

## BUILDING ENERGY FROM THE SUN

### Building Integrated Photovoltaics(BIPV):

When photovoltaic panels are used as building material in roof, atria, skin, rain screen or as roof is called building integrated photovoltaics(BIPV). Innovative designers are even integrating solar panels in sculptures which add to the aesthetics and uniqueness of the structure as well as generate environment friendly energy.

**Centennial Solar Inc.** offers a variety of solutions for incorporating PV into both new and existing buildings. A standoff design is suitable for both new construction or retrofitting to an existing roof. Solar modules with light spaces are suitable for atria or curtain wall mounting.



### WHY SOLAR PHOTOVOLTAIC ?

- Threat of Global Climate Change
- Environment Friendly
- Depleting Fossil Fuels
- Sustainable Energy Supply
- Energy Efficiency
- Increasing Cost of Conventional Electricity
- Environmental Leadership

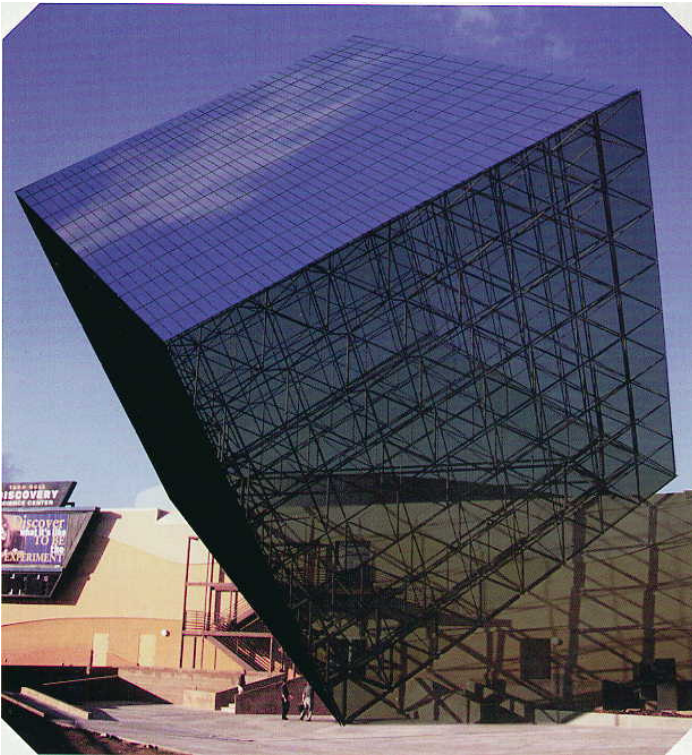
Photovoltaics(PV) is an elegant technology that converts sunlight into electricity. It is modular, silent, free from fuel and pollution and requires minimum maintenance. Centennial Solar's PV systems can be used to differentiate a building from its neighbors and identify its owner as environmentally responsible. In addition, these systems allow participation in energy conservation and pollution mitigation programs.

Photovoltaic offers building material functionality and energy production at the point of use. Building Integrated Photovoltaics(BIPV) can be substitute for glass curtain wall technology to form the outer building envelope. The PV façade allows light to come indoors and provides an aesthetic design. Integration of PV is basically a direct replacement of the normal glass panel with a PV laminate and the electricity generated by PV panels is consumed locally within the building.

An older building's life can now be extended with reduced energy requirements and increased comfort. Integration of PV into the façade is straight forward as the PV panel is substituted for the rain screen face material. The ventilated zone behind it provides space for wiring. BIPV rain screen cladding provides an excellent multi-functional building solution that allows older buildings to be transformed into modern day architectural icons.



# Why just build a building, when you can build something innovative?



## BENEFITS OF BIPV:

### PROVEN TECHNOLOGY:

- No fuels, No Moving Parts, No Pollution, Long Life

### DECENTRALIZED:

- On the Spot Electricity Generation from Free Solar Radiation

### MODULAR:

- Vary from One Module of 125/135/270Wp to Hundreds of Kilowatts

### STURDY:

- Withstand High Wind, Hail, Humidity, High Ambient Temperature

### AESTHETIC:

- Add Tremendous Aesthetic Value

### ARCHITECTURAL FEATURES:

- Replaces or Provides Attractive Combination with some Building Materials Like Glass, Stone, Marble, Granite

### ATRIA AND ROOF LIGHTS:

Architects and designers can now achieve the optimum balance of light, shading and power production for today's urban and building environment by using BIPV solutions for atria, glass roof and roof lights. Quality of life, and productivity in working, shopping, or living environments can be improved by using Solar Panels in atria and roof lights to create just the right lighting and power generation.

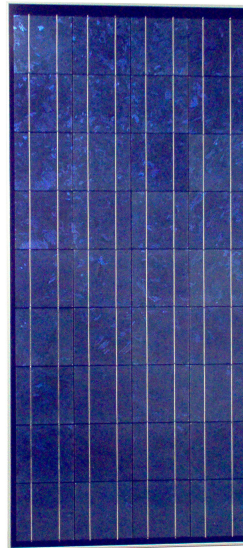
### COMMERCIAL BUILDING FLAT ROOF SYSTEMS:

One of the most underutilized spaces on most commercial buildings is probably the roof. This unused space can generate significant amounts of electricity to satisfy partly or fully the building's own energy requirement.

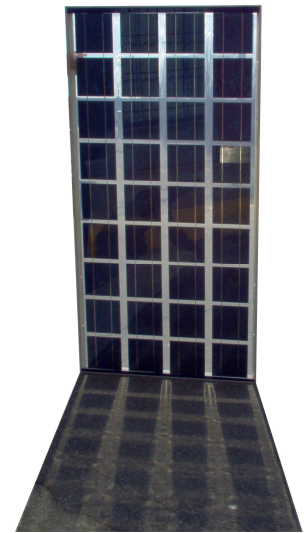
### RESIDENTIAL SYSTEMS:

Solar roofs for individual homes as well as entire housing developments are becoming a common feature of the urban landscape producing power as a building component. Most houses have sufficient roof space for system to generate most, if not all of the electrical power needed to satisfy their annual requirements.

With appropriate mounting and sealing techniques, a roof-integrated system allows full structural and electrical integration with other building subsystems. The solar array provides the weather proofing function, effectively reducing the total photovoltaic system cost.



Solar Photovoltaic Module



Solar Module with Vision Glass

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