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ENERGY
TECHNOLOGY



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ART AND RENEWABLE ENERGY TECHNOLOGY

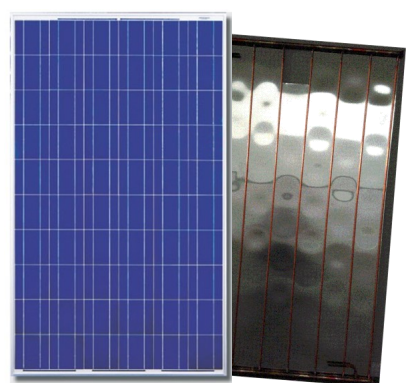
ALRET is the exclusive agent in the Middle East and Gulf region for many of the world's leading companies in the field of energy saving solutions and renewable energy use.

Interested in research, study and development in the harmonious use of several solutions in order to reach the highest possible degree of effectiveness and the lowest possible space for all residential,



based in Fujairah -United Arab Emirates. that has been formed and registered to take these plans and goals forward by researching,studing,and developing the energy solutions.

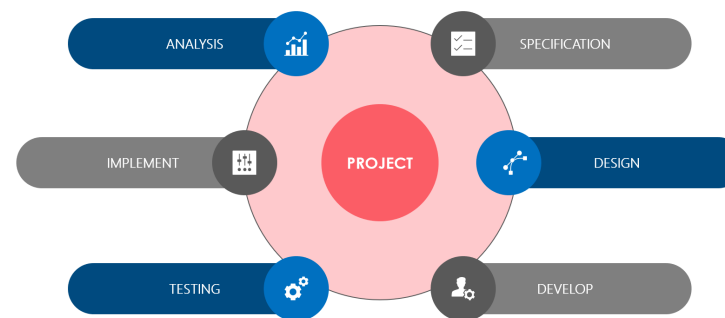
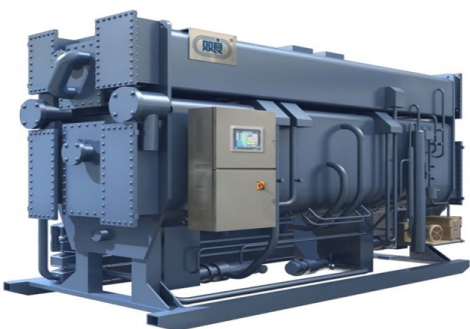
Executive Directors have been carefully picked and will occupy strategic positions with in the company for their expertise and knowledge so essential for this project to work



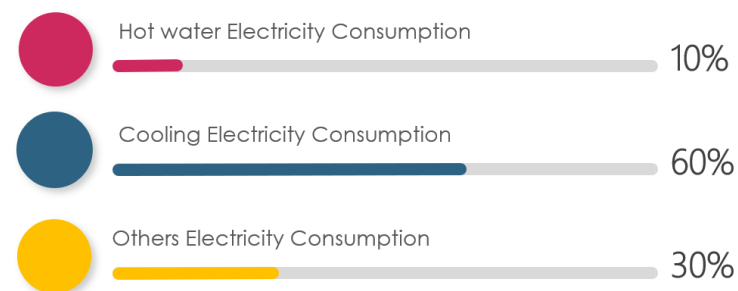
AT ALRET, WE PROVIDE RESIDENTIAL AND COMMERCIAL SOLAR SOLUTIONS MEETING CLEAN ENERGY COUNCIL DESIGN AND INSTALLATION REQUIREMENTS.

From the point of first contact we:

- Analyze your energy requirements
- Recommend the best solar or hybrid panels and batteries suitable for your energy requirements
- Design the solar panel roof layout for optimising energy production, aesthetics and structural safety
- Supply the complete package of components, including inverters, rails and isolators, in addition to the panels and batteries
- Install the system and check that everything works as it should soon after



By using the same area to provide the electrical power for any project we can provide the hot water & cooling system with 90% saving of electricity.



Heating & Cooling System

WHY WE ARE DIFFERENT

- Always Clean Energy**
Unlike conventional power, solar power produces no harmful emissions that hurt the environment.
- Long Time to Use**
Solar power during as the years, you need only some little maintenance on the power system.
- Easy Installation**
No longer must you decide to go either Solar Thermal (Water Heating) or Solar PV (Electric) because of limited optimum roof space.
- Used for Many Purposes**
Solar generate electricity . You can use it for your home, your boat and many other situation.
- Increase Property Value**
Installing rooftop solar panels boosts a Home's Green credentials while cutting utility bills, and Increasing the Value of your home.
- Increase Electrical Output**
NeOn Energy's Patent Technology allows you to Improve PV Electrical Output Significantly, while generating warm water to heat your water or your pool.



Quality panels manufactured Class A



Tier 1



If the 19th century was the age of coal and the 20th of oil, the 21st will be the age of the sun. It is NeOn Energy & ALRET's goal to enhance the development of solar powered solutions and energy services for the Middle East, Gulf & Africa by being a leader in assisting and providing consumers with:

- establishing the true energy potential of the site covering a high share of the energy demand with renewable energies,
- calculating the true cost and return on investment of the installation and use the best solar solution for their

TwinPower PVT Hybrid

- Electrical + Thermal power
- 300% more Energy/m²
- Thermal regulation = 30% more efficient than conventional PV panel.



TWINPOWER[®] BENEFIT

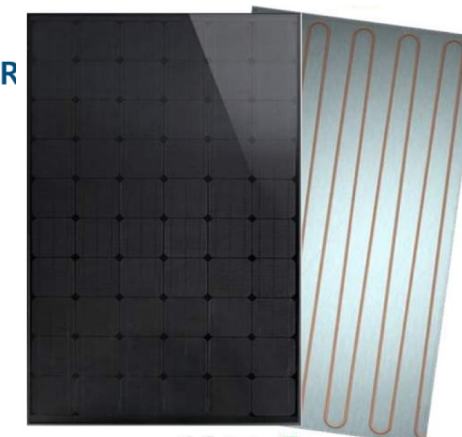
- WHY WE ARE DIFFERENT

PHOTOVOLTAIC + SOLAR THERMAL IN A SINGLE PANEL FOR HEATING HOT WATER AND ELECTRICITY PRODUCTION.

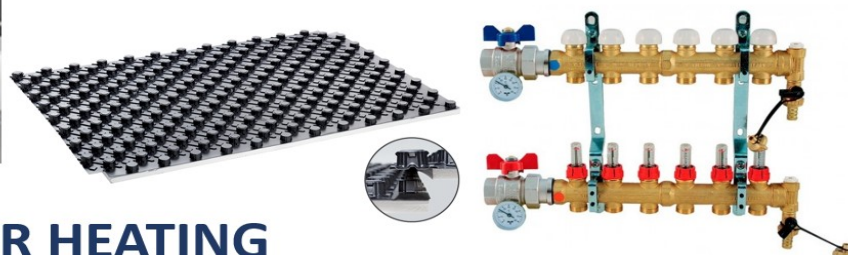
A SYSTEM WITH HIGH-ENERGY EFFICIENCY, LOW COST AND VERY ENVIRONMENTALLY FRIENDLY.

Suitability:

- Suitable for buildings with a high consumption of hot water and electricity e.g. Malls, Hospitals, Schools, Homes.
- Ideal for new homes and developments.
- Perfect for those with a swimming pool, with the ability to heat water at no cost.
- Ideal for those who are attentive to the esthetics of the house and do not want to see two different types of panels on the roof.



FEATURES	BENEFITS
PRODUCES ELECTRICITY FROM THE SUN	SAVE MONEY ON YOUR ELECTRIC BILL UP TO 100%
COMBINED SOLAR ELECTRIC AND WATER HEATING SYSTEM	LARGELY ELIMINATES THERMAL HEATING COST, MAXIMIZING YOUR THERMAL COST INVESTMENT
THE INSTALLATION PLANT IS USUALLY 30% TO 40% SMALLER THAN THE NORMAL DOUBLE SYSTEM	GENERATES UP TO 300% ENERGY FROM THE SAME ROOFTOP SPACE, SAVING YOU MORE MONEY
PV COOLING SYSTEM	INCREASE EFFICIENCY OF THE PV UP TO 30% IN COMPARISON OF NORMAL PV IN SAME CONDITIONS AND INCREASE LIFESPAN
THE SYSTEM CAN BE CONNECTED TO THE ABSORPTION CHILLERS	REDUCES THE CHILLER ELECTRICITY UP TO 100%
PHOTOVOLTAIC AND THERMAL IN A SINGLE PANEL	BETTER AESTHETIC, LESS IMPACT ABOVE THE ROOF THAN NORMAL PV FOR THE SAME ENERGY



UNDERFLOOR WATER HEATING & COOLING

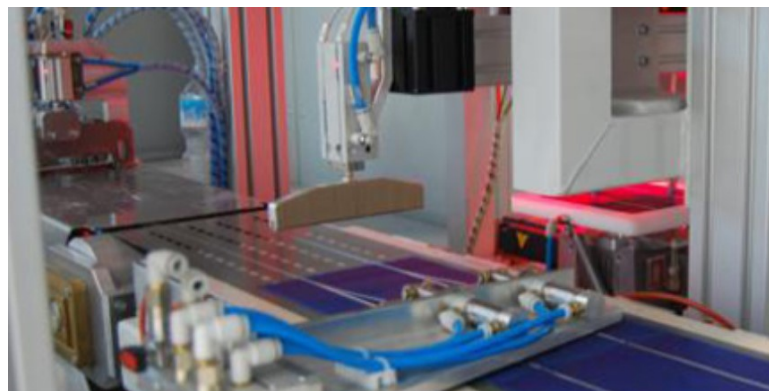
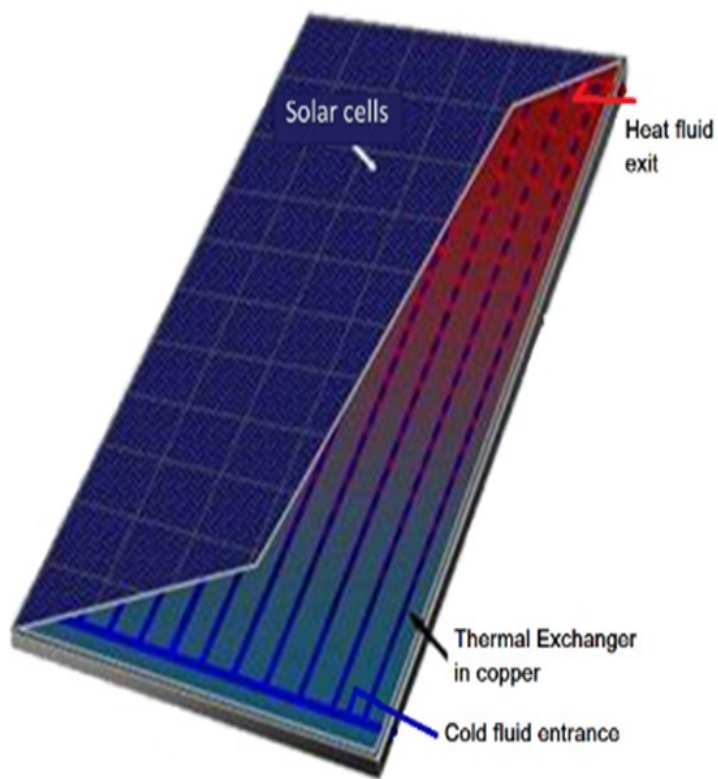




PVT is an innovation to a PV panel.
A thermal exchanger is installed on the backside of the PV panel.

This thermal exchanger drops the PV temperature.
Giving the panel a powerful and longer life cycle, generating more power and giving hot water as well.

TWINPOWER - PVT



The cooling system, allows the panel to work under the conditions of lower thermal stress. Thereby ensuring the increase in life span expectancy. In comparison to a normal PV system



Generates free electricity and Hot Water all in one Panel for your building while providing thermal and electricity, day lighting and night time with storage control.

The TWINPOWER Panel pays for itself due to the energy savings derived from a high performing Photovoltaic Panel plus the thermal energy generated by the thermal exchanger, which is used for self-consumption or for delivery to the Grid.

With this Solar photovoltaic thermal TWINPOWER you will benefit from having low or the same rate of energy cost for the building despite the continuing increase in the local electricity price.

Photovoltaic thermal technology tackling all the challenges faced with the conventional PV system



The environmental effect

With the PVT system installed the temperature of the panel remains low negating the affect of excess heat and avoiding micro cracks.



The power generation

With no micro cracks, the panel performs close to the rated power and generates more electricity.



The Cost and the ROI

This generation in power results in a better cost and ROI.

NeOn Energy's production line relies on state-of-the-art machines and robotic systems and manages the most important steps of the process. Thanks to the modularity and flexibility of the line, it is possible to produce different types of modules with extremely fast set-up times involving a good number of operators.

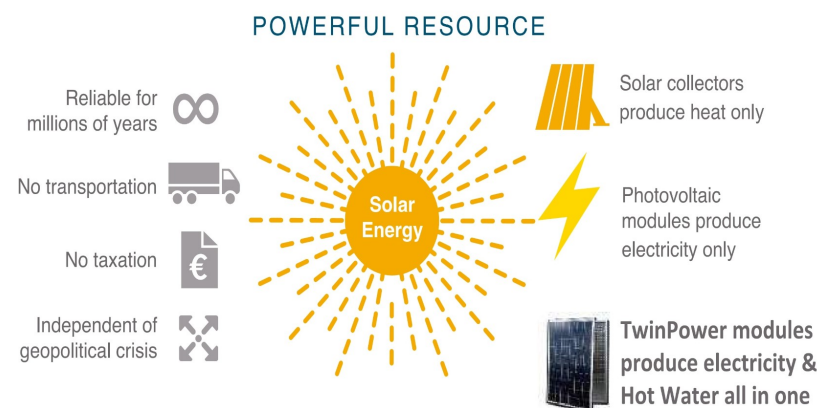




Twinpower and Industrial utilizations:

In cases of use of a large quantity of hot water for hygienic use, such as in Hospitals, Malls, industrial cycle, or in Sport centers.

Twinpower becomes an interesting "Financial Partner"



PSHIP is the acronym for **Power Solar Heat for Industrial Processes** and describes systems which provide Energy and solar heat in a factory all in one Panel. A collector field situated behind the conventional PV, heats a process fluid by means of solar radiation and a heat exchanger transfers this heat to a supply system or production process in the factory as hot water, air flow or steam. Storage units make it possible to use the generated heat at night-time. ESTIF 141

In summary, can be used for different fields of application in the world of agriculture and industry, such as:

- **Beverage industry** (sodas water, beer, mineral water, etc ...).
- **Meat and fish industries.**
- **Canning plants.**
- **Pharmaceutical,**
- **Cosmetics and chemical industries.**
- **Electronics industries.**
- **Motor vehicle industry**
- **Fish farms, aquaculture in general, shellfish processing, fish auctions, major aquariums.**
- **Swimming pools, thermal spas, thalassotherapy...**
- **Sewerage plants**

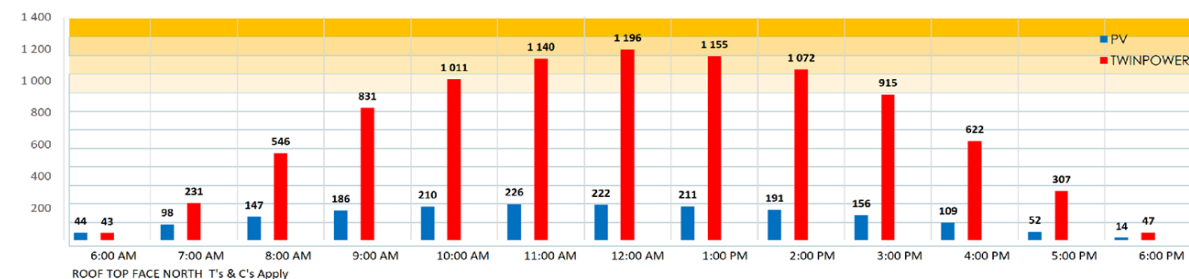
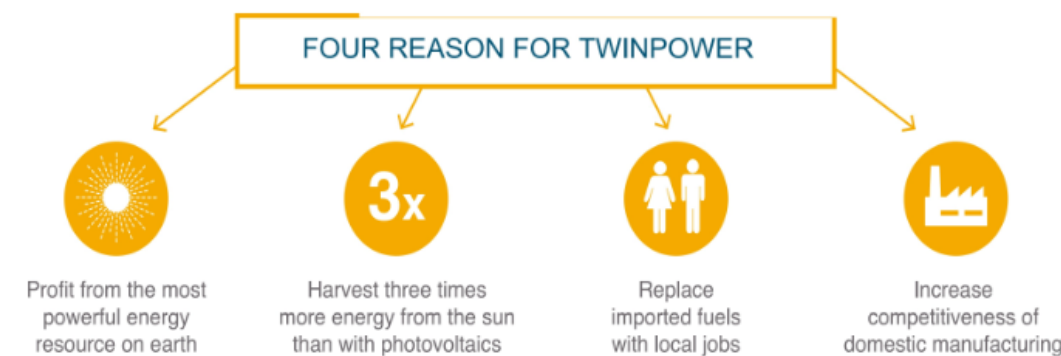
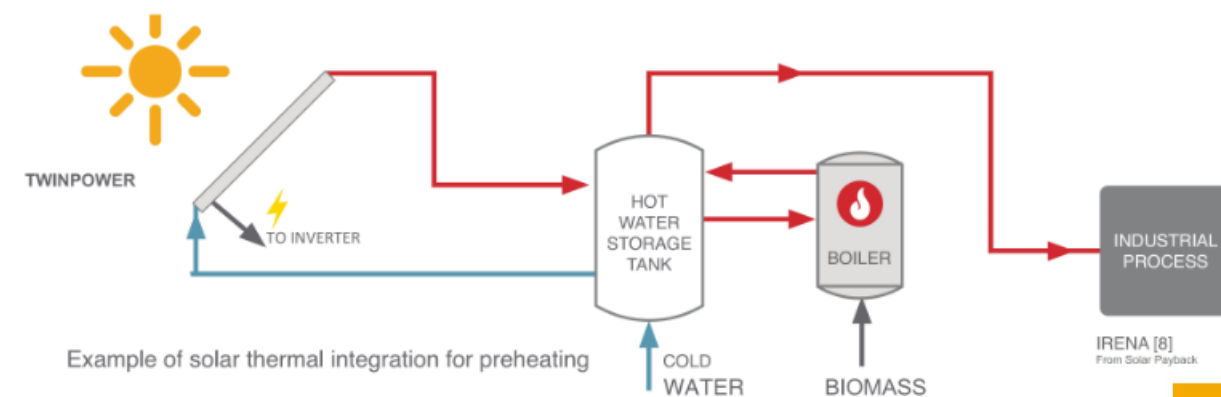


SYSTEM INTEGRATION

Solar heat can be provided at different integration points. Preheating is the most common method of incorporating solar heat into the production cycle. However, it can also be used to generate steam or fed directly into the process loop.

Preheating

Cold water is preheated in the solar field and fed into a storage tank where it is heated up by a fossil fuel boiler to the required high temperature of the production process.



HEAT DEMAND ON THE RISE

1.7 %
Average annual growth of industrial heat demand until 2030

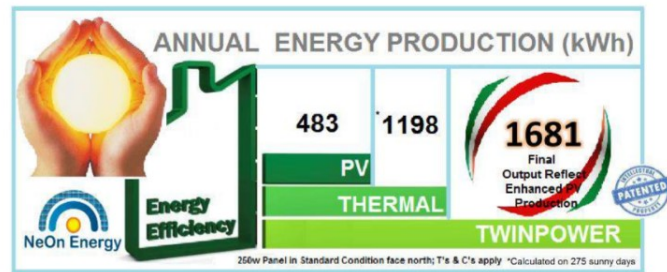
90 %
Met by coal, oil and gas

WHAT IS PSHIP?



TWINPOWER

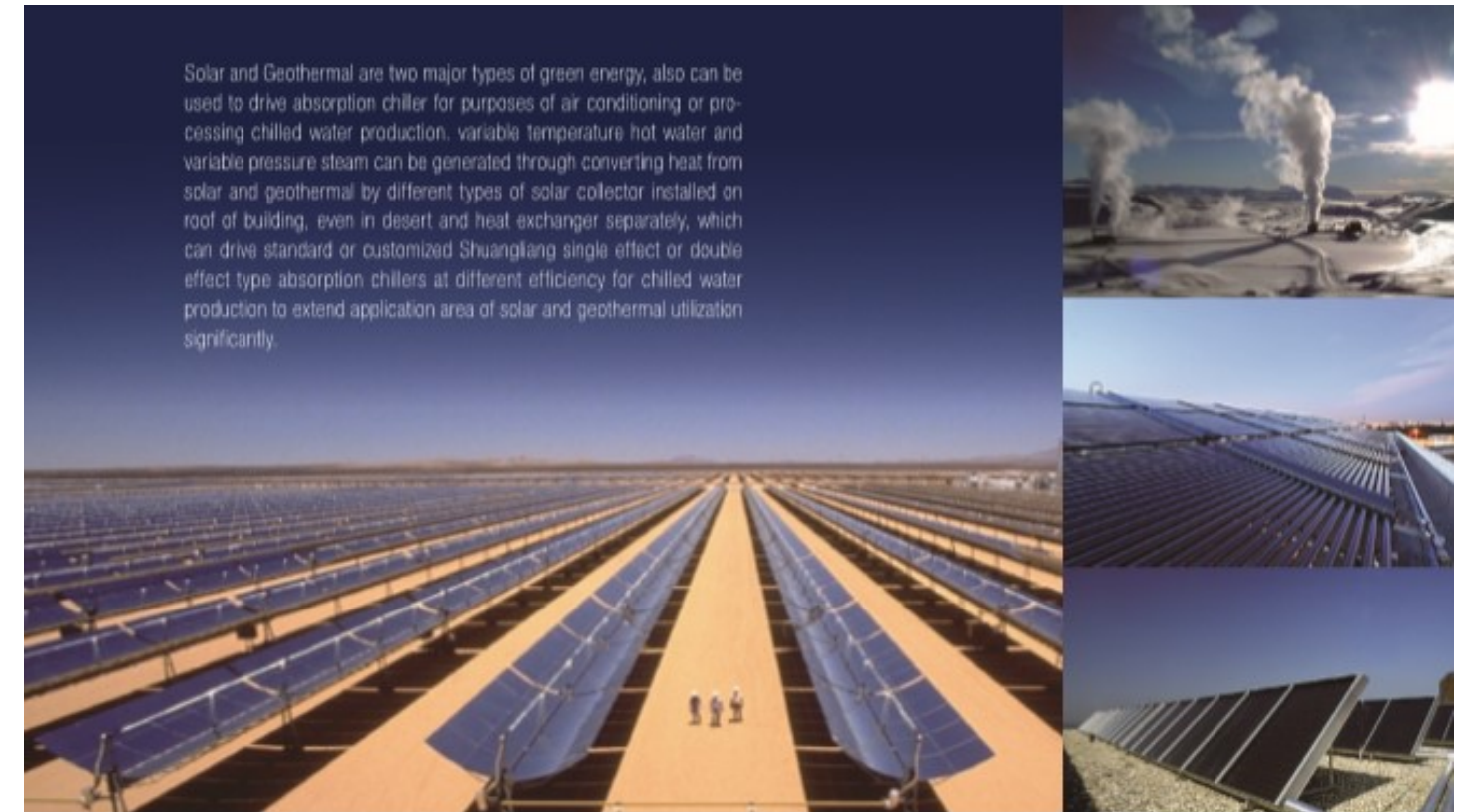
SOLAR ENERGY PERFECT



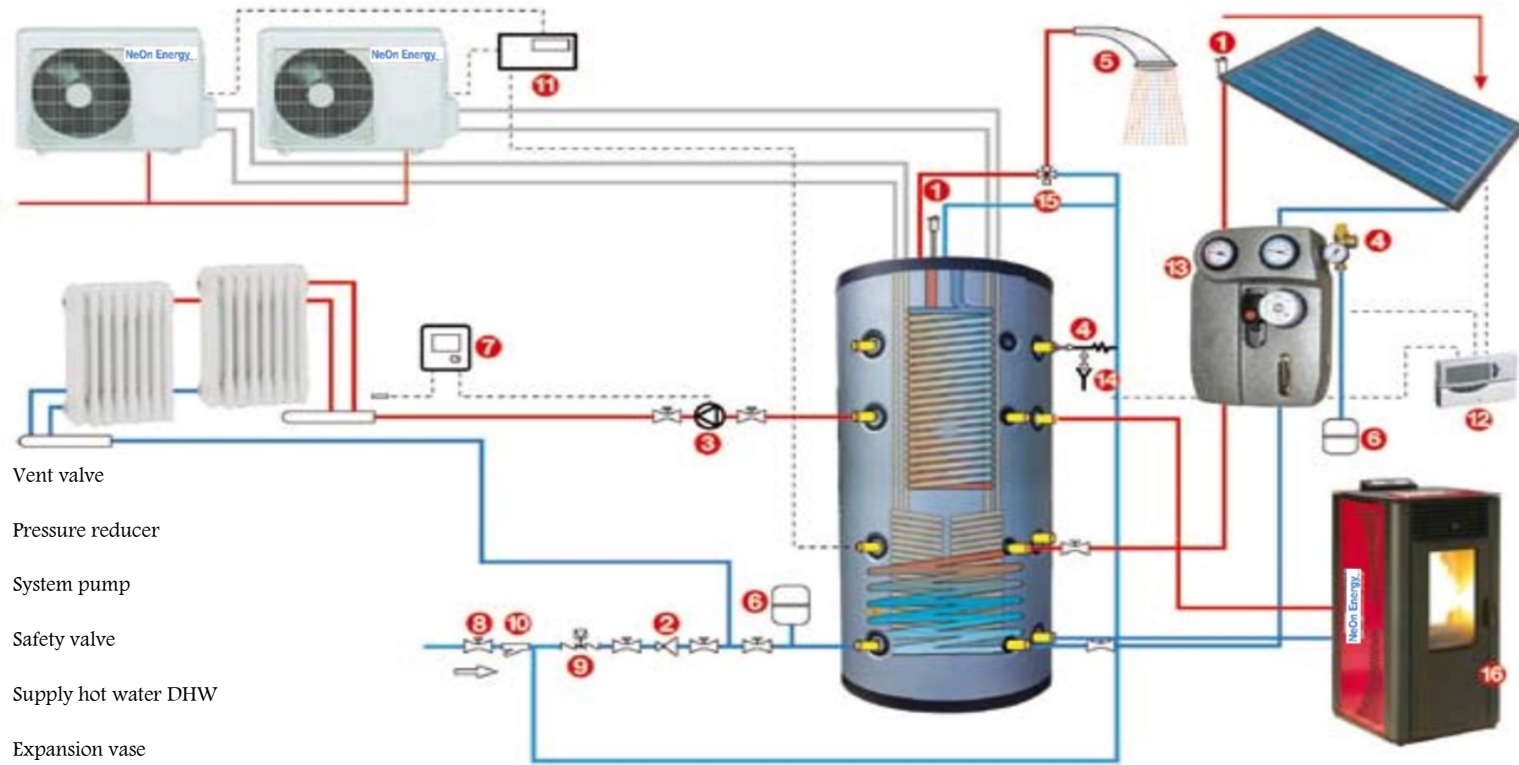
WARRANTY

PVT SYSTEM

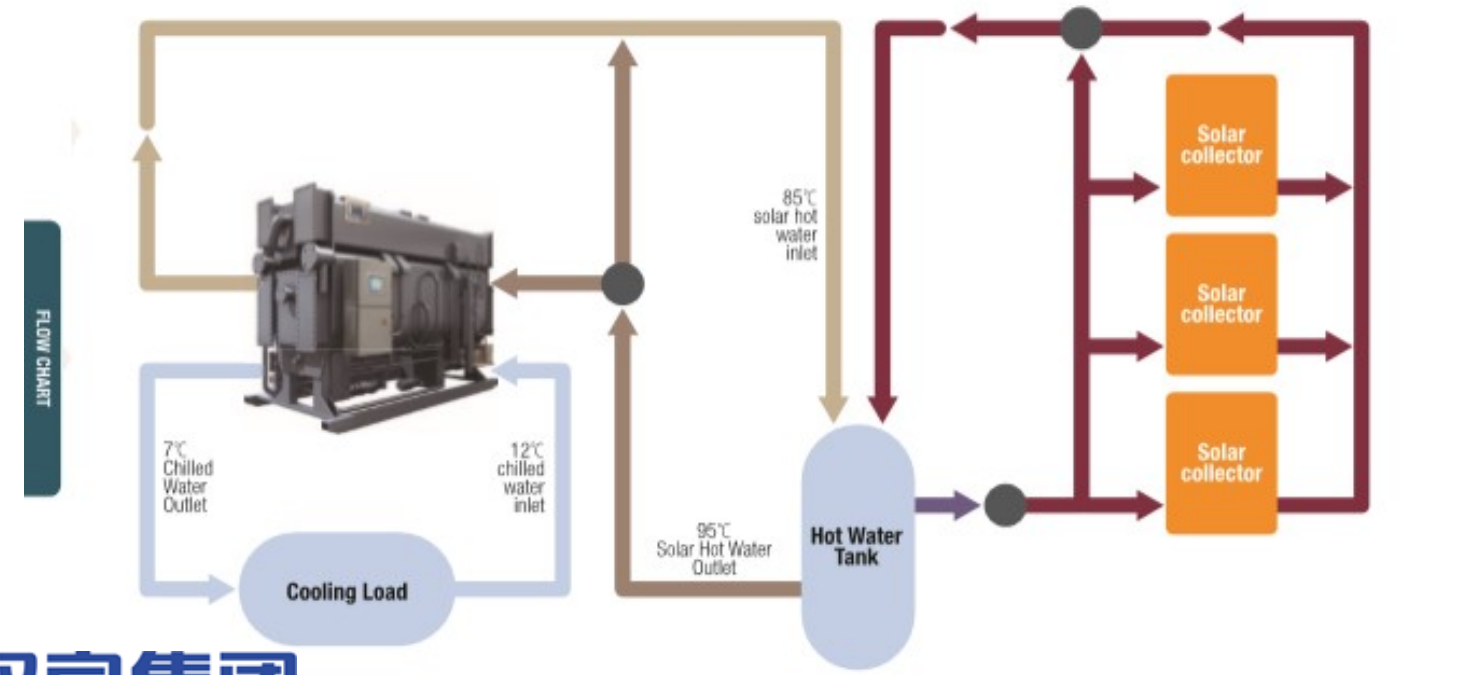
- Guarantee of 95% of the rated power for 10 years
- Guarantee of 87% of the rated power for 25 years;
- 12 years product warranty;
- Resistance to hailstones up to 35 mm at 90 km / h
- Resistance to wind up to 190 km / h
- Resistance to snow load up to 551 kg / m²
- Working temperature range -40°C / +85°C



Solar and Geothermal are two major types of green energy, also can be used to drive absorption chiller for purposes of air conditioning or processing chilled water production. variable temperature hot water and variable pressure steam can be generated through converting heat from solar and geothermal by different types of solar collector installed on roof of building, even in desert and heat exchanger separately, which can drive standard or customized Shuangliang single effect or double effect type absorption chillers at different efficiency for chilled water production to extend application area of solar and geothermal utilization significantly.



- 1 Vent valve
- 2 Pressure reducer
- 3 System pump
- 4 Safety valve
- 5 Supply hot water DHW
- 6 Expansion vase
- 7 Thermostat of ambience
- 8 Shut-off valve
- 9 Backflow for water networks
- 10 Line filter



Solar Hot Water Air Conditioning System Flow Chart





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ABSORPTION CHILLERS & HEAT PUMPS

SHUANGLIANG
ECO-ENERGY

双良集团
SHUANGLIANG GROUP

SHUANGLIANG
ECO-ENERGY



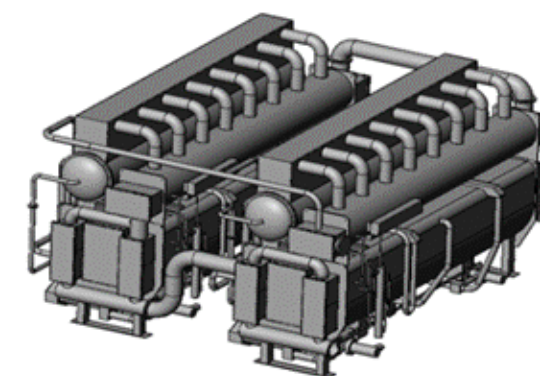
Direct fired chiller/Heater



Exhaust Gas Chiller



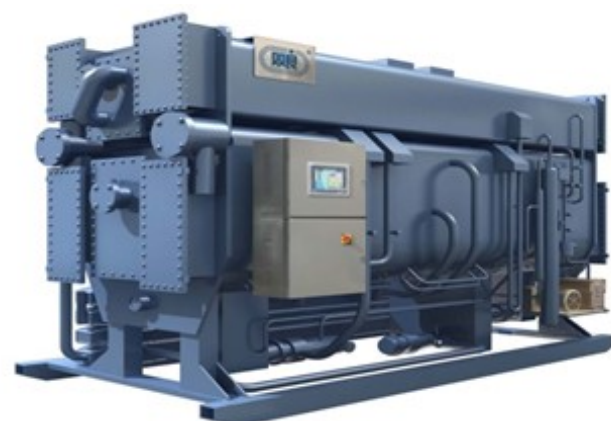
Category I Heat Pump



Category II Heat Pump

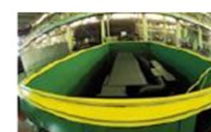


Steam Chiller



Hot Water Chiller

- High quality materials
- Advanced manufacturing processes and machinery set up
- 3-dimensional pipe bending
- CNC/Plasma cutting
- Automatic and semi-automatic welding
- Lithium Bromide manufactured in the chiller plant itself

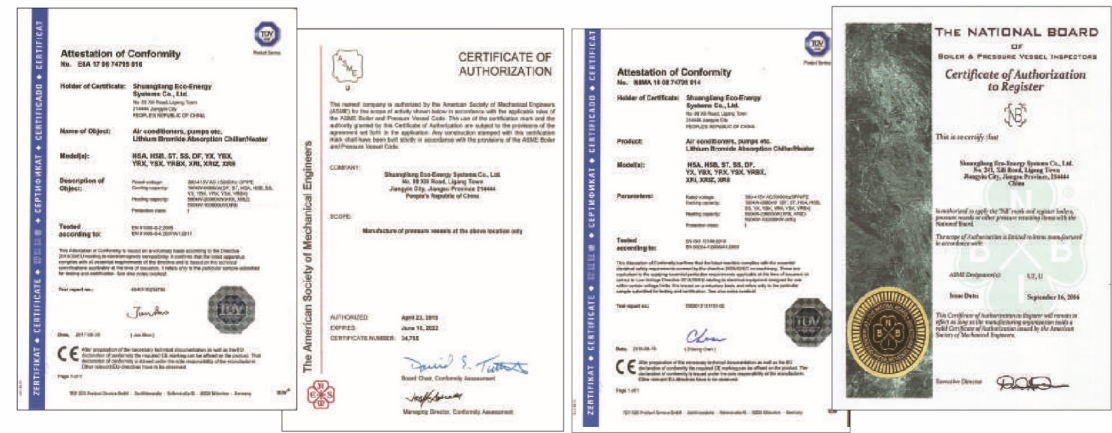




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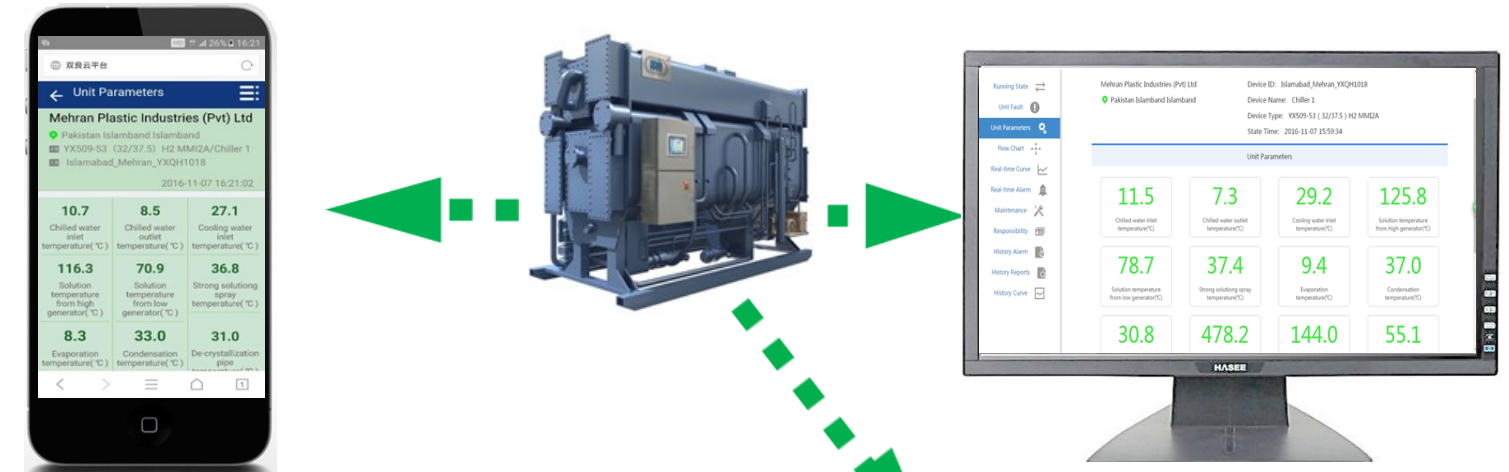
Certificates



- REACH Registration Certificate
- NB Certificate
- ASME Certificate
- CE-EMC Certificate
- CE-LVD Certificate
- ISO 9001 Certificate
- ISO 14001 Certificate
- ISO 18001 Certificate



Different Access To Chiller Monitoring



Diversified Customer Portfolio



16:08:22 D
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Parameter Display Trend ↑

Chilled water inlet temperature	11.2 °C	Evaporation temperature	5.7 °C
Chilled water outlet temperature	6.8 °C	Steam condensate water temperature	84.0 °C
Cooling water inlet temperature	29.8 °C	De-crystallization pipe temperature	24.9 °C
		HP generator pressure	82.6 kPa
Solution temperature from HP generator	148.2 °C	Auto-purging unit pressure	0.5 kPa
Solution temperature from LP generator	85.4 °C	Steam pressure	0.50 MPa
Spraying temperature of strong solution	4.74 °C	Target pressure	0.500 MPa
Condensation temperature	38.5 °C	Frequency of inverter	4.33 Hz
		Instruction steam valve	30.0 %





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President Hotel (Sochi, Russia)

(Hotel & Sanatorium Complex "Rus", Russia)

Total Cooling Capacity: 2800kW

The hotel has modern up-to-date technical equipment. Its sound amplifier and simultaneous translation Media Matrix system, the analogs of which may be found only in a few foreign hotels- allows to held the high-level meetings up to the heads of states and governments. More than 2000 participants can be simultaneously accommodated in these halls.



Beijing China Central Plaza

Total Cooling Capacity: 13360 USRT

Beijing Huamao Center is a large-scale commercial building cluster composed of office buildings, international apartments, shopping malls and five-star hotels (Riz Carlton and Marriott).



Lucky One, (Karachi, Pakistan)

★★★★★

Total Cooling Capacity: 8140 USRT

LuckyOne Mall is a magnificent , multi-faceted, first-of-its-kind regional shopping mall that will revolutionize the shopping experience in Pakistan. The eclectic mix of high-end specialty stores, fine dining and leisure pursuits make it the premiere lifestyle destination for shopping, leisure and entertainment.



Ankamall (Ankara, Turkey)

Total Cooling Capacity: 3369kW

Total Heating Capacity: 2700kW

Ankamall is the largest shopping mall in Ankara, the capital of Turkey, which is over 120,000 square meters and consists of more than 330 stores. Shuangliang chillers are working in the shopping mall energy center to provide cooling and heating for the comfort purposes.





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Persian Gulf Commercial Complex (Shiraz, Iran)
Total Cooling Capacity: 14,000 USRT (For shopping center only)

Persian Gulf Complex is a large shopping mall located in Shiraz, Iran. It is the biggest mall in terms of the number of shops. The facility has space for 2,500 stores covering 450,000 square meters.

The complex includes a 262-room hotel, an indoor and outdoor swimming pool, tennis court, convention centre and a helipad. In addition, there are two amusement parks at the mall, an outdoor amusement park called Iran Land, covering 37,000 square meters, and an indoor amusement park covering 28,000 square meters with video games, a bowling alley and a 3-story billiard hall. The mall also has six 240-seat cinemas. A 14,000-square-metre Carrefour Hypermarket is also located within the mall. The complex has four floors of parking space that can accommodate a total of 5,500 vehicles.



Migros Regional Headquarter (Bern, Switzerland)

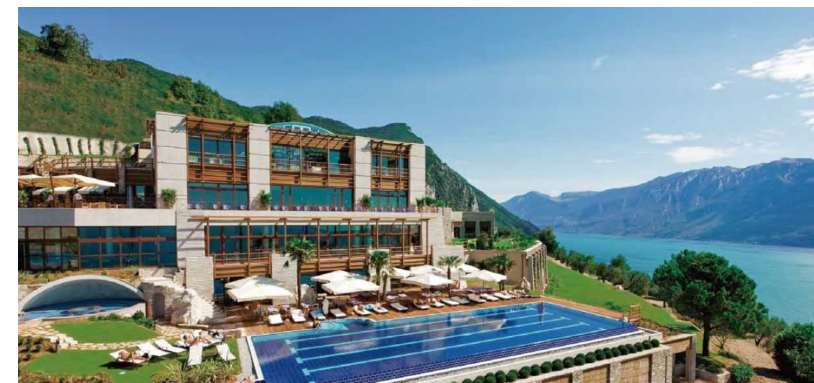
Cooling Capacity: 1000kW

Migros is Switzerland's largest retail company, and also is one of the forty largest retailers in the world.



Diar El Andarous Hotel (Tunisia)

Total Cooling Capacity: 600kW
Total Heating Capacity: 435kW



Lefay Resort & Spa Lago di Garda

(Gargnano, Lake Garda, Italy)

★★★★★

Cooling Capacity: 700kW

Lefay Resort & SPA Lago di Garda is located in Gargnano, one of the most picturesque villages on the lake. The Resort, the first to be awarded the prestigious 5-star superior rating on Lake Garda, is situated inside an 11 hectares natural park in the heart of the spectacular and renowned "Riviera dei Limoni", surrounded by gentle hills and natural terraces rich in olive trees and woods overlooking the lake.

Urumqi Hilton Hotel (Xinjiang, China)

★★★★★

Total Cooling Capacity: 4008 USRT

Urumqi Hilton Hotel is built on a five-star standard with luxurious and comfortable guestrooms and suits.





Pulkovo Airport (Saint Petersburg, Russia)

Cooling Capacity: 3408 USRT

Pulkovo Airport New Terminal is equipped with Shuangliang chillers combined with units of Siemens gas turbines.



BinHai International Airport (Beijing, China)

Total Cooling Capacity: 3960 USRT

It is only 13.3 km away from Tianjin Railway Station, the terminals of which covers an area of 1,160,000 m².



National Olympic Sports Center (Beijing, China)

Cooling Capacity: 3100 USRT

National Olympic Sports Center is suited in the southern part of Olympic Park covering an area of 97.5 hectares. As one of main stadia for 2008 Olympics, a number of matches were conducted here.

Habib University (Pakistan)

Total Cooling Capacity: 992 USRT





Art College of The University of Melbourne (Australia)
Total Cooling Capacity: 1100kW

The University of Melbourne is a public university located in Melbourne, Victoria. Founded in 1853, it is the second oldest university in Australia and the oldest in Victoria. The main campus is in Parkville, an inner suburb just north of the Melbourne CBD.

Government Campus Plaza, (Trinidad & Tobago)
Total Cooling Capacity: 3700 USRT

The Government Campus Plaza (GCP) not only provides superior of ice accommodation to boost the morale of employees and adequate parking to reduce hassle and save valuable time, but also improves the visual appeal of downtown Port of Spain with an attractive public plaza.



Zurich University Hospital (Switzerland)
Total Cooling Capacity: 2000kW

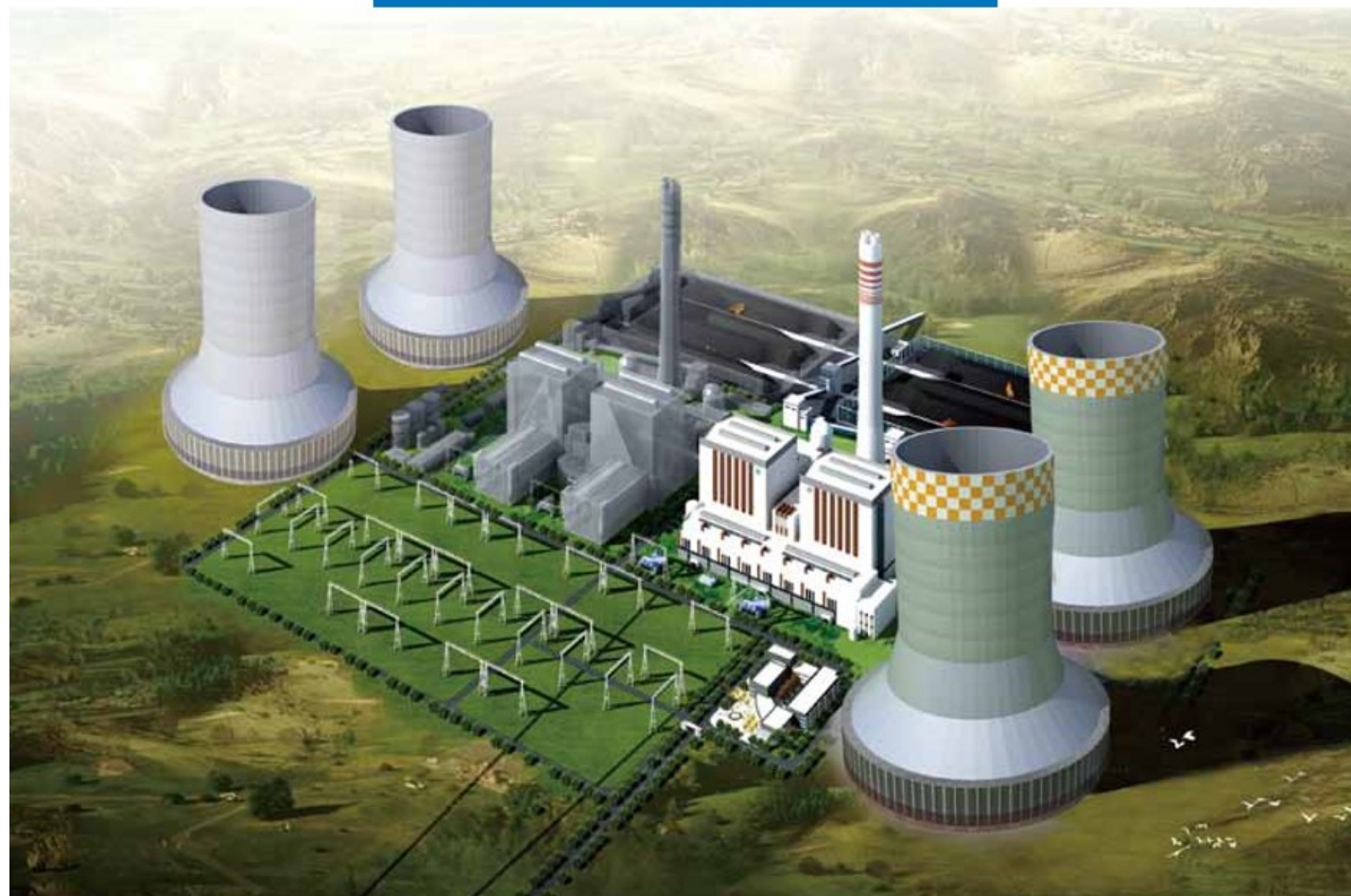
The University Hospital (Universitätsklinik) is the largest and best-equipped hospital in the city and is open to all as a publicly owned hospital. Every year, almost 130,000 patients and more than 34,000 persons come here for treatment.



**Xinjiang Xinyou Zhundong Qitai Power Project
(Xinjiang, China)
2X660MW units**

Technical data:

*Unit Capacity: 660MW
 Quantity: 2
 Exhaust steam quantity of main steam turbine: 1160.28t/h.
 Steam exhaust quantity of steam turbine of steam pump: 154.74t/h.
 Circulating water flowrate: 63128t/h.
 Inlet and outlet water temperature: 63.88°C~52.68°C.
 Ambient temperature: 34.5°C.*



**Inselspital (Bern, Switzerland)
Total Cooling Capacity: 1500kW**

The Inselspital (Bern University Hospital) is the teaching and academic medical center at the University of Bern, Switzerland. The hospital is operated by a charitable foundation. As one of the country's leading medical institutions, the Inselspital has over 6,700 employees and provides care for more than 250,000 patients every year.



**Messe Frankfurt
(Frankfurt, Germany)
Total Cooling Capacity: 2559 USRT**





**SIBUR
(Russia)**

Total Cooling Capacity: 426 USRT



JSOC Bashneft (Ufa, Russia)

Total Cooling Capacity: 26.1MW

JSOC Bashneft is one of Russia's fastest growing private vertically integrated oil companies. The Company ranks among top-10 Russian companies in terms of oil production and among top-5 in terms of oil refining.



**Honda Automobile
(Bangkok, Thailand)**

Total Cooling Capacity: 3026kW

**Daimler Mercedes Benz
(Germany)**

Total Cooling Capacity: 506 USRT





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We have over
5 GW Of power
connected to the grid
with Schneider Electric
inverters since 2000



Bidco oil refineries
Kenya- 1500 KWP Plant



Multi Flora Market
South Africa - 405 KWP Plant

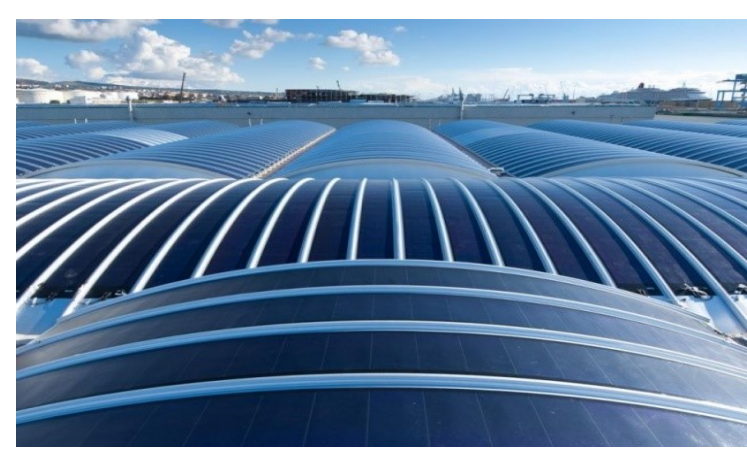




Subbiano (AR)
ITALY— 207 KWP Plant



Basilicata
ITALY— 1000 KWP Green House
New system



Civitavecchia (RM)
ITALY—1100 kWp plant





Fossato di Vico (PG)
ITALY - 350 KWP



65 kWp Porrena (AR)



**181 kWp Castiglion
Fibocchi (AR)**



84 kWp Arezzo



Pretoria—South Africa
PVT Solar power system
500 KWp



100 kWp Arezzo



**PVT Solar power systems
in Durban**





200 kWp Bibbiena (AR)



91 kWp Tregozzano (AR)



67 kWp Arezzo



49 kWp Poppi (AR)



**73 kWp Marciano della
Chiana (AR)**



28 kWp Firenzuola (FI)

