



# SOLAR POWER SYSTEM FOR OIL & GAS INDUSTRY



Several thousand kilometres of buried steel pipelines are used to collect, transport and distribute petroleum products and natural gas. Oil and gas exploration usually takes place in remote areas, far from the nearest utility lines. When power is required in these remote locations, solar energy is often the most reliable and economical source.

Monitoring of gas and oil lines is now easy, reliable and inexpensive, thanks to solar power.

*OSS has designed and successfully installed several Solar Power Systems required for Oil & Gas Applications in most parts of Oman. All systems are working satisfactorily for several years.*



## SOME OF THE APPLICATIONS OF SOLAR-POWERED SYSTEMS INCLUDE

- » Remote Telemetry Units (RTU)
- » Pipeline and Wellhead Flow Monitors
- » Wellhead Control Panel
- » Process Control Equipment
- » Video Surveillance
- » Natural Gas Automation
- » Data Recording
- » Control Valves
- » Cathodic Protection (CP) for pipelines
- » SCADA Monitoring Stations
- » Chemical Dosing Systems
- » Lighting & Security Systems
- » Drilling Meters
- » Gas Flow Measurement
- » Mineral Exploration Camps
- » Storage Tank Gauges

# SOLAR SYSTEMS FOR REMOTE MONITORING & TELECOMMUNICATION SYSTEM

Solar Power Systems are well suited to operating automation equipment used by the oil and gas industry. This equipment includes high-efficiency gas flow computers, Remote Telemetry Units (RTU's) and Supervisory Control and Data Acquisition equipment (SCADA). The equipment's low power requirements and typically remote siting often make a PV system the most cost-effective power source. Custom systems have been designed and manufactured to OEM or end-user specifications. Manufactured in volume to service multiple-site projects, solar electric power systems consistently provide high quality at the lowest possible cost.

## SOLAR SYSTEM FOR RTU AND SCADA SYSTEM

The RTU and SCADA systems are widely used in the oil and gas industry to collect vital data from the well heads and valves. The collected data from the well is transmitted to SCADA systems for analysis and to generate appropriate control for optimizing the gas used for lifting the oil. The solar systems are designed to withstand the harshest weather conditions of tropical and desert areas.

## MSV AND CHEMICAL INJECTION SKID SYSTEMS

Stand-alone skid mounted solar system for operating the Motorized Solenoid Valves (MSV); RTU and Chemical injection systems are designed using state-of-art technology. The PV source is mounted on the skid, which reduces dust accumulation on the solar modules and as well provides shade to batteries and equipment. The batteries are installed inside weatherproof enclosure and mounted on the skid. These systems are designed to withstand the harshest weather conditions of tropical and desert areas.

## CATHODIC PROTECTION SYSTEM

Corrosion leaks are of significant concern to Oil and Gas industry and it is considered to be the largest controllable factor in pipeline safety. Cathodic protection is an electrical method of preventing corrosion since it is difficult and expensive to provide conventional power for cathodic protection systems in remote areas. Solar Powered Cathodic Protection system uses a highly efficient CP controller, which provides multi-turn potentiometers for adjusting the output voltage and impressed current as per the CP protection requirements provided by the customer.

CP systems are available for input voltages of 12V/24V/48V DC. The systems can be designed to suit individual customer specifications.



## INSTRUMENTATION & CONTROL

Many of the instruments, measuring and controlling devices in the Oil and gas industry are powered by solar energy. Stand-alone solar power systems are most suitable to power these equipments because of reliability and low cost.



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