

## NYS Water Resource Mapping

Incorporated in 2003, Rentricity Inc. (Rentricity) has designed a unique energy recovery system which harnesses energy from excess water pressure to generate clean, renewable, in-pipe hydroelectric power. Their Flow-to-Wire™ system can produce between 5 and 350 kW of electricity for each site, providing drinking, irrigation and industrial water operators with an alternative source of reliable energy as well as providing access to an additional source of revenue, offsetting rising electricity rates.

### CHALLENGE

With over 400 billion gallons of water flowing through pipes daily in the United States, Rentricity was challenged to develop a strategic approach towards outreach efforts in New York State (NYS). As a result, Rentricity requested assistance from the NYS Pollution Prevention Institute (NYSP2I) to identify NYS candidates for efficient and sustainable energy production using the Flow-to-Wire™ system to further accelerate commercialization.

### SOLUTION

Using NYS Department of Conservation's (NYS DEC's) publicly available water database, NYSP2I identified water users by facility, town, county, withdrawal source, year, and average daily water withdrawal. During this process, NYSP2I collaborated with Rentricity to identify priority sectors, regions of interest and minimum water withdrawal thresholds. NYSP2I researched and highlighted the consumers which utilized gravity fed sources to the extent information was available, as well as identified and highlighted communities which were awarded grants from NYS towards supporting clean energy and grid resiliency. Last, NYSP2I geospatially mapped all data categories of interest to visually expose overlaps and regions to target.

### CHALLENGE

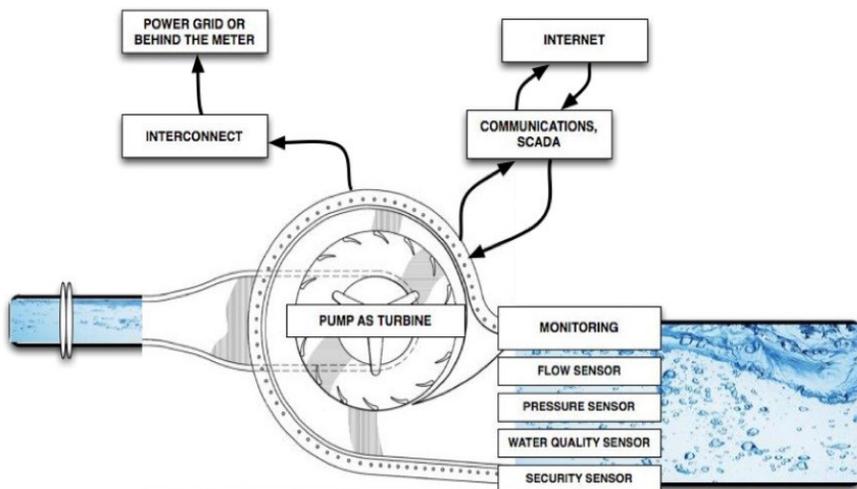
- Identify New York State drinking and industrial water candidates for efficient and sustainable energy production using the Flow-to-Wire™ system to further accelerate commercialization

### SOLUTION

- NYSP2I collaborated with Rentricity to identify priority sectors, regions of interest and a minimum water withdrawal thresholds
- NYSP2I researched and highlighted the consumers which utilized gravity fed sources of water
- NYSP2I identified and highlighted communities which were awarded grants from NYS towards supporting clean energy and grid resiliency
- NYSP2I geospatially mapped all data categories of interest to visually expose overlaps and regions to target

### RESULTS

- The work performed resulted in data and regional mapping of water consumers by location, identifying water use applications in 7 key regions of NYS, and, identification of gravity supplied water sources for potential clean energy production using Flow-to-Wire™ technology



Rentricity's Flow-to-Wire™ system

(Photo Credit: <http://rentricity.com/offerings/equipment/>)

## RESULTS

The results of the NYSP2I work performed include data and regional mapping of water consumers by location, identifying water use applications in 7 key regions of NYS, and, identification of gravity supplied water sources for potential clean energy production using Flow-to-Wire™ technology. Rentricity will use the NYSP2I data and regional mapping to strategically direct out-reach efforts, accelerating commercialization of their sustainable energy recovery system. Rentricity's successful expansion of the Flow-to-Wire™ product line is projected to help create up to thirty two (32) NYS jobs over three years.

## TESTIMONIAL

“Rentricity was very happy with the visualization techniques applied to data made available by NY state entities, as well as the geospatial mapping expertise. NYSP2I effectively identified NYS targets for our Flow-to-Wire™ system which will result in direct sales outreach.”

–Frank Zammataro, President & Co-founder  
Rentricity, Inc.

## NYSP2I PARTNERS

R·I·T

 Rensselaer



University at Buffalo

The State University of New York

Clarkson  
UNIVERSITY

New York Manufacturing Extension Partnership

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