course of the canarian job service.

The Dissemination Department also works as a Press Office, responsible for sending regular press releases, which are channelled through the Press Office of the Cabildo Insular de Tenerife. In addition, the department frequently collaborates with the media through interviews, reports, or submitting written or graphic material, interviews with management personnel from other departments and the management of the shooting of videos of the facilities are other of the things the department takes care of.

Planeta Vivo Radio

It is a new radio program devoted to the popularization of science and technology related to Planet Earth. This initiative by Radio Nacional de Canarias in Spain (RNE) and ITER through the Environmental area, was born in a very special year (2008), the International Year of Planet Earth, and seeks to contribute to the dissemination and implementation the objectives of this important international statement by the General Assembly of the United Nations in its plenary session on December 22, 2005.

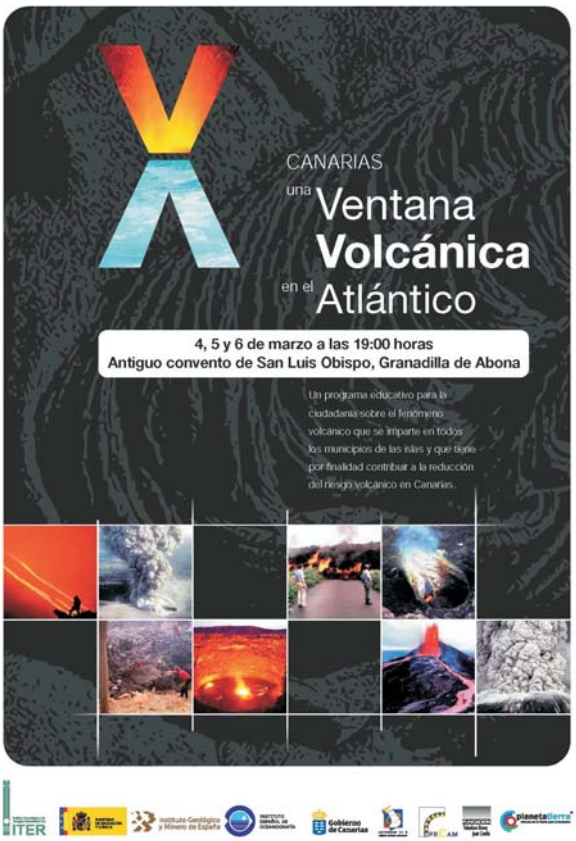
The main purpose of this statement is to raise awareness in society of the relationship between Humanity and Planet Earth, and highlight the importance Earth Sciences have in achieving a balanced and sustainable future to increase the quality of life and safeguard planetary dynamics. This project received funding FECYT, Ministry of Science and Innovation.

Latin American Volcanology Network

This Project of the Environmental Area of ITER was aimed to promote the First Latin American Network of Volcanologist Meeting held in the city of La Antigua (Guatemala) on days 19, 20, 21 and 22 of February. The main objective of this first meeting was to discuss Volcanology´s most important social implication in Latin America, to reduce volcanic risk. The primary interest of this goal was to ascertain the situation and the current status of the efforts of various member countries of the Latin American community are materializing for the reduction of volcanic risk in Latin America. This project was funded by the Ministry of Science and Innovation.

Training Courses of the Pista Local project

During 2008, the Information Technologies Department has carried out various training courses. Among them is the Manager Training Course on Pista Local Plus Tool, aimed at technicians of local authorities in two days' duration, performed 5 times at ITER facilities. In addition to the Training Course on Pista Local Plus framework, aimed at programmers, four days long on two occasions, one in the City of Arafo.



Canarias: Una Ventana Volcánica en el Atlántico

This dissemination and outreach project of ITER Environmental area on the volcanic phenomenon and the volcanic risk management in the Canary Islands began in 2008 and is held in all municipalities of the Canary Islands, including La Graciosa, with the support and the collaboration of Instituto Español de Oceanografía (IEO) and Instituto Geológico y Minero de España (IGME), both under the Ministry of Science and Innovation, Canarian Academy of Security of the Government of the Canary Islands, the Federación Canaria de Municipios (FECAM), and the Telesforo Bravo-Juan Coello Foundation.This program was born from the need to inform and educate the population living in the Canaries on the volcanic phenomenon and volcanic risk management, and has received public praise and applause from the current General Secretary of the International Association of Volcanology and Chemistry Earth's Interior, IAVCEI. (Instituto Geológico y Minero de España, Instituto Español de Oceanografía, Academia Canaria de Seguridad del Gobierno de Canarias, Federación Canaria de Municipios and Fundación Telesforo Bravo-Juan Coello)

23rd European Photovoltaic Solar Energy Conference And Exhibition. 1 - 5 septiembre 2008. Valencia

Oral presentation *6BO7_1 Bottlenecks in the Canary Island Multi-MW PV Development*
M. Cendagorta, C. Montes, A. Linares, E. Llarena, P. González, E. Friend & M. Friend, ITER S.A.

Oral presentation *5CO.8.2 Hybrid Renewable Energy Systems for the Supply of Services in Rural Settlements of Mediterranean Partner Countries. The Hyress Project*
G. Papadakis, Essam Sh.Mohamed, G. Kyriakarakos, Agricultural University of Athens
Abdel-Wahab S. Kassem, Alexandria University
A. Linares, L. Ovidio, ITER S.A.
J. Bard, B. Panahandeh, Institut für Solare Energieversorgungstechnik e.V. (ISET)
A. Outzourhit, University Cadi Ayyad
A. El Khazen, National Agency for Energy Conservation, ANME
R. Janssen, WIP Renewable Energies
E. Kyritsis and S. Kyritsis, Clean Power L. P. Limited

Poster *5BV.3.32 Hyress Project. Study Case of Ksar Ghilene, Tunisia*
M. Cendagorta, M. Friend, L. López-Manzanares & A. Linares, Instituto Tecnológico y de Energías Renovables, S. A. ITER S.A.
A. El Khazen, Agence Nationale pour la Maîtrise de l'Energie

Poster *5BV.2.51 Integration of Solar Photovoltaic in a 25 Bioclimatic Dwelling in Tenerife*
M. Cendagorta, M. Friend, A. Linares, C. Montes, E. Llarena, R. González & M. Delgado, ITER S.A.

Poster *6DV.5.20 Bottlenecks in the Canary Island Multi-MW PV Development*
M. Cendagorta, C. Montes, A. Linares, E. Llarena, P. González, E. Friend & M. Friend, ITER S.A.

Poster *1DV.2.25 Photoluminescence and Morphology of Stain Etched Silicon Nanostructures during Chemical Oxidation and Applied to Silicon-Based Solar Cells*
B. González, B. Díaz, M. Friend & M. Cendagorta, ITER S.A.
R. Guerrero, J. Méndez & V. Rodríguez, ULL

Poster *1DV.2.28 Improvement of Solar Cell Efficiency by Erbium Doping Methods*
B. González, B. Díaz, M. Friend & M. Cendagorta, ITER S.A.
R. Guerrero, ULL

Interinsular Environmental Education Conferences 20th – 23st February 2008. La Laguna

Presentation of the material on CD format *Material Educativo para Jornadas de Ahorro Energético en Colegios e IES - ERAMAC II project*
Guillermo Galván, Wind Energy Department ITER
Erica Pérez y Mónica Alonso. TenerifeEnergy Agency

First Conference on Sustainable Cities and Villages. 24th – 26th March 2008. Santa Úrsula.

Oral presentation *Renewable Energies. Primary Energy Saving*
Guillermo Galván
Wind Energy Department ITER, invited by the Betancourt Foundation

Oral Presentation *Reducing the volcanic risk: an additional bet for the sustainable development of the Canary Islands*
Nemesio M. Pérez and Pedro A. Hernández
Environmental Area ITER

Poster *SOLTEN Photovoltaic Platform*
María Paz Friend
Photovoltaic Energy Department ITER

Technical Visit to the ITER Bioclimatic Dwelling
María Delgado
Bioclimatism Department ITER

Regional conference EURO-SOLAR 2008. 14th – 18th April 2008. Ávila.

Oral Presentation *EURO-Solar system kit and participation in the round tables about installation's planning*
Jesús Rodríguez and Luis O. López
Communication and New Technologies Department ITER

International Conference on Renewable Energy. New markets of Future. Best practices of RES large-scale integration on European islands. RES and the water-energy binomial. Renewable island touristic destinations. 28th – 29th May 2008. Cabildo de Tenerife and Visitors Centre ITER.

Inaugural session
Manuel Cendagorta - Galarza
ITER Manager-Director

Oral Presentation *Photovolataic large-scale integration in an insular system: ITER platforms*
Manuel Cendagorta - Galarza
ITER Manager-Director

Oral Presentation *The project of the bioclimatic dwellings*
María Delgado
Bioclimatism Department ITER

Technical visit to ITER facilities
Photovoltaic Plataform and 25 Bioclimatic Dwelling

Eolica Festival's parallel conferences. An Intelligent World is possible. 5th–6th June 2008. S/C de Tenerife

naugural session
Manuel Cendagorta Galarza
ITER Director-Manager

Oral Presentation *The bioclimatic home: a sustainable habitat*
María Delgado
Bioclimatism Department ITER

Eolica Festival's conferences 2008. 5th July 2008. Visitors Centre. ITER

Photovoltaic Energy
María Paz Friend
Photovoltaic Department ITER

Development of isolated communities by means of the use of Renewable Energy and Information and Communication Technologies. HYRESS and EURO-SOLAR projects
Jesús Rodríguez
Information and New Technologies Department ITER

The future of Energy
Manuel Cendagorta Galarza
ITERDirector-Manager

IV Meeting of the Spanish network of Volcanology. 10th – 12nd September. Almagro, Ciudad Real

Oral presentation *Geo-chemistry of the fumaroles of the Teide volcano, Tenerife, Canary Islands*
Gladys Melián, Franco Tassi, Eleazar Padrón, Dácil Nolasco, Nemesio Pérez, Pedro Hernández, Rayco Marrero, David Calvo, Germán Padilla, José Barrancos, Margarita Díaz

Oral Presentation *Diffuse emission of helium in the Cumbre Vieja volcano, La Palma*
Eleazar Padrón, Pedro A. Hernández, Gladys Melián and Nemesio M. Pérez

Oral Presentation *The hydro-geochemical signature of the Cañanadas del Teide aquifer, Tenerife, Canary Islands*
Rayco Marrero, Dina López, Gladys Melián, Eleazar Padrón, Marga Díaz, Pedro A. Hernández and Nemesio Pérez

Oral Presentation *Volcanological Institute of the Canary Islands (IVC): an urgent bet which cannot be postponed on the Spanish society to contribute for the reduction of the volcanic risk and for the development of volcanological research in Spain*
Nemesio M. Pérez, Juan Acosta Yepes, Susana Briz Pacheco, Ramón Capote del Villar, Juan Jesús Coello Bravo, Emilio Custodio Gimena, Antonio Eff-Darwich, Mercedes Ferrer Gijón, Luís García Cacho, Elena González Cárdenas,Luís González de Vallejo, Pedro A. Hernández, Jesús Ibáñez Godoy, Marceliano Lago San José, Santiago Leguey Jiménez, José López Ruiz, Eduardo Martínez de Pisón, Modesto Montoto San Miguel, Mercedes Peinado Moreno, José A. Rdguez. Losada, Carmen Romero Ruiz, Antonio Santana Santana, Carmen Solana and Luis Suárez Ordóñez

Oral Presentation *CO2 Diffuse emission in Campo de Calatrava, Ciudad Real*
David Calvo, José Barrancos, Germán Padilla, Marianela Brito, Rafael Becerra, Elena González, Rafael Gosálvez, Estela Escobar, Gladys Melián, Dácil Nolasco, Eleazar Padrón, Rayco Marrero, Pedro A. Hernández and Nemesio Pérez

Oral Presentation *CO2 Diffuse emission in the volcanic system of Olot, Girona*
Pedro A. Hernández, Nemesio Pérez1, Emili Bassols, Llorenç Planagumà, Gladys Melián, Eleazar Padrón, Dácil Nolasco, Rayco Marrero, Germán Padilla, José Barrancos

Oral Presentation *Canarias: Una ventana volcánica en el Atlántico, and educational programme on the volcanic phenomenon in the Canary Islands*
Fátima Rodríguez, David Calvo, Rayco Marrero, Gladys Melián, Eleazar Padrón, Dácil Nolasco, José Barrancos, Germán Padilla, Marga Díaz, Pedro A. Hernández and Nemesio M. Pérez

Poster *Gases emission measures by means of remote optical sensors in the Teide volcano, Tenerife*
José Barrancos, Konradin Weber, José I. Roselló, Eleazar Padrón, Pedro A. Hernández and Nemesio Pérez

Poster *Diffuse emission of CO2 by the Timanfaya volcano, Lanzarote, Canary Islands*
Germán Padilla, David Calvo, Bárbara Hernández, Wilhelmo Othoniel, Gladys Melián, Rayco Marrero, Pedro Hernández and Nemesio Pérez

Poster *Geo-chemical monitoring of the CO2 diffuse emission by the Fogo volcano, Green Cape*
Gladys Melián, German Padilla, David Calvo, Nemesio Pérez, Pedro Hernández, José Barrancos, Wilhelmo Fuentes, Jeremisas Cabrales, Alberto Mota Gomes, Zuleyca Bandomo, Sonia Melo, Ignacio Barros

Poster *Diffuse emission of Organic Volatile Compounds (VOCs) into the atmosphere by the Teide volcano (Tenerife, Canary Islands) and other volcanic systems*
Dácil Nolasco, Gladys Melián, David Calvo, Pedro A. Hernández and Nemesio M. Pérez

Poster *Diffuse emission of CO2 by the volcanic lake Laacher See, Germany*
Pedro A. Hernández, Nemesio Pérez, Konradin Weber, Christian Fischer, Kai Bothe, Michael Laue, Rainer Mebus, Hirochika Sumino, Gladys Melián, Eleazar Padrón

Poster *Monitoring of the diffusion emission of CO2 in the NW dorsal of Tenerife: period 2000-2008*
Pedro A. Hernández, David Calvo, Gladys Melián, Eleazar Padrón, Rayco Marrero, José Barrancos, Germán Padilla, Dácil Nolasco, Inás Galindo, Nemesio M. Pérez

Poster *ITER Geodesic Programme for the volcanic surveillance in the Canary Island*
Takeshi Sagiya, José Barrancos, David Calvo, Dácil Nolasco, Gladys Melián, Eleazar Padrón, Germán Padilla, Margarita Díaz

Poster *ITER Geo-chemical programme for the volcanic surveillance in the Canary Island*
Pedro A. Hernández, Eleazar Padrón, Nemesio M. Pérez, Gladys Melián, Dácil Nolasco, Rayco Marrero, José Barrancos, Germán Padilla, David Calvo, Fátima Rodríguez, Margarita Díaz

Conference on European Energy and Climate Change policies. An Insular vision. 28th October 2008. Visitors Centre ITER

Presentation of the conference - *ITER and the Renewable Energies in the Canary Islands*
Manuel Cendagorta Galarza
ITER Director-manager

Current European Projects of the Instituto Tecnológico y de Energías Renovables de Tenerife, HYRESS and EURO-SOLAR Project
Jesús Rodríguez
Communication and New Technologies Department ITER

Publications

Erbium doped stain etched porous silicon
Materials Science and Engineering: B, Volume 146, Issues 1-3, Pages 171-174
B. González, B. Díaz, R. Guerrero, J. Méndez, V.D. Rodríguez, C. Hernández, J.M. Martínez
Photovoltaic Department ITER and ULL

Present and Future of the Photovoltaic Energy
Planaria Magazine - Monográfico número 3: Cambio Climático y nuevas oportunidades de negocio, (Octubre 2008) 23-25
Elsa López
Dissemination Department ITER

Carbon Dioxide Discharged through the Las Cañadas Aquifer, Tenerife, Canary Islands
Pure and applied geophysics. 165 (2008) 147172
Rayco Marrero, Dina L. López, Pedro A. Hernández and Nemesio M. Pérez
Environmental Area ITER
Department of Geological Sciences, 316 Clippinger Laboratories, Ohio University

Changes in the Diffuse CO2 Emission and Relation to Seismic Activity in and around El Hierro, Canary Islands
Pure and applied geophysics, 165 (2008) 95114
Eleazar Padrón, Gladys Melián, Rayco Marrero, Dácil Nolasco, José Barrancos, Germán Padilla, Pedro A. Hernández and Nemesio M. Pérez
Environmental Area ITER

Diffuse CO2 emission rate from Pululahua and the lake-filled Cuicocha calderas, Ecuador Journal of Volcanology and Geothermal Research 176 (2008) 163169
Eleazar Padrón, Pedro A. Hernández, Theofilos Toulkeridis, Nemesio M. Pérez, Rayco Marrero, Gladys Melián, Giorgio Virgili, Kenji Notsu
Environmental Area ITER
Center of Geology, Volcanology and Geodynamics, Univ. S. Francisco de Quito
WEST Systems, Italy
Laboratory for Earthquake Chemistry. University of Tokyo

SO2 Emission from Active Volcanoes Measured Simultaneously by COSPEC and mini-DOAS
Pure and applied geophysics, 165 (2008) 115133
José Barrancos, José I. Roselló, David Calvo, Eleazar Padrón, Gladys Melián, Pedro A. Hernández, Nemesio M. Pérez, Millán M. Millán and Bo Galle
Environmental Area ITER
Centro de Estudios Ambientales del Mediterráneo Foundation
Chalmers University of Technology, Göteborg

Publication of the special volume of the scientific magazine *Pure and Applied Geophysics Terrestrial Fluids, Earthquakes and Volcanoes Vol. III* acting the Director of the Environmental Area of ITER as invited Chief-editor.

INVESTEE COMPANIES

.8.

Solten II Granadilla S.A.

Energía Verde de la Macaronesia S.L (EVM)

EVM2 Energías renovables S.L.

Eólicas de Tenerife, AIE

Fundación ITER

Parque Eólico Punta de Teno S.A.

Agencia Insular de la Energía de Tenerife, Fundación Canaria

Parque Científico y Tecnológico de Tenerife S.A.

Constante Solar S.L.

NAP África Occidental-Islas Canarias S.A.

Soluciones Eléctricas Insulares S.L.

8 INVESTEE COMPANIES

The Technological Institute of Renewable Energies PLC., ITER, promotes and participates in the capital of companies or entities with the aim of carrying out activities that are specifically entrusted under its social purpose.

These are, among others, the implementation and promotion of applied research in the field of renewable energies or related with them, the creation of the needed infrastructure for the development of local research activities, engineering and industry or the development of results for the local industry, and the exportation of know-how to other countries and archipelagos.

Currently, the network of companies participated by ITER consists of the ones listed below which include a brief presentation:

Investee companies	ITER Participation
Solten II Granadilla S.A.	21,55%
Energía Verde de la Macaronesia S.L (EVM)	39,94%
EVM2 Energías renovables S.L.	30,00%
Eólicas de Tenerife, AIE	50,00%
Fundación ITER	100,00%
Parque Eólico Punta de Teno S.A.	3,00%
Agencia Insular de la Energía de Tenerife, Fundación Canaria	23,53%
Parque Científico y Tecnológico de Tenerife S.A.	1,80%
Constante Solar S.L.	4,40%
NAP África Occidental-Islas Canarias S.A.	48,52%
Soluciones Eléctricas Insulares S.L.	100,00%

Solten II Granadilla S.A.

Trading company established the 26th of October 2007, and registered in the Company House of Santa Cruz de Tenerife. It is shared by private investors and ITER.

Solten II Granadilla S.A deals with the acquisition, promotion, management, development and exploitation of PV solar platforms, as well as with the production, transport and distribution of electricity from solar photovoltaic platforms.

Private investors interested in the production of PV solar energy connected to the grid have, this way, the opportunity to participate by means of the purchase of shares in sustainable initiatives for the economical and industrial development of the island, contributing to increase the participation of renewable energy in the primary energy balance of the Canary Islands.

Energía Verde de la Macaronesia S.L (EVM)

Trading company established the 10th of October, 2007, and registered in the Company House of Santa Cruz de Tenerife. It is shared by Sumitomo Corporation, ITER, Cerco Tenerife LTD., Feralon Canarias LTD., and two private investors.

As established in its social purpose, the limited company Energía Verde de la Macaronesía (EVM1) has the aim of promoting, designing, constructing and exploitation of all kinds of renewable energy plants, as well as the implementation and promotion of any type of applied research in the field of renewable energies and the development of systems or techniques that allow the use of them.

EVM2 Energías renovables S.L.

Trading company established the 10th of October, 2007, and registered in the Company House of Santa Cruz de Tenerife. It is a limited company whose main shareholders are Proparsa 2000 PLC., ITER PLC., Cerco Tenerife LTD. and Feralon Canarias LTD.

The social purpose is the promotion, design, construction and exploitation of all kinds of renewable energy plants as well as the implementation and promotion of any type of applied research in the field of renewable energies and the development of systems or techniques that allow the use of them.

Eólicas de Tenerife, AIE

Economic Interest Association established on November 27th, 1995, and registered in the Company House of Santa Cruz de Tenerife.

It is integrated by Unelco Participadas PLC., el Instituto Tecnológico de Energías Renovables S.A and Made Energías Renovovables PLC. The social purpose of the Association is the cooperation between the shareholder for the development and research in the field of wind energy, by means of the promotion, construction, exploitation and management of the resources of Tenerife, increasing therefore the wind energy exploitation in the island.

Eólicas de Tenerife owns the 4.8 MW Wind Farm installed in ITER lands, which consists of 8 MADE AE-46 wind turbines, each one with 600 kW nominal Power and has an annual energy production of 14 GWh.

Fundación ITER

Foundation established the 3rd of December, 1997, and registered in the official Foundations Registry of Santa Cruz de Tenerife with ITER as its only shareholder.

The foundation has as social purpose the promotion, development of scientific, technical and economical activities in renewable energies and technologies, which contribute to reduce the dependence on imported oil, to obtain stable and competitive prices and to guarantee minimum energy supplies for production and elevation of drinkable water in exceptional situations.

For the development of these aims the Foundation carries out different actions:

- Awarding of financial grants.
- Awarding of grants to institutions.
- Participation in the development of activities from other entities that carry out overlapping or complementary activities with the Foundation.
- Studies, research, courses and conferences.
- Publications, exhibitions and other cultural activities.

Parque Eólico Punta de Teno S.A.

Trading company established the 30th of June, 1997, and registered in the Company House of Las Palmas de Gran Canaria, being its shareholders the City council of Buenavista del Norte, Unelco participadas PLC., Vega Luz Teno Ltd, owner of the land where the Wind Farm is located, and Instituto Tecnológico y de Energías Renovables PLC.

This public limited company is in care of the promotion, installation, exploitation and management of the Wind Farm in the Municipality of Buenavista del Norte, Parque Eólico de Punta Teno, within the municipality of Buenavista del Norte.

This wind farm has an installed power of 1.800kW, divided into 6 wind turbines of 300kW each, with an estimated annual energy production of 6180 MWh.

Agencia Insular de la Energía de Tenerife, Fundación Canaria

Foundation established the 3rd of December, 1997, and registered in the Company House of Santa Cruz de Tenerife with Cabildo Insular de Tenerife as founding member.

The foundational members of the Tenerife Energy Agency is formed by Cabildo Insular de Tenerife, Instituto Tecnológico y de Energías Renovables, Fundación Canaria Caja Rural Pedro Modesto Campos, Loro Parque PLC., Endesa Distribución Eléctrica LTD., Compañía Transportista de Gas de Canarias PLC. and Asociación Hotelera y Extrahotelera de Tenerife, La Palma, La Gomera y El Hierro.

As established in its social purpose, the foundation has as aim to coordinate and collaborate with the different administrations, particularly those from the island, to facilitate measures for the rationalization of energy production and consumption that enable to achieve the highest level of energy self-sufficiency in the island territory.

And develop, in collaboration with local bodies, the implementation of dissemination, promotion and implementation programs of actions related to renewable energies and energy efficiency and saving.

Parque Científico y Tecnológico de Tenerife S.A.

Trading company established the 10th of January, 2006, and registered in the Company House of Santa Cruz de Tenerife. This insular company with mixed economy is participated by Cabildo Insular de Tenerife as principal shareholder, the City council of Santa Cruz de Tenerife and Instituto Tecnológico y de Energías Renovables PLC.

This Public Limited Company has a social purpose the promotion and management of the Scientific and Technological Park of Tenerife through out the recruitment and establishment of companies and institution of research, innovation, development or production of unique technology.

Within its social purpose we can highlight the following activities: Acquisition of land and make it suitable for building in order to make an attractive land offer to potential investors, promoting the all purpose building of the Park, promoting the construction of any buildings or warehouses as possible headquarters for companies who want to settle in the park, management and administration of them, the actions aimed at enhancing the relationship between companies that settle in it along with the technology centres and institutions that generate knowledge and the promotion of relations with the national and international scientific community.

Constante Solar S.L.

Trading company established the 11th of April, 2006, and registered in the Company House of Santa Cruz de Tenerife. It is a limited company whose foundational shareholders are el Instituto Tecnológico y de Energías Renovables and the trading company Energías Renovables de Canarias LTD.

Constante Solar LTD. works in the field of solar energy and is engaged in the manufacture of solar thermal collectors and photovoltaic panels for the use of solar energy and other equipment, materials and articles that are related to renewable energy in general.

As it is reflected in its social purposes, the company focuses its activities on the manufacture of low-temperature solar thermal systems, equipment and systems for solar thermal installations, projects, studies, consulting, energy audits, training and computer calculation programs, design and manufacture of components.

NAP África Occidental-Islas Canarias S.A.

Trading company established the 28th of April, 2006, and registered in the Company House of Santa Cruz de Tenerife. It is shared by a high number of companies including Chafiras PLC., Construcciones Gomasper LTD., Obras y Servicios Daltre LTD. and Instituto Tecnológico y de Energías Renovables.

This society is aimed for the purchase of infrastructure for the establishment of the Neutral Access Node NAP in Tenerife, the operation and maintenance of the telecommunications networks within the NAP of clients housed at the neutral point, as well as of the own ones of the centre.

The NAP of Tenerife, which is planed to be built in La Laguna, is one of the centres that Terremark plans, together with other two in Jordan and the Dominican Republic, and will help to reduce the cost of Internet connection for Africa, to focus the international traffic of data to this continent and to manage the regional communication.

Soluciones Eléctricas Insulares S.L.

Trading company established the 17th of July, 2007, and registered in the Companies House of Santa Cruz de Tenerife. It is totally shared by Instituto Tecnológico de Energías Renovables PLC.

As established in its social purpose, this limited company has as aim the manufacture, installation, marketing and distribution, both in national territory and abroad, of all sorts of articles and materials related to electricity and renewable energy in general, as well as the construction, repair, restoration and preservation of the building works and, specifically, facilities involving directly or indirectly the use of renewable energies.

The company also elaborates studies, technical projects, offers advisory services, technical support and engineering management within the field of any activity in renewable energy and technological innovation, together with research, development and demonstration for the development of the activities listed above.

ENERGY PRODUCTION

.9.

Solten I

Solten II

Finca Verde

Finca Roja

Mercatenerife

Piloto Plant

Parque Made

Experimental Platform

Enercon Park

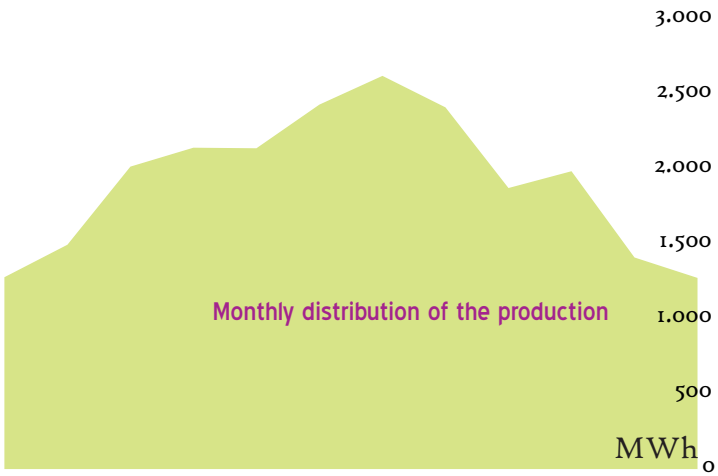
9 ENERGY PRODUCTION

The energy production details of ITER installations and of those in which the Institute participates are shown next.

The following information is given for each instalation:

- Installed power (kW)
- Generated energy (MWh)
- Participation percentage (%)
- Equivalent consumption (persons)
- Tons of CO2 emissions avoided (tons)
- Monthly distribution of the production during 2008 (kWh)

Solten I

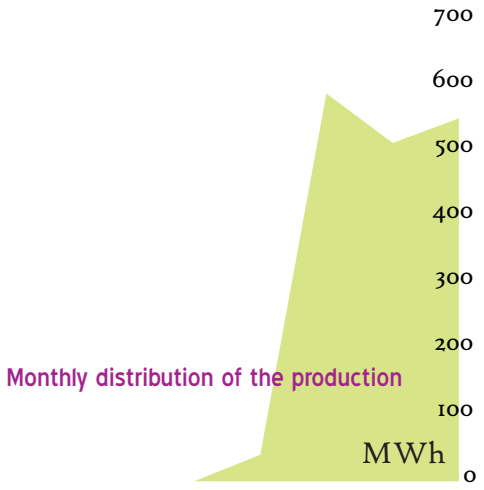


Installed Power 13.000 kW
Generated Energy 22.921,462MWh
ITER participation 400 kW
Equivalent consumption 27.145 persons
Tons of CO2 emissions avoided 12.729ton

Solten II

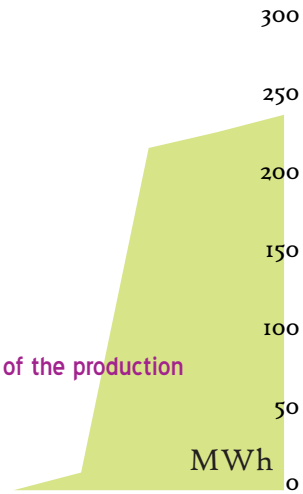
Installed power 11.000 kW
Generated energy 14.008,735 MWh
ITER Participation percentage 21,55 %
Equivalent consumption 16.590 persons
Tons of CO2 emissions avoided 7.779 tons

Finca Verde



Installed power 9.000 kW
Generated energy 1.686,130 MWh
ITER Participation percentage 30 %
Equivalent consumption 1.997 persons
Tons of CO2 emissions avoided 936 tons

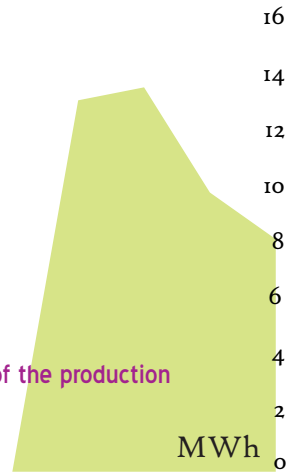
Finca Roja



Monthly distribution of the production

Installed power 3.600 kW
Generated energy 696,060 MWh
ITER Participation percentage 39,939 %
Equivalent consumption 824 persons
Tons of C02 emissions avoided 386 tons

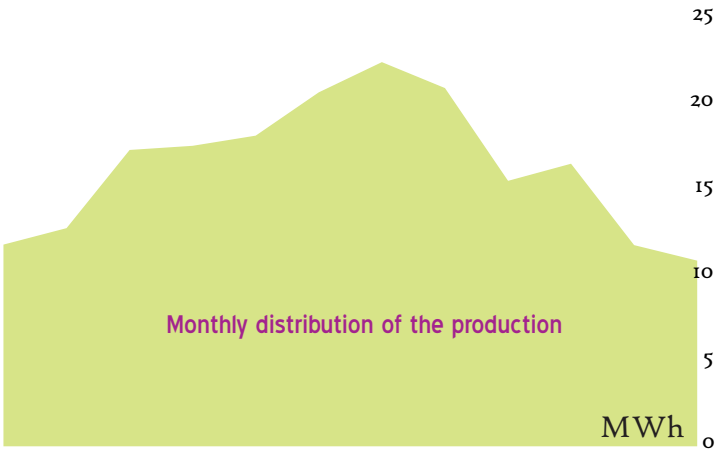
Mercatenerife



Monthly distribution of the production

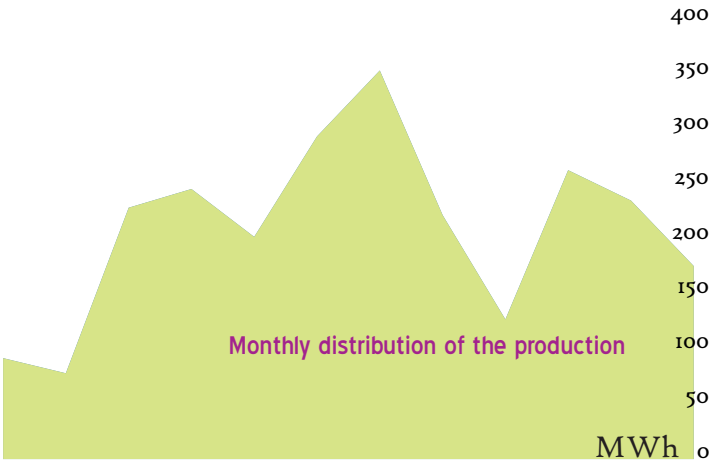
Installed power 100 kW
Generated energy 45,3 MWh
ITER Participation percentage 100 %
Equivalent consumption54 personas
Tons of C02 emissions avoided 25 tons

Planta Piloto



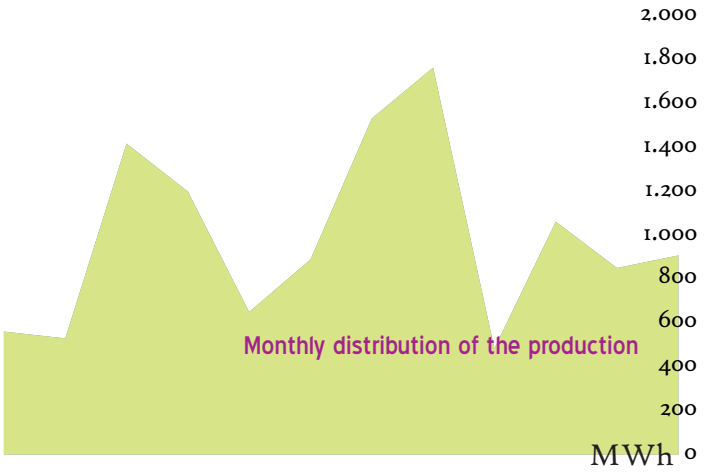
Installed power 100 kW
Generated energy 178,491MWh
ITER Participation percentage 100 %
Equivalent consumption 211 persons
Tons of CO2 emissions avoided 99 tons

Plataforma Experimental



Installed power 2.830 kW
Generated energy 2.514,901 MWh
ITER Participation percentage 75,26 %
Equivalent consumption 2.978 persons
Tons of CO2 emissions avoided 1397 tons

4,8MW Wind Farm



Installed power 4.800 kW
Generated energy 11.794,995 MWh
ITER Participation percentage 50 %
Equivalent consumption 13.969 persons
Tons of C02 emissions avoided 6.550 tons

5,5MW Wind Farm

Installed power 5.500 kW
Generated energy 11.224,554 MWh
ITER Participation percentage 100 %
Equivalent consumption 13.293 persons
Tons of C02 emissions avoided 6.233 ton

ITER 2008

CABILDO DE TENERIFE

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