



## **PLATEK SERVICES INCORPORATED**

Engineering and Energy Management Services

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### **“GREEN POWER?”**

We are proud to offer a green energy solution for a cleaner, friendlier future. Look at an alternative, environmentally friendly renewable energy system and you will save money while you conserve the environment.

“Think green!”

# The future of **electricity....**



# **Abundant, Clean, and Affordable!**

## What is Wind Energy?

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Wind energy is the fastest-growing renewable power source in the world. Canada currently sources less than 1% of its total energy from wind, but has the potential to source more than 20%.

## What is Solar Energy?

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Solar energy is energy which is transferred from the sun to Earth in the form of electromagnetic radiation. Every hour, the sun showers the earth with more energy than the world's entire population consumes in a whole year. Sunny or cloudy days, solar power is always there in the form of UV rays.

## What are the Benefits of Wind & Solar Energy?

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- ✓ They are both renewable energy sources that do not create emissions or hazardous waste.
- ✓ They provide a cushion against electric power price increases.
- ✓ Renewable energy will help reduce Canada's dependence on fossil fuels.
- ✓ It provides the means to gain greater energy independence from the utility.

## What is a Hybrid System?

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According to many renewable energy experts, a "hybrid" system which combines wind and photovoltaic (solar) technologies is the best. These systems work together to produce power when it is available, as in the winter, there is more wind and less sun, and vice versa.

## Are there incentives from Government?

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Yes, both the Federal government and Provincial governments are enthusiastic about encouraging power from renewable sources. There are tax incentives and other funding that will reduce your initial capital cost.

## Description of our system

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- Our system is designed for the urban landscape. Wind energy is maximized along the lakefront. For solar energy, a southern exposure is required.
- Wind installations are possible on the ground and on the roof.
- Our wind turbines range from the smaller 1.4 KW to our medium sized 5 and 10 KW units and up to maximum of 30 KW single units.
- Any combination of these units, including solar power, provides us with the flexibility to build large systems up to 100 KW capacities and above.
- In fact our system is completely modular, up to a maximum of 1.5 Mega Watts.
- Our wind / solar systems need less maintenance and can last up to 25 years.
- Our wind turbines are gearless and are more efficient than the larger wind turbines.
- The combined system is very sophisticated, with advanced software to monitor the environmental conditions and maximize its power output.
- The system can work on-grid and off grid, and can switch seamlessly.
- The wind blades are designed to maneuver out of high wind speeds automatically.

## How is our system different?

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- We have a unique and revolutionary power generation and storage system.
- The system is composed of a hybrid wind/solar power generation infrastructure and has a very sophisticated, energy efficient AC/DC power conversion module.
- Governed by programmable logic controllers (PLC's), the system is intelligent enough to sense environmental conditions and adjust its operation accordingly.
- The system has an uninterruptible power supply (UPS) that will protect the building operations from sudden power fluctuations. This is ideal for critical operations.
- The UPS system acts as an emergency power generator and can be sized according to the needs of the building, as long as 8 hours and beyond.
- With its sophisticated PLC controls, and high capacity battery storage technology, the UPS system will shift the peak load from high energy cost day intervals by running the building load from the battery source.
- Availability of wind and solar will extend the off-grid time interval to avoid costly power costs.



## How do you achieve lower payback?

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With our design you can rest assured that you will get the most sophisticated renewable power generation system available. It will be designed to maximize your energy savings, maximize your energy cost avoidance and reduce your payback.

As part of your effort to build a renewable plant, there will be factors to reduce your capital cost:

- Federal tax incentives
- Provincial tax incentives
- GST and PST reduction

There is also an asset appreciation tax holiday for 10 years.

And there will be an associated bonus from installing this renewable energy system:

- UPS power plant for critical operations
- Emergency generation system for extended power failures

Payback will be reduced due to greater operational cost and energy saving factors:

- Green energy generation
- Peak shaving (moving the load out of higher interval energy pricing)
- Net metering (selling energy to the grid)

**For additional information or to arrange a site visit to an existing installation, please call.**



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