

LEO Energy's experience in the oil & gas, platforms and pipelines, military, telecommunications, UPS and electric traction industry has lead to the development and application of a variety of micro energy generation systems. AES group offers a variety of energy systems to meet green demands along with design, procurement, installation and service.

## Solar and Wind Energy

Both energy from the sun and wind can be used to produce electricity. LEO is a dynamic, growing organisation that has the expertise and experience in the design, procurement and installation of both grid connected and stand alone wind and solar power systems. We have a good understanding of emerging technologies and can apply these in a variety of settings.



LEO group also has the capability of adding site studies and due diligence to large scale renewable energy projects. Grid integration and stand alone systems can both be modeled and simple pay back periods minimized in order to make your return on investment as fast as possible

## Building Integrated Photovoltaics (BIPV)

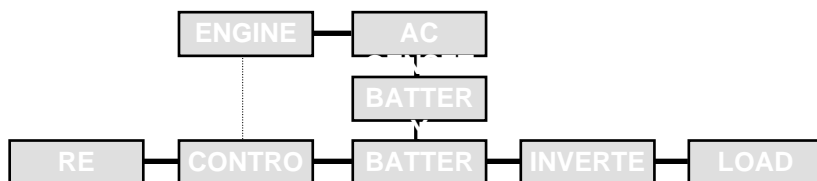
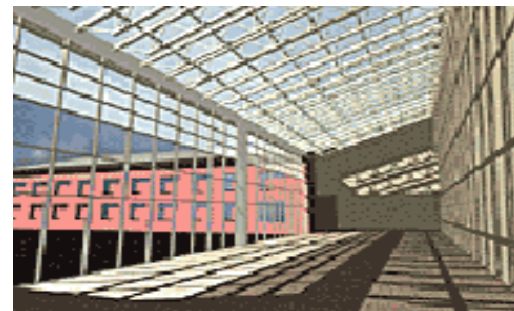
Well integrated, photovoltaics can be used to enhance the aesthetics of a building and control day lighting and shading. This slick and "green" look is becoming popular in urban areas. WorleyParsons, with civil, structural, materials, photovoltaics and electrical engineers, has been found to be well suited to BIPV projects.



## Remote Area Power Supply (RAPS)

LEO Energy has the capability to design and implement renewable energy systems for remote locations where reliability and low maintenance is of utmost importance. In locations where there is no electricity, these systems are typically used for instrumentation, telecommunications, water pumping and electrification of rural households. In order for these systems to be completely stand alone a battery bank is required to provide energy while the system is not producing enough and to store energy while more than enough is being generated.

In remote areas, many who currently run diesel generators are switching to renewable hybrid systems. A common example of this is the hybrid system which includes a solar array and a diesel generator. This allows reduced hours of run time for the diesel generator and hence reduced noise and fuel requirements. Through the consideration of the load profile, availability requirements, local shading and climate characteristics, and budget we customise systems for various client needs.



## Grid Connected Systems

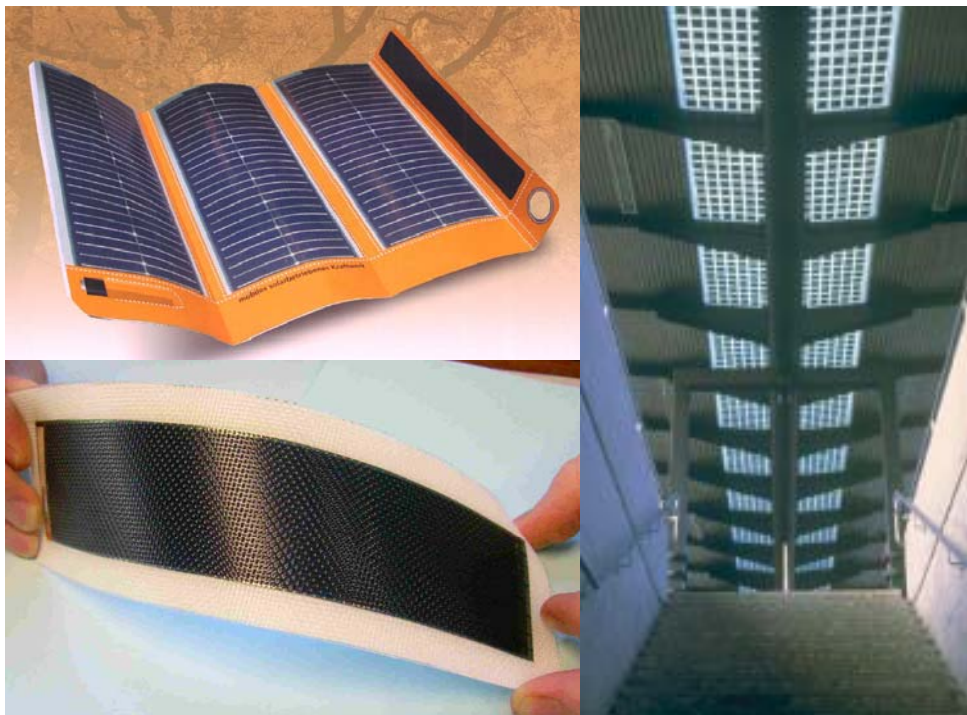
A grid connected system is one which is connected to a regional electricity network. Usually a grid connected system uses the grid for energy “storage”, taking electricity from the grid in times of no wind or sun and feeding electricity back into the grid when power is being produced. With grid connected systems, users can choose to have the renewable energy source cover a percentage of their annual load and have the grid cover the rest. In many countries the electricity is sold back to the grid, so savings on electricity bills are possible.

LEO offers complete project management in this area from design to installation.

## Third Generation Photovoltaics

Third generation photovoltaics includes photovoltaics technologies which have multiple semiconductor junctions and are thin film cells. These technologies have the potential to be more efficient while using less materials in their manufacture than traditional photovoltaics.

LEO Energy has close ties with photovoltaics research and development institutions and is currently implementing cutting edge technology. We now have a range of small, lightweight and flexible multijunction amorphous silicon photovoltaics products.



## Solar Cars

We have been promoting photovoltaics technology for many years now through the support and sponsorship of a number of solar car teams.

Offering the highest energy densities along with reliability and increasingly sophisticated battery control units, we helped put several teams in the top three in the World Solar Challenge and have built up a strong background in the integration of photovoltaics and lithium battery technologies.