Leveraging ArcGIS Online to Inventory Supply Side Organizations in New York State's Clean Energy Economy

STONE
ENVIRONMENTAL

NYSERDA Clean Energy Inventory Explorer

Services / Expertise
Geospatial & Data Solutions
Database Application Development
Data Compilation
Story Mapping
ArcGIS Online

Markets
State Government
Renewable Energy

Project Location
Montpelier, Vermont

Date Completed
December 2016

Project Owner
New York State Energy Research and Development Authority

Project ID#
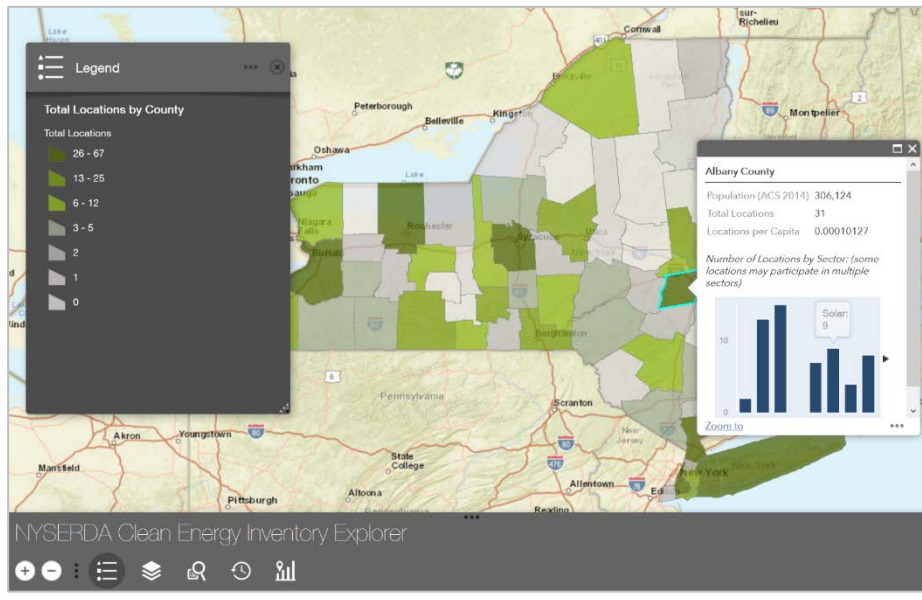2015-138

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Project Highlights
Developed a secure, web-based database and compiled a statewide data inventory of New York's clean energy economy and organizations

Designed a queryavble, web-based data sharing and visualization application using ArcGIS Online App Builder for stakeholders to explore inventory results

Delivered a comprehensive clean energy cluster analysis for NYSERDA using algorithms to identify statistically significant clusters or "hot spots" of clean energy industries by sector and performed geographic hot spot analysis.

STONE worked with Meister Consultants Group, Inc. to create a detailed geo-coded inventory of clean energy organizations in New York State and conduct a comprehensive clean energy cluster analysis. We developed a secure, web database to streamline inventory development and sharing throughout data development, data review, and the QA/QC process. The database was pre-populated with business information provided by the New York State Energy Research and Development Authority (NYSERDA), and additional, detailed information was obtained by research consultants through online research and phone calls. Field validation and choice lists were used throughout the database to ensure consistency and avoid misspellings and data entry errors.

Given the project's requirements for extensive data entry and multiple data entry forms, in addition to the project's limited resources for database development, Stone utilized the Knack database platform. The Knack platform provided for an easily customizable interface that could be quickly modified as data entry requirements changed. In addition, the platform has sophisticated user permissions capabilities that were implemented to allow users access only to their records and to specific content in the database.

Following data collection, a secure ArcGIS Online web mapping application was developed for internal NYSERDA staff to map, explore, and visualize the results of the clean energy inventory. The inventory data was summarized by geographic regions, including counties, regional economic development council zones, and census core-based statistical areas to help visualize hot spots of renewable energy industry activity across the state. The application includes tools to query, identify, and visualize industry activity over time.