

# Community Energy Strategies Pilot Program



## Services / Expertise

Application Development  
Spatial Analysis  
Story Mapping

## Markets

State Government  
Local Government  
Renewable Energy

## Project Location

15 Massachusetts Communities

## Date Completed

January 2015

## Project Owner

Massachusetts Clean Energy Center

## Project ID#

13-038

## Project Manager

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Story Maps prepared for the Franklin Regional Council of Governments Clean Energy Roadmap  
(<http://mapping.masscec.com.s3-website-us-east-1.amazonaws.com/MassCEC/FRCOG/>)

MASSACHUSETTS' Clean Energy Center (MassCEC) and the Department of Energy Resources (DOER) have helped to greatly increase installed renewable energy generation capacity and to broaden the application of energy efficiency measures statewide through a variety of financial and technical assistance programs. Nonetheless, recent experiences related to the siting and operation of renewable energy projects, together with specific feedback from municipal officials, suggest that additional efforts are required to fully realize the Commonwealth's clean energy potential. Such efforts include improvements to the project development process such as broad early stage stakeholder involvement and an increased role for strategic energy planning support.

Stone helped MassCEC's Community Energy Strategies Pilot Program (the "Pilot") in assessing clean energy opportunities at the community or regional level based on a combination of the locally available clean energy resources and the community's clean energy goals. There were 16 communities and 3 Regional Planning Authorities who participated in the Pilot Program. The program was designed on the belief that GIS-based spatial analysis of infrastructure and siting criteria for various clean energy technologies can facilitate a better understanding of the distribution and extent of clean energy opportunities, streamline the development process itself, and ultimately increase the number of development projects.

Stone developed several adaptable and reusable ArcGIS tools using the Python scripting language to process wind, ground-mounted solar PV, and anaerobic digestion siting exclusion and concern layers. Exclusions are layers that clearly

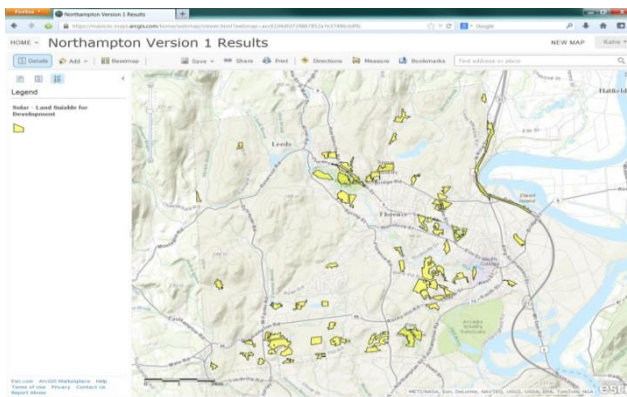
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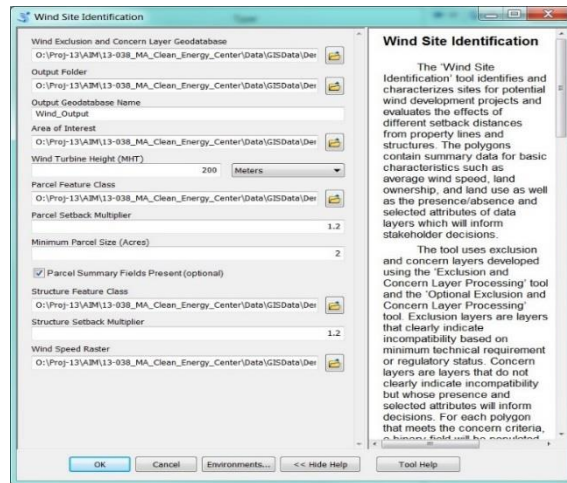
indicate incompatibility based on minimum technical requirement, regulatory status, or local ordinances. After processing this data, Stone's tools used these exclusion and concern inputs to identify potential clean energy sites. Communities added their own exclusion and concern layers to this analysis, as well as input their own setback distances for existing exclusion or concern data layers.

Stone played an instrumental role in this multi-participant project through four distinct efforts:

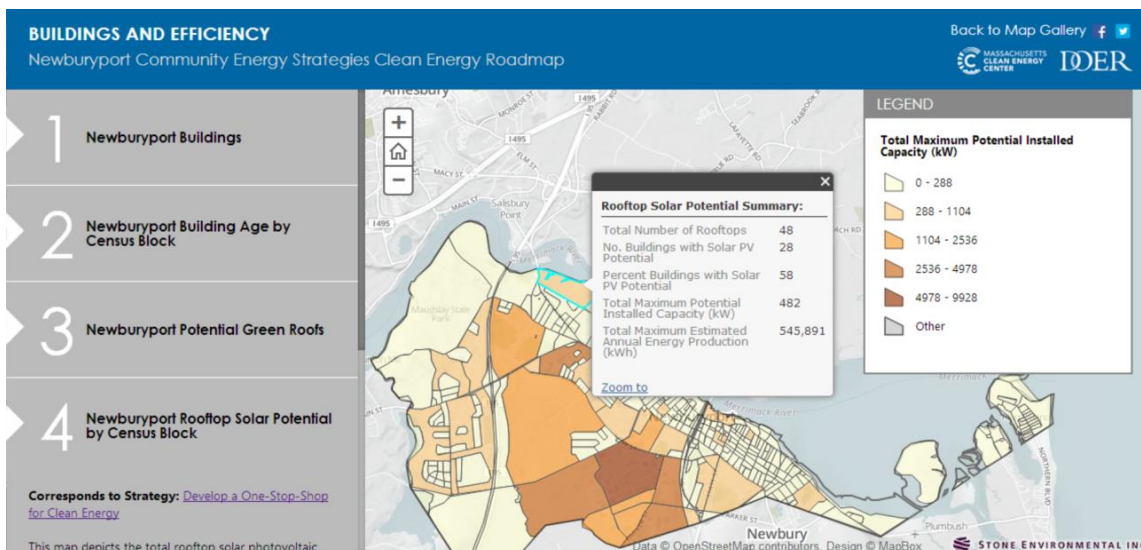
- Created a geodatabase of associated manufacturing facilities & air permits with building footprints and statewide parcels.
- Created several reusable and user criteria Renewable Siting Assessment Tools:
- Creating an Interactive Tab-based ArcGIS Online Template
- Conducted Community-Specific Analyses for each participating community.



ArcGIS Online is used to communicate results of the clean energy analyses to the community planners and working groups.



ArcGIS tools were developed to evaluate wind, solar, anaerobic digestion, and energy efficiency opportunities within communities. Above is the 'Wind Site Identification' ArcGIS Tool



Accordian Style Story Map for Newburyport Community Energy Strategies Clean Energy Roadmap (<http://bit.ly/1uFHuZS>)