



INOVISION SOFTWARE SOLUTIONS

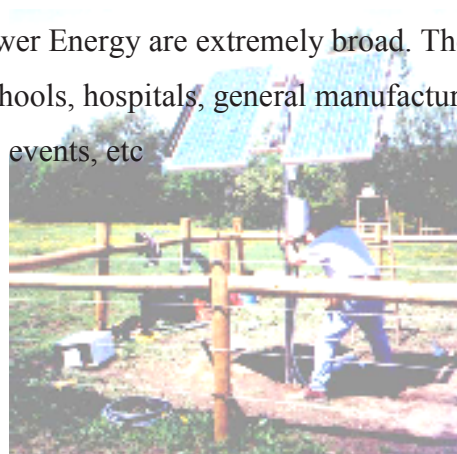
ISO 9001:2000

PV Technology

PV technology converts sunlight directly into electricity throughout the day, allowing you to produce your own electricity with no noise, air pollution, or moving parts. The basic building block is the PV cell, which is connected to other cells to create larger units called modules. Typically, modules are attached as panels onto your existing roof or are designed directly *into* the roof so they act as both a part of the roof or shingles and a solar module at the same time. The integrated roofing option may make sense if you are building a new home or considering replacing your current roof. Modules can also be set up as freestanding units on the ground.

A PV system includes a collection of PV modules that is usually connected to the utility grid. Systems must be connected to the utility grid to be eligible for the cash incentive offered by the resident state. The PV modules produce direct current (DC) electricity, which the system then converts to alternating current (AC) electricity so it can be used to power your lights, appliances, and other home electrical needs. Being connected to the utility grid provides two additional benefits. First, when your system doesn't produce enough electricity to power your home (when the sun isn't shining, for example), you automatically receive the additional power you need from the utility. Second, if you produce more electricity than you need — which can happen on most sunny days — electricity flows back through your meter to the utility. In fact, your meter will run in reverse when your PV system is producing more electricity than you need, and you can receive a credit from the utility for the energy you're supplying but you don't need.

The applications of Solar Power Energy are extremely broad. The Solar Power Energy can be used at home, commercial, farms, schools, hospitals, general manufacturing industry, automotive industry, government buildings, sports events, etc



Wind Technology-making the connections

Identifying and then optimizing the best interconnection choice is crucial to a wind farm's reliability and success. Inovision has the knowledge and experience to help keep the line of communication open between the developer, wind turbine manufacturer and utility.

Inovision commitment to sustainability

We are committed to developing solutions, systems and products that advance the use of wind power. National environmental and energy policy and state renewable power generation standards are becoming a major driver for the wind power industry. The goal of creating a cleaner environment positions wind power to become a major energy source.

Inovision will provide all Balance of System components

Stand-alone systems require batteries to store excess power generated for use when the wind is calm. They also need a **charge controller** to keep the batteries from overcharging. Deep-cycle batteries, such as those used to power golf carts, can discharge and recharge 80% of their capacity hundreds of times, which make them a good option for remote renewable energy systems. Because the automotive batteries are shallow-cycle batteries we don't use them in renewable energy systems because of their short life in deep cycling operations. In **very small systems, direct current (DC)** appliances operate directly off the batteries. If it is a need to use standard appliances that require conventional household alternating current (AC), however, we install an **inverter** to convert DC electricity to AC. Although the inverter slightly lowers the overall efficiency of the system, it allows the home to be wired for AC, a definite plus with lenders, electrical code officials, and future homebuyers. For safety, batteries are isolated from living areas and electronics because they contain corrosive and explosive substances. In grid-connected systems, the only additional equipment is a power-conditioning unit (inverter) that makes the turbine output electrically compatible with the utility grid. No batteries are needed. Through its advanced controls, the ISS wind turbine's control system continually adjusts the wind turbine's blade pitch angle to enable it to achieve optimum rotational speed and maximum lift-to-drag at each wind speed. This "variable speed" operation maximizes the turbine's ability to remain at the highest level efficiency. The result: greater annual energy production yield as compared with machines operating at constant speed. Additionally, while constant speed rotors must be designed to deflect high wind gust loads, ISS's variable speed operation enables the loads from the gust to be absorbed and converted to electric power. Generator torque is controlled through the frequency converter. This control strategy allows the turbine rotor to over-speed operation in strong, gusty winds, thereby reducing torque loads in the drive train. The wind turbine converts the extra energy in wind gusts to electric power.

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