



# Public Schools of the Tarrytowns

*Rigor, Responsibility and Respect – Personalized Learning by Design*

## Wind-Solar Machine Harnesses Off-the-Grid Power for Tarrytown Schools



If you've been to the Washington Irving Intermediate School in Tarrytown lately, you may have noticed the unusual tall lamppost hovering over the newly refurbished upper field. You may have also noticed that the post is topped by a small windmill and a solar panel.

The tall object is called an off-grid Remote Power Unit (RPU) – and “off-grid” is the key term to remember here. The RPU was installed four months ago by Aris Energy Solutions, a Mount Vernon-based company that specializes in providing reliable, independent lighting on roadways, parkways, parking lots and recreation areas. In a partnership with the Tarrytown School District and Willdan Energy Solutions, Aris constructed the wind-solar energy device at Washington Irving.

The bonus for the school district? Off-the-grid lighting and power that is already hard at work providing lighting for both security and athletic events at WI's popular fields. During the day, and particularly because of its location close to the windy Hudson River, the RPU stores wind and solar power that can then provide lighting in the evenings.

Jim Quinn, a business development specialist with Willdan Energy Solutions, says Willdan is working with Aris, the school district, and Tarrytown and Sleepy Hollow on setting up sustainable power solutions that will protect and assist the villages and school district not only by providing lighting, but by eventually enabling the communities to harness the power of the sun and the wind in the event of severe weather or an emergency.

The communities received a \$100,000 grant to develop a “microgrid” last summer from the state of New York, and already, two wind/solar devices have been constructed – one at WI and another at the North Tarrytown Housing Authority. A microgrid is a resilient electric power generation and distribution network that can disconnect from the traditional grid and operate autonomously to minimize or eliminate power outages.

The ultimate plan is to have in place a community microgrid that provides a combination of heat and power, wind, solar, tidal power and other smart technologies to places include village hall, the police stations, firehouses, water and sewer filtration and pump stations, public schools and affordable housing complexes. Tarrytown and Sleepy Hollow were two of just 83 communities to receive the grant.

Eddy Rugel, vice president of business development with Aris, said the Washington Irving machine can be monitored by his company and that the field lights can be turned on and off by Aris remotely, if necessary. Because a metal “shroud” around the windmill itself serves as a funnel, wind energy is more efficiently stored in the RPU, said Mr. Rugel. Aris has also built an RPU in Mount Vernon, which it has been operating successfully for more than three years.

Peter Quartironi, Director of Facilities for the Tarrytown Schools, said the District hopes to expand on the project by adding an RPU at the Peabody Field, where a unit could provide security lighting and possibly charging stations for mobile phone,

and at the District's multi-purpose facilities and transportation garage, which is set to be rebuilt next year.

“We have been discussing using solar and other energy efficient solutions in Tarrytown for some time,” said Mr. Quartironi. “This all ties into our long-term efforts.”

Washington Irving Principal Susan Bretti said that having the solar-wind device at the school “helps our students understand first-hand what ‘being green’ really means.” She noted that WI's two Challenge teachers, Maureen Massaro and Elizabeth Hickey, are planning curriculum for 2016-17 that will include a study of how the solar/wind unit outside their school building works.



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 Aris Wind ([www.ariswind.com](http://www.ariswind.com)) is the licensee of Airsynergy's patented distributed wind technology for the United States and Caribbean. Aris Wind is an affiliate of DGC Capital Contracting Corporation, a 30-year-old Mount Vernon, NY, company with a solid reputation among the largest retailers for executing fast-track construction projects on time and on budget. Aris has added deep renewable energy know-how to complement its traditional strengths and customer focus, and has allied with Airsynergy to bring innovative enhanced wind solutions to the US distributed wind market.

Willdan Energy Solutions ([www.willdan.com](http://www.willdan.com)) provide professional consulting and technical services to utilities, public agencies and private industry throughout the United States. The company's service offerings span a broad set of complementary disciplines that include energy efficiency and sustainability, engineering and planning, financial and economic consulting, and national preparedness. Willdan provides integrated technical solutions to extend the reach and resources of its clients, and provides all services through its subsidiaries specialized in each segment.

