

## **Whirlwind Solar Completes First Ever Solar Wall for School District in Fairbanks, Alaska**

*Whirlwind Solar, a division of Whirlwind [Steel Buildings](#), Inc. in Houston, TX, announced the completion of a "Solar Wall" installation for the Fairbanks North Star Borough School District in Fairbanks, Alaska. The first of its kind in the area, the wall is comprised of building integrated photovoltaic (BIPV) solar panels and incorporates innovative thermal insulation techniques designed to reduce energy consumption.*

(Vocus) June 9, 2010 -- Whirlwind Solar, a Division of Whirlwind Steel Buildings, Inc. a Houston, TX based company announced today, in conjunction with Fairbanks North Star Borough School District (FNSBSD), the first "Solar Wall" installation of building integrated photovoltaic (BIPV) solar panels in the Fairbanks, AK area. The Photovoltaic Laminates are installed on the South Facing Wall of the Fairbanks School District's Facility on Minnie Street. The new solar wall also incorporates innovative thermal insulation techniques which will reduce energy consumption.

The solar array, which is laminated to the Whirlwind Weather Snap metal system, is sized at 5.44 kW. The solar laminate system underscores the FNSBSD's commitment to green technologies education and at the same time reducing electricity usage.

Larry Morris of FNSBSD Facilities Management, said, "The Fairbanks North Star Borough has a long history of supporting alternative energy sources as well as technologies which will make for a cleaner and more energy efficient school district for our students and faculty."

According to Fred Reardon of [Whirlwind Solar](#), "Larry Morris and his team at Fairbanks North Star Borough Facilities developed a unique thermal wall design that incorporates new solar wall laminate technology. Larry came up with the idea, I made it a concept and Chuck Wiegiers of A & A Roofing Co., Inc. took our conceptual design and made it a reality. A & A Roofing, by incorporating some metal craftsman knowhow and architectural metals methods and materials expertise created an economical and clean electricity generating wall system." Reardon also commented "I have been in the metals industry for 23 years and these are some of the most forward thinking, creative guys I have come across. You really need to think outside the box if you are going to solve problems and these gentlemen know how to do that."

The "Made in USA" BIPV system is manufactured by United Solar Ovonic LLC, based Rochester Hills, MI, and is sold through their authorized distributor, Whirlwind Solar, a division of Whirlwind Steel Buildings, Inc. with corporate headquarters in Houston, TX.

The Solar Wall system is comprised of approximately 80 photovoltaic laminates each 16" wide and 9' - 4" long, and approximately ¼" thick. Each panel fits between the ridges of the building's standing seam metal system and face south for maximum efficiency. The solar laminate technology is lightweight (less than one pound per square foot). The combined weight of the panels is approximately 1,000 lbs and covers an area of approximately 1,000 SF. The solar laminate technology is better at capturing off angle light than traditional crystalline solar panels. Therefore, the photovoltaic laminate array does not need to be at the perfect Tilt Angle (Slope) or Azimuth Angle (perfectly oriented South) to create a great deal of electricity. The solar laminate utilizes unique triple-junction

amorphous silicon solar cells, where the blue, green and red light of the sun is absorbed in different layers of the cell. This technology results in better performance in low and diffuse light conditions. Solar Laminates demonstrate superior energy production in high temperatures, low light levels, cloudy conditions, and shading.

Larry Morris and his team avoided adding 3 to 6 lbs. per SF to the structure which can be the case when using framing systems and heavy traditional crystalline solar panels. Additional foundation and heavy framing costs were averted because of the lightweight solar laminate materials. Traditional solar arrays require multiple penetrations which can lead to water leaks and air infiltration in [metal buildings](#). The solar laminate system is a "penetration free system" which is another reason why the facilities management team selected to use the solar laminate technology.

The 5.44 kW Array is part of the Golden Valley Electric Association's Sustainable Natural Alternative Power (SNAP) program. The SNAP program links members who want to produce renewable power within the Golden Valley Electric Association's service area with those who are willing to pay a little more each month to buy solar and wind power. Member contributions to the SNAP fund will be paid to the renewable energy producers in Interior Alaska. In addition to receiving their proportionate share of the fund, producers will also receive a percentage of the off-peak wholesale power rate for the power they produce. Participating in the SNAP program is a unique opportunity to promote the development of renewable resources.

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