

## STE Energy: a global player in the energy field

With more than two hundred plants executed in the last few years in Italy and abroad and offices in many different countries, nowadays **STE Energy** can be considered as among the major Contractors in the field of energy and plant construction.

Born in Padua in 1995 and first of the companies managed by **Sorgent.e**, **STE energy** develops, designs, builds and manages as **General Contractor** a number of plants for the production of energy, mainly of a hydroelectric type, as well as electric and heating plants.

All over the world **STE Energy** carries on wind farms, PV, biomass and cogeneration projects as well as it executes plants for the production, transport and distribution of electrical and thermal power.

Thanks to collaborations with important research centers and partnerships with worldwide leading suppliers, **STE Energy** – by guaranteeing high quality, performance and efficiency – aids, with its experience, the engineering of preliminary and final projects.

In this context, STE Energy promotes an organic collaboration with its own clients and local organizations affected by this kind of interventions, even arranging the availability of the management competences of the whole group, achieved by practice in complex systems.

**STE Energy**'s general knowledge and background are based not only on sustainable development but also on the social effects of the productive and economic processes. The growth in values of human resources considered as competitive human capitals to invest on is an important and representative feature of the company.







## A company by Sorgent.e Holding



#### "Investment Company"

Specialized in renewable energy sectors:

• Wind • Hydro • Photovoltaich

(total investments: more than 400mln€):

### "Service Company"

30 companies working in the renewables.

Installed Power: more than **300 MW**More than **50 Projects** obtained in the world

#### "General Contractor"

EPC - BOP - TurnKey
900 MW installed
200 MW under construction
Works in more than 20 countries
More than 100 Projects realized





## **BUSINESS AREAS**

### Energy

- Co-generation and biomass PP
- Hydroelectric PP
- PhotoVoltaic PP
- Wind Farms

### **M&E Services**

- Electric
- Heating and conditioning
- Energy saving
- Engineering and electric instrumentation







## **OUR MAIN ACTIVITIES**

**General Contractor** 

**EPC Contractor** 

**Turnkey Solutions** 

Balance of plant

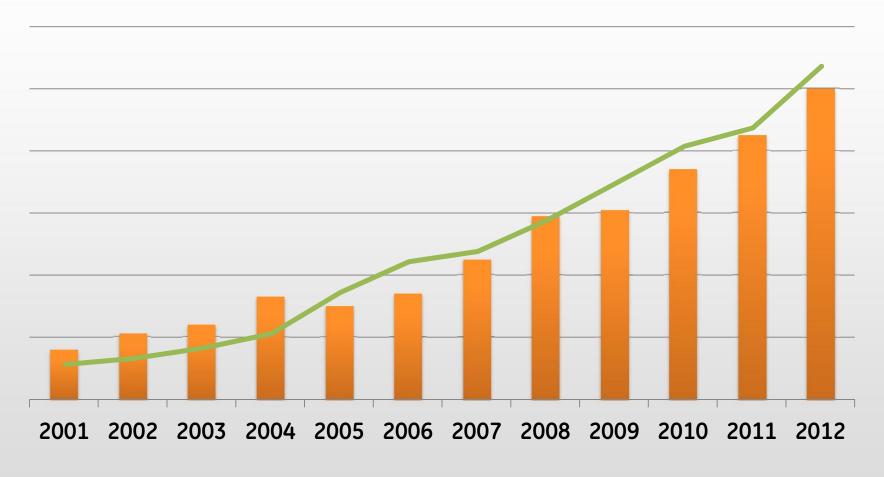
- Development of Power Plants sites
- Project management
- Erection
- Assembly
- Commissioning
- •Operation & Maintenance







## VALUES OF A STABLE GROWTH



Foreseen values of 2012 (holding's data)



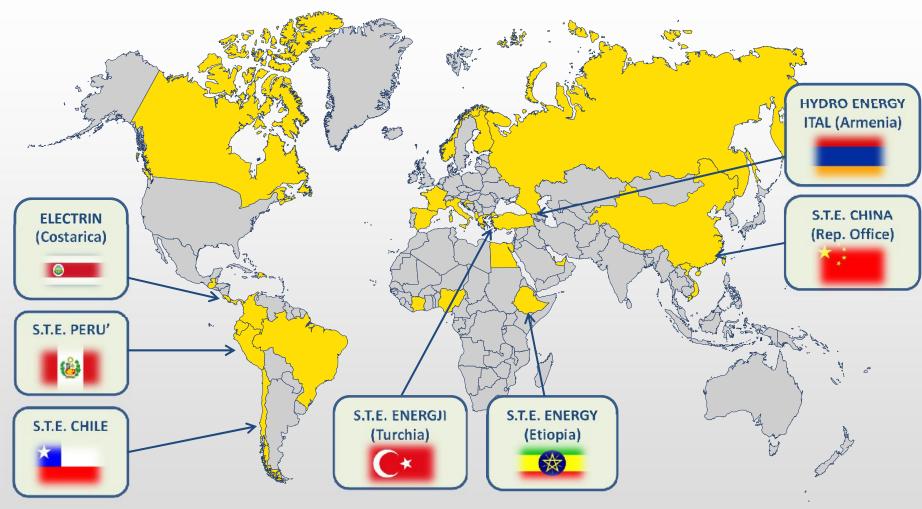
Production: 100 M€

Employees: 180





### WORLDWIDE PRESENCE & LOCAL BRANCHES



FRANCE | GREECE | CROATIA | NORVAY | FINLAND | TURKEY | ALBANY | SPAIN | RUSSIA | IVORY COAST | EGYPT | ETHIOPIA | NIGERIA | QATAR | UAE | CHINA | VIETNAM | DOMINICAN REPUBLIC | GUATEMALA | NICARAGUA | COSTA RICA | CHILE | BRASIL | PERU' | EQUADOR | COLOMBIA |





## O&M - Remote Control System

- In order to allow a Continuous and Centralized Control of the energy production, STE Energy developed a comprehensive Remote Control System based on SCADA (Supervisory Control And Data Acquisition) interfaces
- Through the centralized control room at STE
   Energy facilities in Padua (Italy) or other local
   control rooms, the STE Energy Remote
   Control System monitors on a 24/7 basis all
   the main operations parameters of several
   power plants and remotely supports its
   scheduled and unscheduled maintenance.



Main advantages of the STE Remote Control System are

Optimization of Production Output and Reduction of "out of order" Time thanks
to a timely alarming service





## **O&M - STE Guardian**

- STE Guardian is a web-based application aimed to manage and simplify the periodical maintenance of the power plant
- Main funcionalities:
  - ✓ Management of the centralized system
  - ✓ Real-time reports of production and works data
  - ✓ Simulation of work orders
  - ✓ Generation of maintenance plan
  - Alarms management
  - ✓ Meters read out.
  - Spares warehouse management
  - ✓ Daily news

A control room available through one click!





iPhone #iPad #: BlackBerry





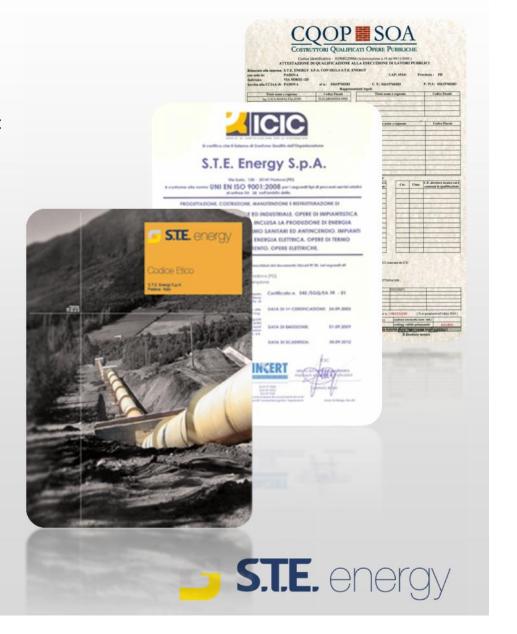
## QUALITY, CERTIFICATES AND INTERNAL POLICIES

ISO 9001 Quality Certificate

Qualifying Certificate (SOA) for Italian public works. (unlimited in OG9 category - EPC for Power Generation Systems)

International Safety and Security Certificates.

Ethical Code.





### SOME REFERENCES

- **Hydroelectric Power Plants**
- \*
- **Electromechanical Plants**
- Photovoltaic Power Plants
- Wind Farm
- DO

Cogeneration Systems

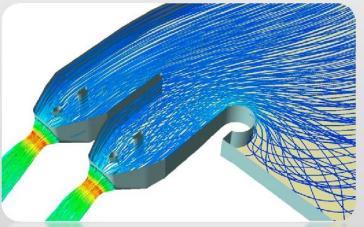




## INNOVATION AND DEVELOPMENT

- VLH turbines with very low head
- Pelton, Francis, Kaplan turbines
- Asynchronous and Synchronous generators
- Generator with permanent magnet
- Frequence convertor
- Hybrid compact high voltage substation
- "Smart grid" system
- Test hydraulic systems
- Low environmental impact plants













# **MARIPOSAS**

<u>Description:</u> Turnkey design, supply and

assembly of electrical works

Site: Chile

Year: 2009-2010

Feature: Francis 1 x 5900 kW.









## **CHIBURGO**

<u>Description</u>: Turnkey design, supply and

assembly of electrical works

Site: Chile

Year: 2005-2007

Feature: Francis 2 x 12000 kW









## **LOS NEGROS**

<u>Description</u>: Turnkey design, supply and assembly of electrical, automation

and mechanical works

Site: Costa Rica

Year: 2004-2005

Feature: Francis 2 x 10000 kW







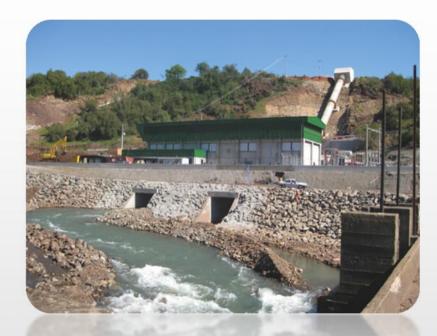


<u>Description</u>: Hydroelectric Power Plant

Site: Chile - Maule Year: 2007-2009

Feature: Francis 21.4 MWe







# **©** QUITARACSA

<u>Description</u>: Hydroelectric Power Plant

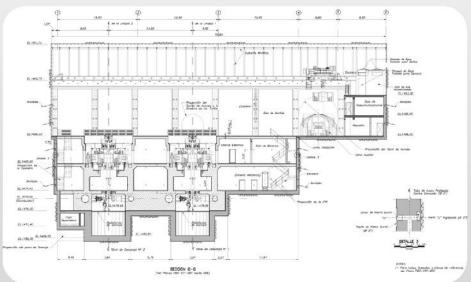
Site: Perù

<u>Year</u>: 2011-2013

Feature: 112 MWe











# C. I. MONTODINE

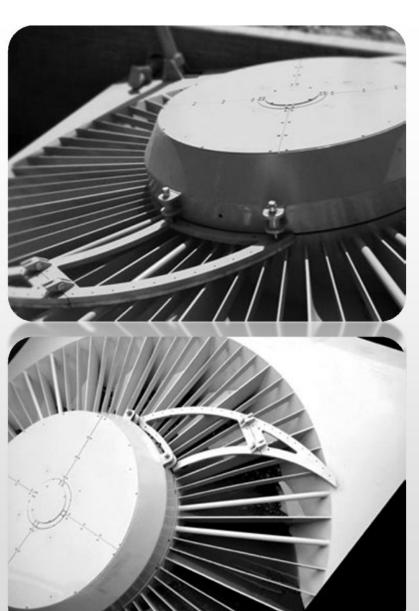
<u>Description</u>: Hydroelectric Power Plant

Site: Italia - Cremona

Year: 2011

Feature: VLH, 0.5 MWe











<u>Description</u>: Turnkey design, supply and assembly of electrical and automation works.

Site: Turkey

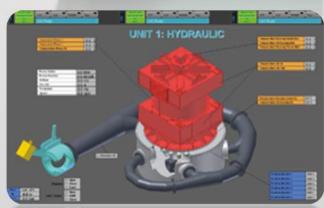
Year: 2008-2010

Feature: Pelton 3 x 11800 kW















Description: Turnkey design, supply and

assembly of electrical and automation works

Site: Turkey

Year: 2008-2010

Feature: Kaplan 3 x 7770 kW













<u>Description</u>: Turnkey design, supply and assembly of civil, electrical, automation and mech. works.

Site: Italy

Year: 2004-2005

Feature: Francis 4 x 1800 kW











## C.I. VOLTABAROZZO

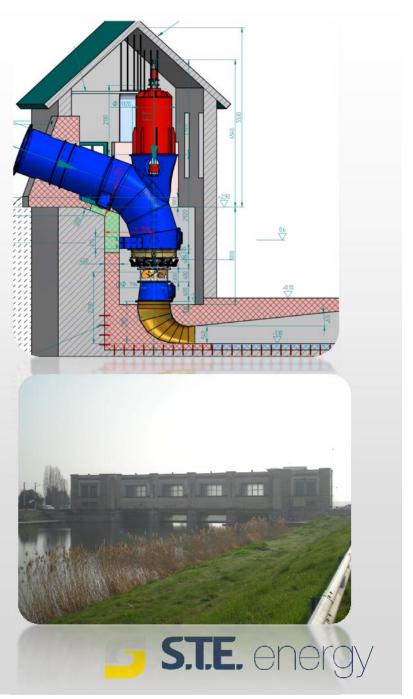
<u>Description</u>: Hydroelectric Power Plant

Site: Italy - Veneto

<u>Year</u>: 2000

Features: 0.8 MW Kaplan





### SOME REFERENCES

- Hydroelectric Power Plants
- **Electromechanical Plants**
- Photovoltaic Power Plants
- Wind Farm
- Cogeneration Systems





## 15 TOWNS - ETHIOPIA

**Description**: Waterworks

Site: Ethiopia

Year: 2011 - 2013

Feature: 95 boreholes in 15 cities













## CITTA' DELLA SPERANZA – RESEARCH CENTRE

<u>Description</u>: Building of Laboratories

and Officies

Site: Italia - Padova

Year: 2011 - 2012











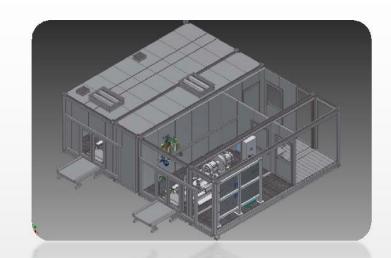
## CATERPILLAR CONTROL CENTRE

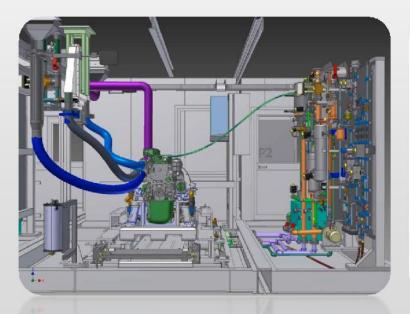
<u>Description</u>: Revamping of Check Systems for

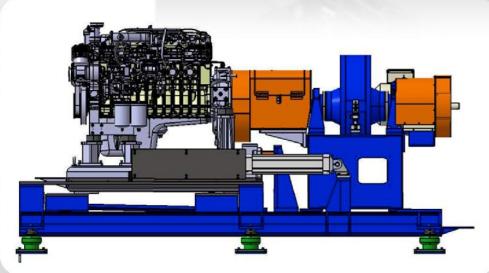
motor industry

Site: India - Bangalore

<u>Year</u>: 2012











### SOME REFERENCES



**Hydroelectric Power Plants** 



**Electromechanical Plants** 



**Photovoltaic Power Plants** 



Wind Farm



**Cogeneration Systems** 





# INTERPORTO PADOVA

<u>Description</u>: Photovoltaic Power Plant

Site: Italy - Padova

Year: 2010

Feature: 12.5 MWe, roof: 240,000 sqm





<u>Description</u>: Photovoltaic Power Plant

Site: Italy - San Fiorano (LO)

Year: 2011-2012 Feature: 6 MWp









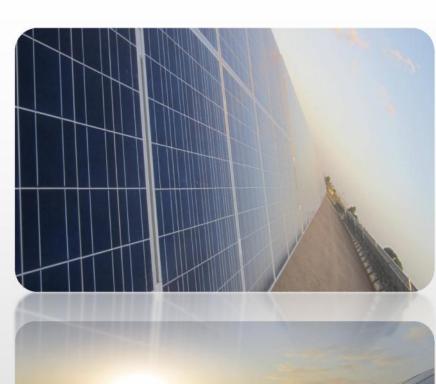


<u>Description</u>: Photovoltaic Power Plant

<u>Year</u>: 2011

Feature: Ground mounted PV Plant

Power: 1 MWp











# DOMESTIC PV SYSTEMS

<u>Description</u>: Photovoltaic Power Systems

Site: Italy

Sorgent.e

<u>Year</u>: 2009-2011 <u>Feature</u>: 1,2 MW





### SOME REFERENCES









Cogeneration Systems





## Nuova Siri PP

<u>Description</u>: Wind Farm

Site: Italy - Basilicata

<u>Year</u>: 2007 - 2008

Feature: 12x1.5 MWe



## Ariano Irpino

<u>Description</u>: Wind Farm

Site: Italy - Avellino

<u>Year</u>: 2011 - 2012

Feature: 5x2,050 kW







### SOME REFERENCES









Cogeneration Systems







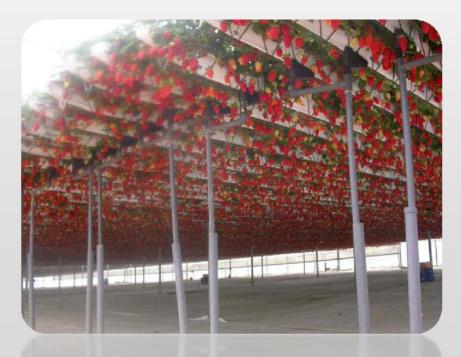
<u>Description</u>: Cogeneration Plant with wood

biomass for agriculture uses

Site: Italy - Torino Year: 2012-2013

Feature: 1MWe - 4.1 MWt











## Cesano Boscone PP

<u>Description</u>: Cogeneration Plant with wood

biomass for district heating

Site: Italy - Milano Year: 2011-2012

Feature: 1 Mwe, 12 MWt, 1600 apartments

(I°step) final projects: 5.000 ap.













<u>Description</u>: Cogeneration Plant with gas for district heating

Site: Italy - Milano Year: 2009-2011

Feature: 2x4MWe gas engines, 2 boilers, 24 MWt









<u>Description</u>: Cogeneration Power Plant

Site: Italy

Features: Thermal Power 5.3 MWt













### **OUR OFFICIES**



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