Ride the winds of change

Introducing Architectural Wind for urban and suburban communities.

The concept of using wind as a power source has been evolving for over 5,000 years. The ancient Egyptians first used wind to sail ships on the Nile River. Then, windmills that were used to grind grain and pump water were invented in Persia in about A.D. 500-900. Centuries later, farmers in Holland integrated propeller-type blades into the basic design of windmills, making them much more effective.

Today, windmills have evolved into wind turbines that are used to generate electricity. Conventional wind turbines are usually clustered together into wind farms that stretch off into the horizon and require massive amounts of open, windy spaces. That's because wind typically has to blow at speeds of 12 to 14 miles per hour to turn the turbines fast enough to create electricity. They also need to be placed on tall towers, because the higher you go, the faster the wind flows. This can translate into a good amount of vibration and noise, and many people complain that acres upon acres of wind turbines detract from the beauty of wide-open spaces.

Now, AeroVironment has created a wind turbine system for urban and suburban communities by making it small and quiet and by eliminating the need for a tower. Architectural Wind is the next step in the evolution of wind power, and the concept behind it is as powerful as when the first seafarers put wind to their sails.

*Wind power is perhaps the greatest success story.**

* "More Profit With Less Carbon," *by Amory B. Lovins,* Scientific American, *September, 2005*

A wind turbine designed the way buildings are designed.

As our product name suggests, our wind turbines are architectural in nature. This means that Architectural Wind harnesses a building's own aerodynamic properties to generate electrical power.

Here's how it works. When wind hits the side of a building, it travels upward at an increased rate of speed. As a result, the wind patterns at a building's parapet generate more energy than those on the flat section of a roof, and that means more energy. For instance, this increase in wind speed can result in up to a 30% increase in energy production.

Architectural Wind takes advantage of this "chimney effect" of rapidly rising wind by mounting our wind turbines on the parapets of buildings rather than on their roofs. Since there's no need for a tower, the roof is not penetrated, and that can help eliminate problems such as leaks.

This all translates into a fast and easy way to add an alternative source of energy to your building, while enhancing its architectural integrity. That's why we named the product Architectural Wind.

Start small and build from there.

Since our modular turbines are scalable, you can start with as little as 6kW and then add more as your need for renewable energy increases. As a result, many buildings can add 100 or more wind turbines. And remember, once they are all connected to your power line, you will have a dependable source of energy that's as natural as summer breeze.

No matter how many wind turbines you decide to mount on your building, they are designed to perform their job smoothly and quietly. These sturdy, dependable turbines feature a unique blade design that significantly reduces noise and vibration. Also, unlike large turbines that require brisk wind speeds, Architectural Wind can operate at wind speeds as low as 5 mph, but they are still designed to withstand gusts above 100 mph.

An optional color-matched canopy module ensures visual integration with buildings, as well as a screen to maximize avian safety. Architectural Wind is designed not only to provide you with a steady source of affordable, renewable energy, but also to blend seamlessly into the design of your building.

Wind energy is abundant, inexhaustible, widely distributed, and clean, and it mitigates the greenhouse effect.

Everyone will see your commitment to clean, renewable energy.

Most people take the issue of dwindling energy resources very seriously. In fact, a Gallup Poll* found that the availability and affordability of energy was one of the top five concerns that people have, and as our energy prices remain high, this concern will likely continue to grow.

Architectural Wind will help you to send a strong message to the community that you're helping to make a difference through your commitment to alternative forms of renewable energy. Unlike photovoltaics that typically reside on the roof and out of sight, Architectural Wind turbines are prominently mounted on the building parapet and will constantly be communicating your environmental stewardship. As Architectural Wind turbines rotate at low wind speeds, they create a form of "kinetic architecture," communicating clearly that you are committed to the generation of clean energy.

Investing in Architectural Wind turbines is also an investment in a powerful public relations tool.

**Gallup Poll (March13-16, 2006)*

*Nine out of ten Americans are worried about dependence on foreign oil, and even greater numbers want government to develop new clean energy technologies.**

*Yale Center for Environmental Law and Policy's Environmental Attitudes and Behavior (EAB) Project.

Mix and match your alternative energy resources.

Wind power, solar power, hydroelectric power, biomass power, geothermal power, and other clean energy solutions are all pieces to the energy puzzle. And solving that puzzle depends on how you put all those pieces together.

Perhaps you are already using some of these clean energy resources. The electricity you receive from the power company could be generated from hydroelectric power. Or you may already have a solar photovoltaic system installed on your building. Now, you can easily add to these clean energy resources with Architectural Wind.

Our wind turbines can be installed to work alone or with other renewable energy technologies such as photovoltaics. They connect directly to your current utility system to provide a dependable source of energy that will be there for years to come. Plus, electricity generated from Architectural Wind will contribute to reducing greenhouse gasses and air pollution, which, in turn, will help to reduce externalities such as damage to human health, the associated medical expenses, and environmental degradation.

So, help solve the energy puzzle with Architectural Wind. It can be an important piece of your total energy strategy.

Wind power doesn't directly produce carbon dioxide, sulfur dioxide, mercury, particulates, or any other type of air pollution, as do conventional fossil fuel power sources.

Let Architectural Wind energize your bottom line.

Business leaders throughout the world stand at a crossroads.

On one side are increasing energy costs that can negatively impact the profitability of their companies. On the other side are renewable energy systems that can help bring those costs down.

The chances are good that energy already represents a significant expense for your company. Yet, many experts believe that the high energy costs we are seeing today are just the tip of the iceberg. As the economies of countries such as China and India continue to expand, so will their appetites for energy, and that will put even more pressure on energy prices. Unless alternative sources of energy are developed and implemented on a large-scale basis, the cost of energy is likely to continue to rise. This may affect your cost of doing business and, ultimately, the competitiveness of your company on the world stage.

The use of renewable energy is an important decision that all business leaders should consider, and Architectural Wind provides a new option to help with that decision.

In recent years, the cost of wind-generated electric power has dropped substantially and is now lower than the cost of fuel-generated electric power.

Make the choice future generations can live with.

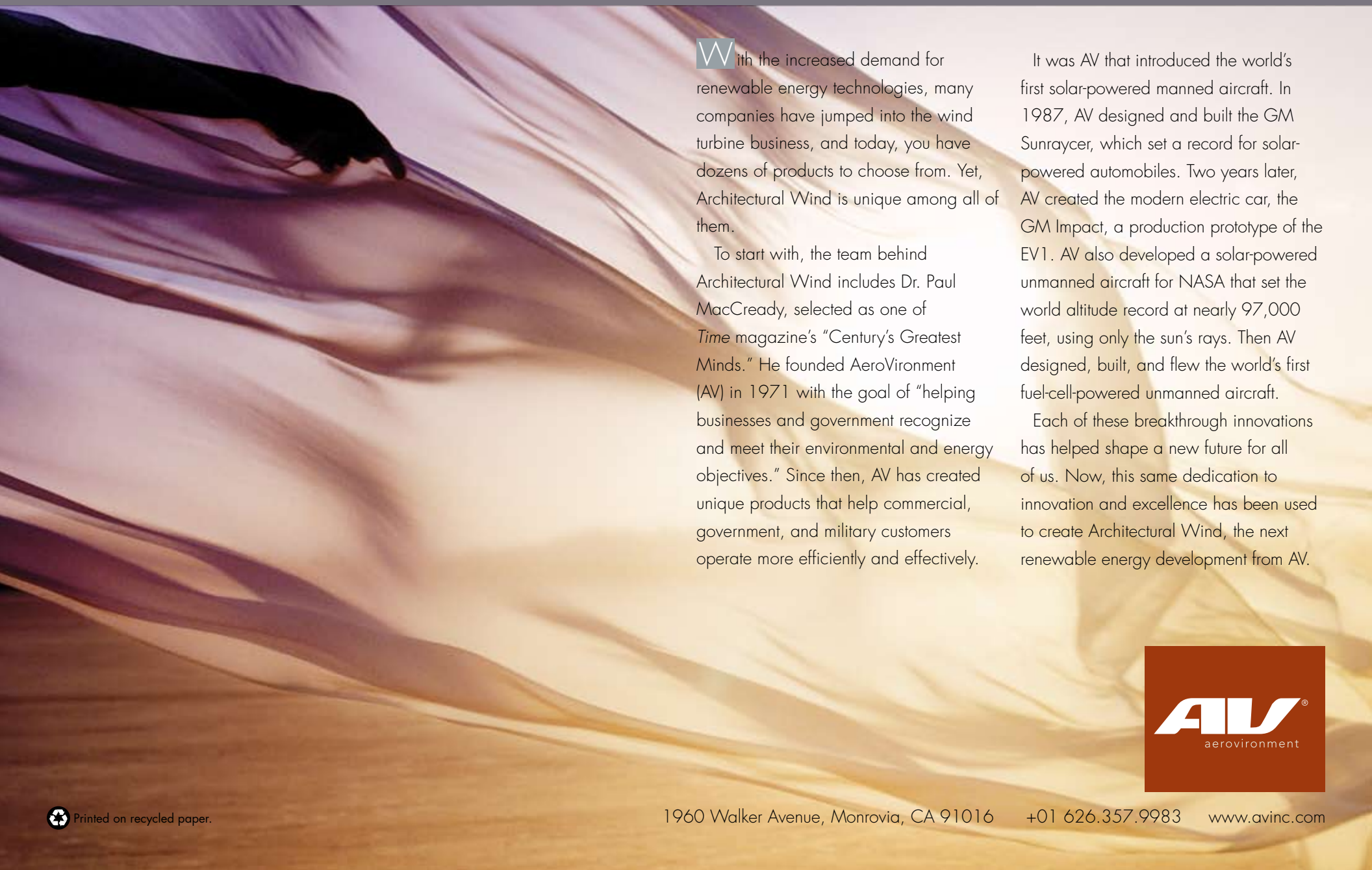
Until now, the extensive use of wind turbines has not been practical for urban and suburban communities. Now, Architectural Wind changes all this with innovative wind turbines that can expand your energy choices.

Our modular and scalable wind turbines offer total flexibility. You can start with just one 6kW utility-grid-connected wind turbine system and then add from there as your need for alternative, dependable energy increases. There are no cumbersome towers to install and no excessive noise or vibration to endure. Our wind turbines are designed to perform their job quietly and smoothly, and will serve as a constant reminder to the community that you have taken action to make the world better for both ourselves and future generations.

For more information on Architectural Wind, call us today at **626-357-9983**. We'll help you ride the winds of change.

Approximately 12 acres of forest are necessary to absorb the amount of carbon dioxide that can be easily eliminated by a single 30kW Architectural Wind system.

A pioneer in building integrated wind energy.



With the increased demand for renewable energy technologies, many companies have jumped into the wind turbine business, and today, you have dozens of products to choose from. Yet, Architectural Wind is unique among all of them.

To start with, the team behind Architectural Wind includes Dr. Paul MacCready, selected as one of *Time* magazine's "Century's Greatest Minds." He founded AeroVironment (AV) in 1971 with the goal of "helping businesses and government recognize and meet their environmental and energy objectives." Since then, AV has created unique products that help commercial, government, and military customers operate more efficiently and effectively.

It was AV that introduced the world's first solar-powered manned aircraft. In 1987, AV designed and built the GM Sunraycer, which set a record for solar-powered automobiles. Two years later, AV created the modern electric car, the GM Impact, a production prototype of the EV1. AV also developed a solar-powered unmanned aircraft for NASA that set the world altitude record at nearly 97,000 feet, using only the sun's rays. Then AV designed, built, and flew the world's first fuel-cell-powered unmanned aircraft.

Each of these breakthrough innovations has helped shape a new future for all of us. Now, this same dedication to innovation and excellence has been used to create Architectural Wind, the next renewable energy development from AV.

AV® aerovironment

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