

LONG ISLAND SOLAR ROADMAP PROJECT

CONSORTIUM MEETING NOTES

SEPTEMBER 11, 2019

To review the agenda and presentation materials, go to <http://www.solarroadmap.org>

ATTENDEES

Leadership Team

Aimee Delach, Defenders of Wildlife
Karen Leu, The Nature Conservancy
Jessica Price, The Nature Conservancy
Chelsea Schelly, Michigan Technological Univ
August Schultz, TNC GIS intern
Stephen Lloyd, The Nature Conservancy
Catherine Morris, Facilitator, CBI

Steering Committee

Michael Deering, LIPA
Jossi Fritz-Mauer, PSEG LI
Tim Lederer, LIPA
Sarah Oral, Cameron Engineering for NYSDA
Tara Schneider-Moran, Town of Hempstead
Tara Bono McDermott, EmPower Solar & LISEIA

Consortium Members

See a list of attendees in Appendix A.

OVERVIEW

Jessica and Catherine reviewed the agenda and the meeting objectives:

- Share results of Working Groups
- Get input on the synthesis/implications of the results
- Begin to formulate recommendations

SOCIAL SCIENCE RESEARCH RESULTS

- Chelsea reviewed the process for developing and administering an online survey of Long Island ratepayers. The survey was developed by the Social Science Working Group with input from PSEG LI and administered by PSEG LI. A link to the survey was sent to 50,000 randomly selected PSEG LI customer email addresses.
- She presented the results from the 405 responses, including six responses to the Spanish language version of the survey.
- Notable findings from the survey included:
 - Ninety-two percent of respondents expressed general support for mid- to large-scale solar development in their community.
 - Respondents were nearly evenly split on their self-reported level of knowledge about solar energy, with 47% saying they were knowledgeable or very knowledgeable and 53% saying they had little or very little knowledge.
 - Respondents indicated greater support for rooftop, carport, and ground-mounted projects on landfills regardless of their visibility and for projects that are privately funded on private property.
 - They also showed slightly stronger support for privately funded projects developed by local companies compared to privately or publicly funded community solar projects.
 - Respondents preferred projects sited in a mixed-use setting.

- Respondents were more likely to support projects that led to jobs and lower electricity rates.
- Among the concerns that might reduce their support, responses suggest that unfair distribution of economic benefits and increases in electricity rates were the leading concerns.
- Chelsea explained that approximately one quarter of respondents did not provide information about where they lived or other demographic information (as these questions were voluntary), so it was not possible to draw any inferences about the level of support by town, political persuasion, age, race or other demographics.

DISCUSSION

Chelsea posed three questions to the Consortium Members:

1. What have you learned from the survey results?
2. What other key findings, meanings, or interpretations do you take away from the report?
3. Based on what we learned from the survey results, what education and engagement is needed?

Observations shared by Consortium members included:

- General support may not translate to support for a specific project in your community.
- It would be interesting to know if there is a correlation between the adoption rate of residential solar and support for mid- to large-scale solar.
- A member expressed surprise that the survey results indicate that a majority of residents' support is not influenced by the level of visibility of a project. This contradicts the assumption that aesthetics is a central concern or point of objection to solar projects and that projects should be screened from view.
- Equity concerns (unfair distribution of benefits) may be driven by similar concerns expressed in up-state New York that the electricity generated locally is exported to other parts of the state rather than consumed locally. Chelsea noted that comments suggest less concern for negative economic impacts for low- and moderate-income and more concern for negative impacts to a respondent's own rates.
- The indication that there is less support for non-local developers could be a barrier, since many of the interested developers are not from Long Island.
- One member suggested that outreach should target local officials to share information that would help them play a leadership role in supporting solar development.
- A next step for social science research might be focus groups in towns where the response rate was lowest.
- The limited level of knowledge about solar indicates the need for education, particularly about the economics and the impact on electricity rates, since these were raised as concerns. For instance, residents may not be aware of the positive property tax implications of solar development.

ECONOMIC RESEARCH RESULTS

Jessica presented the research conducted by the Economic Research Working Group members. Among the points highlighted were:

- Business models and settings applicable to for mid- to large-scale solar:
 - Four business models were described -- direct ownership, host, third-party ownership, and community shared solar.
 - Four types of settings were presented – commercial, non-profit, government, and farms. For commercial, non-profit, and government settings, she discussed the economic opportunities and

barriers to solar development as well as the types of business models that might be well-suited. Farms will be included in the report in the next draft.

- Financial incentives and funding mechanisms available on Long Island include federal, state and utility programs.
 - Some state agency or authority programs available in other parts of the state are not offered or are fully subscribed and no longer available on Long Island. Non-profit, government, community solar, and low- to moderate-income households are currently underserved by existing programs.
- Direct costs of solar development have been declining since 2010, primarily because the declining cost of the hardware such as PV panels. Soft costs such as labor, design, and permitting costs, have not declined significantly and remain higher for commercial scale solar installations relative to utility scale projects.
 - The cost of land on Long Island is expected to continue to increase, and interconnection costs can be significant. The upfront costs of installing mid- to large-scale solar remain high, especially compared to the national average.
 - Generally speaking, parking canopy systems have the highest direct installation cost, ground mounted systems are intermediate in cost, and rooftop systems are the least expensive.
- Battery storage prices have also been declining.
 - Studies show that PV systems combined with battery storage perform significantly better than stand-alone systems, and installation cost is reduced when PV and storage are coupled.. The value of storage goes beyond the ability to better match supply with demand for electricity.
- Indirect benefits and costs were also outlined in the report, including potential impacts on jobs, the environment, human health, low- and moderate-income households' energy costs, utility's costs, ratepayers' costs, and neighboring land values.
- The report concluded with a number of suggestions for improving the economic feasibility of solar on low-impact sites, which could be implemented by the federal and state government, local government, the utility, solar industry, and property owners interested in installing solar.

DISCUSSION:

Jessica posed the following questions for discussion:

1. What aspects of the report stood out for you as new or compelling information to share?
 2. What economic opportunities or barriers should be addressed that weren't covered?
 3. What are the key areas of future research?
 4. What are additional economic strategy and policy options for driving solar development to low impact sites?
- The Consortium members endorsed the Working Group's efforts to get more local data on cost trends and suggested that there may be national numbers to predict future cost trends.
 - One member suggested that the Leadership Team and Consortium focus on the potential to lower soft costs and mentioned efforts in up-state New York to lower costs by expediting permitting and including more community engagement up front. Other members noted the difficulties in lowering costs, siting prevailing wage requirements and taxes.
 - Evidence that perceptions of property value impacts varies based on the level of familiarity with solar suggests the need to educate and train property assessors.
 - More information would be helpful on the property tax implications of solar development, such as loss of the tax discount for farmland.
 - Consortium members suggested that the Working Group look at incentives available in New York City and elsewhere in the state, such as the Market Transition Credit and adders to the value of solar energy for carport systems.

- It was suggested that the value of solar as determined in VDER (value of distributed energy resources) could be updated based on US EPA's tool for calculating environmental and health benefits.
- Water quality benefits from reduced deposition from fossil fuel emissions and possible stormwater retention could also be included under environmental benefits.
- Consortium members called for greater transparency and predictability from the utility around interconnection costs. PSEG has a filing before the Department of Public Service with an updated hosting capacity map that might help address this recommendation.

SPATIAL ANALYSIS

Karen reported on the progress made in the spatial analysis, and August walked through the interactive map of Riverhead to demonstrate the type of information that will be developed for the rest of Long Island. Karen emphasized that the map does not reflect where solar should or should not be sited. This information would have to be coupled with a site-level survey to collect more granular information about site suitability.

- The information about maximum solar potential on parcels that meet the suitability criteria is not meant to be a precise calculation of potential solar capacity and does not mean that the entire parcel is suitable.
- The next steps will be to expand the analysis to all of Long Island and include overlays such as zoning for each town.
- The interconnection overlay will hopefully show where interconnection is more accessible. The Leadership Team is working on a non-disclosure agreement with PSEG Long Island to access the data necessary for this analysis.
- TNC received additional grant funding to develop a solar irradiance overlay (based on LIDAR, altitude, and meteorological characteristics which will help fine tune issues with slope, shading, rooftop equipment, etc.) so users can translate potential capacity to potential energy produced.

DISCUSSION:

Karen posed the following questions for discussion:

1. What have you learned or found surprising in the Riverhead spatial analysis results?
 2. What guidance or context would help you to use the map?
 3. How else can the map be used?
- A Consortium member suggested that the 300 ft. buffer zone from wetlands and rivers be extended to parking lots and building installations. This in contrast to the SC decision not to exclude parking lots and building installations during workplan development.
 - Questions were raised about the airport on the edge of Riverhead that was formerly a weapons site. It may have been excluded as an unremediated brownfield but could be rezoned and sold for industrial use in the future. Such "future" potential sites may be highlighted by overlays added to the web map.
 - A member asked the GIS team to consider adding a function that allows users to leave comments on the map to provide granular feedback (similar to Suffolk County GIS tools).
 - Participants suggested other uses of the map including education of local officials and the public about what this could mean for Long Island.
 - Consortium members asked for a more in-depth tutorial on how to navigate the maps.

VISION, GOALS, STRATEGIES

Catherine introduced the draft statements below to help frame the purpose and approach of the final report:

VISION – Rapid development of mid-to-large-scale solar power on Long Island that minimizes environmental impacts and maximizes benefits to the region.

GOAL – Create and help implement a strategic plan for accelerating smart development of mid-to large-scale solar power on low impact sites that reduces economic barriers and meets the needs of local communities on Long Island.

STRATEGIES - In collaboration with key stakeholders (the Consortium), identify and support changes in policy and practices, technology, siting, business models, and financial incentives that drive smart solar development, as well as identify new research, information, and education needed to address knowledge gaps.

Based on initial reactions to the statements (thumbs up, thumbs down, thumbs sideways), it was decided that a small group of volunteers would work on refining the wording to present to the Consortium at the next meeting.

SYNTHESIS ACTIVITY

Consortium members spent this session in small groups processing what they heard in the morning and drawing out important findings or challenges that should be addressed in the final report. Some of the suggestions were:

- Promote the headline that the silent majority supports solar
- Educate public about what we mean by low impact sites and the potential on Long Island
- Potential is huge but the barriers, like zoning restrictions, are also high
- Health and other direct benefits of solar need to be in the headlines
- Economics of solar are getting worse because incentives are disappearing
- Interconnection access and costs are a major barrier
- Access to the benefits of solar for low- to moderate-income households needs to be addressed
- Connect with best practices and resources to regulate solar on farmland
- Value under VDER (revision at the end of 2019) and barriers to community solar need to be addressed
- Share what we have learned with municipalities and provide technical assistance so they can support solar-friendly policies

RECOMMENDATIONS ACTIVITY

In a brainstorming activity, Consortium members shared with each other the one problem that, if solved, they believe would have the greatest impact, and one bold idea for how to solve it.

The top ten ranked ideas were:

Problem	Recommendation
Interconnection	Use maps to find areas with low conflict potential and interconnection challenges. Provide cost share or incentives for upgrades to the grid at these locations.
Interconnection costs & difficulty	Form a coalition of environmental groups to send letter to utility and elected official to highlight the impediment to solar development caused by the lack of interconnection information and capability.
Interconnection costs for developer	Fold the expense of interconnection upgrades into government infrastructure spending/investment.
Ineffective and counter-productive municipal policies	Provide technical assistance such a model legislation and best practices for permitting, zoning and building codes.
Solar is not financially attractive to building and landowners	Pair solar with battery technology and require the utility to offer a feed-in-tariff purchase contract at \$.018/kWh.
Local resistance (NIMBY)	Provide economic incentives for siting on carports.
Convincing municipalities to promote and use solar energy and making it easier to install.	Education of public officials about the economic, health and other benefits, and the public support (see survey results). Determine the best zoning practices to allow more solar on low impact sites.
Community solar is not economically viable	Make community solar more competitive with long-term commitment and financial incentives.
Lack of incentive for commercial and industrial rooftop solar	Identify sites and provide financial credits for planning and/or construction.
Need to engage more stakeholders and convert non-believers	Host a series of town hall meetings coupled with a social media campaign to correct misinformation and educate local officials, stakeholders, and citizens.

All the ideas were collected and will be considered by the LT in drafting options for the final report.

PROCESS AND TIMELINE FOR THE PROJECT

Jessica shared the remaining project timeline:

OCT 28	CONSORTIUM MEETING 4 Roll out mapping results for all of Long Island
SEPT – JAN	DRAFT SYNTHESIS REPORT
JAN	CONSORTIUM MEETING 5 Develop recommendations—policies, strategies, actions
JAN – MARCH	DRAFT FINAL REPORT & MAPS
MAY	RESULTS LAUNCH Final meeting to rollout results to broad audience

NEXT STEPS

- Catherine will convene a Working Group on Vision, Goal, and Strategies and present a revised version in October.
- Jessica will solicit volunteers for Recommendations Working Group to assist the Leadership Team in developing options for consideration at the January Consortium meeting.
- Next Consortium meeting in October 28 by webinar to review the more complete spatial analysis.
- American Farmland Trust and TNC are hosting a forum on Solar and Agriculture in New York on Nov. 13 in Riverhead. Link to registration will be shared via email.

Appendix A. List of Consortium Member Attendees

- Lisa Broughton, Suffolk County Energy Office
- Robert Carpenter, Long Island Farm Bureau
- Michael Deering, LIPA
- Irene Donohue, Suffolk County Legislator Bridget Flemming
- Steven Englemann, EnterSolar LLC
- Jessica Enzmann, Sierra Club
- Meagan Fastuca, Town of North Hempstead
- William Feldmann, Empire Clean Energy Supply
- Jossi Fritz-Mauer, PSEG Long Island
- Meme Hanley, Land Trust Alliance
- Tim Lederer, LIPA
- Samantha Levy, American Farmland Trust
- Ryan Madden, Long Island Progressive Coalition
- Andrew Manitt, Sustainability Institute at Molloy College
- Brandon May, Town of Hempstead, Intern
- Tara Bono McDermott, EmPower Solar & LISEIA
- Sarah Oral, Cameron Engineering for NYSERDA
- Nicholas Palumbo, Suffolk County Community College
- Kyle Rabin, Long Island Regional Planning Council
- Tara Schneider-Moran, Town of Hempstead
- Lauren Steinberg, Town of East Hampton