

Sample of Projects Completed

Himin has created more than 100 solar projects globally.

Some examples:

Project Name	Central hot water supply + room heating
Location	Tibet, China
Surface	2472M ²



Project Name

Sweden solar swimming pool project

Location

Stockholm, Sweden

Surface

810M²



Project Name

Project for Beijing Olympics

Location

Beijing,China

Surface

1650M²



Project Name

Hotel project in North Korea

Location

Rason, North Korea

Surface

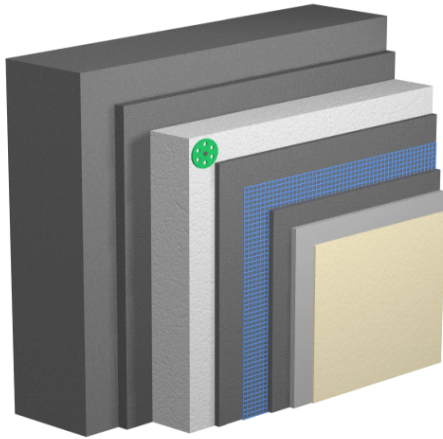
2700M²



To make it possible to save an impressive 88% of energy at Solar Valley, the technologies of the HIMIN team include:

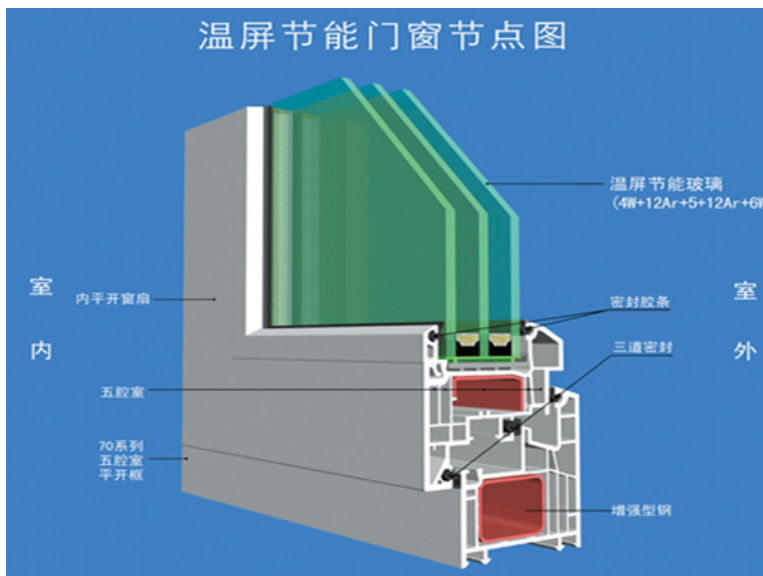
- **External wall insulation system**

External wall insulation system (or EWIS) is a thermally insulated, protective, decorative exterior cladding procedure involving the use of expanded polystyrene, mineral wool, polyurethane foam or phenolic foam, topped off with a reinforced cement based, mineral or synthetic finish, plaster.



- **Energy saving window and door**

Window's energy saving is the key part to the architecture energy conservation, because it concerns lighting, ventilation, sound insulation and facade. By improving the material's thermal insulation and the window's airtightness, the window saves more energy. Client's demand-orientated, we offer personalized and customized energy saving solutions.



- **Sun shading with turnover adjustment**



- **Solar PV sun shading**



- **Solar collector sun shading**



- **LED system**



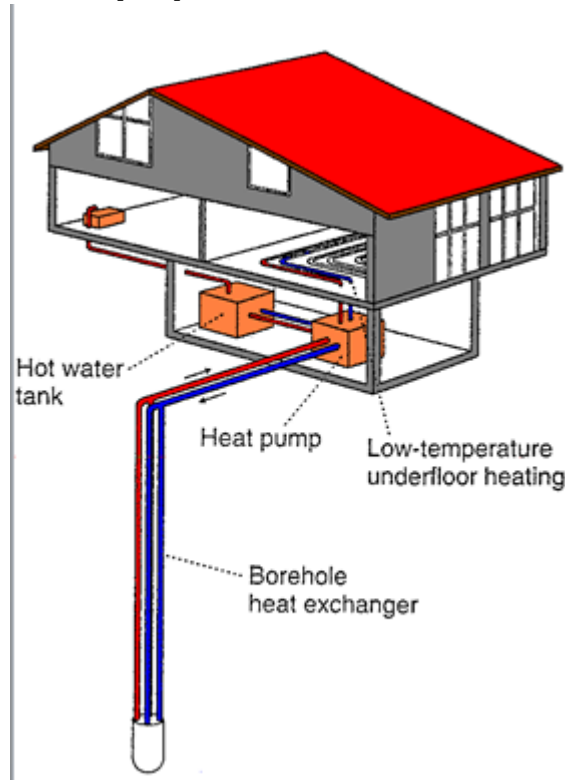
- **Ceiling radiation**

This technology combines equipment and suspended ceiling into one. Adopting principle of heat radiation and steel, the ceiling improves radiation effect as well as the decoration. Besides the system does not bring much wind and noise when it works. Comparing with ground heating system, it is faster in heating and cooling, and it can save 30% energy. Moreover the lightness of the radiating materials reduces building load greatly. The radiation technology, low in cost and simple ins installation, can be applied in public buildings such as hospitals, shopping centers, etc.



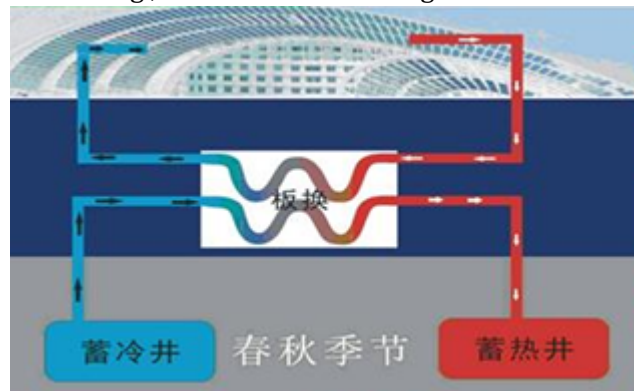
- **Combination of solar energy and ground source thermal pump**

Warm water in the shallow earth and the stagnant layer can be used for heating in winter by ground source thermal pump while cold water there is used for cooling in summer. It saves 23% energy than the conventional use of the ground source thermal pump.



- **Cross-seasonal energy storage in monimolimmion**

By the feature of stagnancy of underground water in a certain depth, two wells are drilled in the depth of 200m then extra heat energy is stored into hot water well from solar collectors by heat exchanger in spring and autumn and then is consumed in winter, and at the same time cold water goes down to the other well for summer cooling. This technology achieves energy-saving greatly, namely 35% for cooling, while 40% for heating.



- **CSP**

Concentrated solar power (CSP) systems use mirrors or lenses to concentrate a large area of sunlight, or solar thermal energy, onto a small area. Electrical power is produced when the concentrated light is converted to heat, which drives a heat engine (usually a steam turbine) connected to an electrical power generator or powers a thermochemical reaction.



- **Solar water heater & collector**

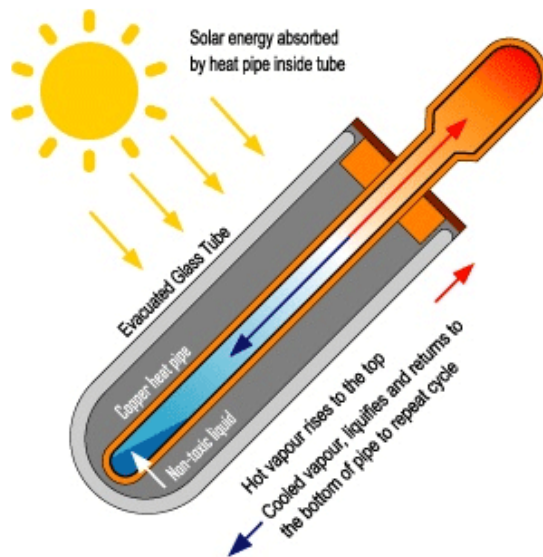
- Solar water heater



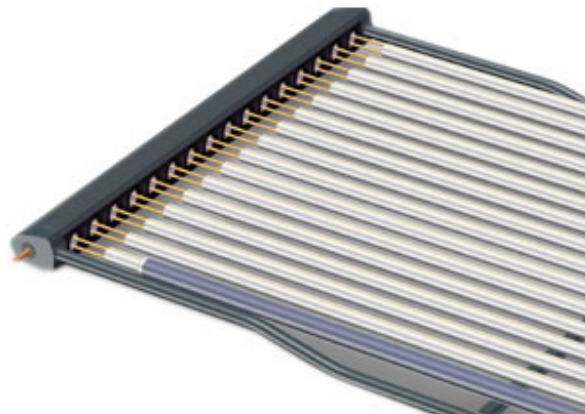
■ Flat plate collector



■ Heat-pipe collector



■ U-pipe collector



- **Solar air-conditioning**

It uses solar energy to drive the dual-unit machine working with the principle of lithium bromide solution for cooling. Until now, the solar air-conditioning system adopted by this building is the largest one in the world. The heat collecting area of 9188m² and a total heat collecting power of 3310kw, this building has a cooling power of 1024kw through this machine, average coefficient of performance(COP) of which is 0.7,1.3 in maximum, it meets 45% of the cooling in this office building.



- **Solar air collector system**

Applying high-efficient vacuum tubes and heat collecting technology, air, the heat transfer medium, transfers solar energy into the water tank by way of heat exchanger for heating and cooling.



- **BIPV(Building Integration PV)**

BIPV integrates power generation, energy saving, lighting and decoration into one. Electricity generated by solar panel that are embedded inside the energy-saving glasses is provided to LED lights. With this technology, no pollutions discharged, no extra space is occupied. Both functions of energy conservation and decoration are achieved at the same time.



- **Technology of PV grid-connected power generation**

The PV panels can be built into light collecting roof. Electricity , generated by the PV modules with high inversion efficiency, up to 96%, is able to connect into the state grid for sales, and the state electricity is bought at night. The information e.g. electricity output discharge reduction of carbon dioxide, etc. can be displayed through its remote control system. The annual output of electricity is 20000kw/h.



- **Solar light system**



- **Recycling water treatment system**

Recycling water treatment system of ZHB-I type is adopted to save water and realize recycling. In this system, the technique of biological contact oxidation is combined with physicochemical method to improve the water quality.

