Project Title:	Facilitating Deployment of Community Solar PV systems on Rooftops and Vacant Land in Northeast IL
Project Period:	12/15/2014 – 9/30/2017
Project Budget:	$1,663,206
Submission Date:	12/31/2017
Recipient:	Cook County
Address:	69 W Washington, Suite 1900 Chicago, IL 60602
Award Number:	DE-EE0000006916
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Executive Summary

The Cook County Community Solar project set out to unlock the potential of community solar in the Chicago region with lessons that could be applied nationally. One of the first steps was to prove out the potential market. This was done through an opportunity assessment which showed there is over 9,000 megawatts worth of site capacity available for community solar projects in Cook County – nearly enough to offset all of Cook County's residential electricity use. The assessment also showed that almost 75% of Cook County households are not able to invest directly in solar photovoltaic systems due to a variety of issues from physical barriers such as shading, or condition of the roof, to financial barriers such as lack of roof ownership, or the up-front costs of installation. Because of these barriers, community solar is an essential part of making the benefits of renewable energy available to all of the residents of Cook County.

In addition to the opportunity assessment the project team also worked with the over 200 individuals who participated in the stakeholder advisory group to develop a number of other products including: 1) an Economic & Policy Barriers Resolutions and Work Plan document which laid out best practices to address the policy barriers that existed at the time (May of 2016) 2) Value Proposition Report I and Report II which summarize the value of community solar to potential developers and subscribers, 3) The Community Solar Business Case Tool, which provides a flexible financial model that projects the costs and befits to the system developer and subscriber for a project, 4) Bill Crediting Analysis and the 5) Final Report.

The Final Report contains 15 case studies which prove that community solar projects are economically feasible in Cook County with a variety of sites, solar designs, ownership and subscriber models.

Project Objectives, Goals and Accomplishments

In the Statement of Project Objectives (SOPO), the County team laid out the following goal:

> "The goal is that through this initiative, at least 30,000 people in Cook County and nearly 45,000 regionally would gain access to solar by 2022. Cook County and partners' Solar Market Pathways grant proposal will focus on unlocking the potential of community solar in the Chicago region with lessons that could be applied nationally. Leveraging a broad stakeholder-driven approach, community solar will create pathways for Cook County's urban population to participate in distributed solar generation, expanding the demographic participation to seniors, low income, and apartment and condominium residents.
>
> This project will demonstrate replicable models for community solar by analyzing at least 5 case study projects, developing the supporting programming and advancing at least 3 projects to full plans and potential installation. In 2022, 5 years after the completion of the grant, we anticipate that these case study

> models will be replicated, driving a transformation of the local solar market, and generating an over 9- fold increase over the 2014 baseline case in Cook County, and over 12 times the Chicago MSA installed residential solar PV baseline."

Since this goal was written in late 2014, the prospects for community solar have improved beyond what was assumed to be possible at that time. Because of the passage of the Future Energy Jobs Act (FEJA) in December of 2016, there is now a legislative mandate for 400MW of solar to be installed in Illinois by 2030. The timing of the incentives that FEJA provides will drive the development in the early part of that time period, but they don't start until early 2018 and so no development is expected until those programs are initiated.

Because there was such a large response to our Request for Information from site owners, we had the opportunity to complete 15 rather than the 5 projected case study projects. And a prescreen by the utility did not rule out any of the 15 sites, which was a surprising outcome. All 15 sites had full case studies developed with the following components.

Case Study Component	Description
Host Site Assessment	A physical description, as well as a narrative of the owning entity, the community and its constituency.
Structural & Civil Engineering	A formal engineering report including structural and Civil assessment, site preparation and cost details.
Interconnection Pre-Screen	An interconnection pre-screen report, including estimated network upgrade and component requirements.
Solar Design	System design, component selection, panel placement, shading analysis, costs and design optimization.
Financial Modeling	Detailed financial assessments, including key financial metrics for the Developer, Subscriber and Host Site.
Customer Acquisition Strategy	Customer Acquisition, marketing & outreach, subscriber and billing management planning and costs.
Proposed Business Structure	Recommendations for the business case, including ownership, subscriber model, rates and projected outcomes.

Only one of the case studies showed that the site was not suitable for community solar due to capacity limitations and it was therefore recommended that traditional solar could be installed to supply electricity on-site. We have heard from several site owners that they plan on moving forward towards development but we won't have confirmation on those developments moving forward until the Incentives are finalized and made available in early spring 2018.

Cook County itself is in the process of drafting an RFP for a community solar installation on one or more of its properties.

The Local Benefits Analysis Report used the National Renewable Nergy Laboratory (NREL) Jobs and Economic Development Impact (JEDI) Solar PV model to estimate the jobs that would be created from building community solar projects. Additional analysis was conducted to estimate economic output unique to community solar, including jobs created from subscriber acquisition and management and savings from customer electric bills that could be reinvested in the local economy. The modeling was designed to look at the benefits based on projections of 600MW of community solar installations being installed between 2018 and 2030 (400MW of community solar mandated plus an assumed 200MW based on other available incentive blocks that can also be applied to community solar as set out in FEJA) and determined that would equate to 120,000 or more subscribers – much more than our initial goal of 30,000. In addition, the Local Benefits Analysis estimated a possible savings of $1.01 Billion in electric bill savings to subscribers (over a 25 year project life in 2016 dollars).

The Objectives outlined in the SOPO were also all achieved.

> This Program will unify Cook County and Chicago communities' shared solar stakeholders in a multiyear effort that will:
>
> - Convene a stakeholder group and working groups to identify and address local market barriers, allowing existing and new community shared solar ownership and business models to thrive.
> - Steering Committee = Includes at least Cook County, City of Chicago, Elevate Energy, West Monroe Partners, Environmental Law and Policy Center and decision making level representative from a Utility
> - Stakeholder Advisory Group = higher level stakeholders, e.g. nonprofits, solar developers, state regulatory bodies, etc.
> - Working Groups = Regulatory/Policy, Business Models, Education and Outreach
> - Showcase community shared solar through analyzing at least 5 case study projects, at least 3 of which advance to full plans towards installation
> - Model and disseminate the shared solar costs and benefits at each of the pilot sites for scalability and market potential

Over 160 groups and 200 individuals participated in the Stakeholder Advisory group over the course of 6 meetings. A list of the participating groups is found on pages 44

and 45 of the final report. All steering committee groups remained active throughout the course of the project and working groups met regularly through the summer of 2015 and then served as a resource towards the end of the funding period when reports were being finalized.

Project Activities

The Cook County community solar project's aim was to unlock the potential of community solar in the Chicago region with lessons that could be applied nationally. Leveraging a broad stakeholder-driven approach, the project worked to show that community solar will create pathways for Cook County's urban population to participate in distributed solar generation, expanding the demographic participation to seniors, low income, and apartment and condominium residents.

During the funding period, the project team worked hard to make sure that the project received a wide range of stakeholder input and that there was a consistent meeting schedule to ensure progress on deliverables and goals. To do so the project team hosted:

- 6 Stakeholder Advisory Group meetings with between 50-120 attendees each,
- 3 Business Model working group meetings,
- 3 Policy and Regulatory working group meetings,
- 2 Outreach working group meetings,
- 8 Community solar model vetting sessions with local developers, the National Community Solar Partnership, GTM and NREL
- 2 Community Solar Value Proposition Workshops to review valuation methodologies for the Value Proposition Analysis,
- Monthly steering committee meetings,
- Bi-weekly project management team meetings.

In December of 2016, the Illinois State Legislature passed the Future Energy Jobs Act (FEJA). The FEJA set the stage in Illinois for successful community solar in Illinois by addressing the major economic and policy barriers identified in the project's Economic and Policy Barriers Resolution Work Plan. Almost all of the best practices identified by the Cook County Community Solar Project's policy working group were incorporated into the FEJA.

In November 2015, the project kicked off the pilot site selection process at a stakeholder advisory group meeting, targeting Cook County property owners and encouraging them to consider hosting community solar. Many thousands of solicitations were sent out by team members and members of the Stakeholder Advisory Group to local governments, community groups, business, associations and many others.

The project received overwhelming interest from the community: 109 properties were submitted for consideration and 75 of those were deemed suitable for community solar based on initial criteria such as site size, capacity for solar and condition of roof. The project team received both rooftop and ground mount submissions from across Cook County and from nonprofits, commercial and industrial properties, schools, churches, municipalities,

park facilities, and even from a landfill. The project team selected fifteen sites for further analysis based on criteria such as slope, obstructions, and roof life.

The sites represent a diversity of uses, ground v. roof mount, size, and geographies in many parts of the County. The sites were first analyzed by ComEd to determine interconnection feasibility and then by an independent engineering firm, Primera Engineers, Ltd. to assess structural integrity and other issues, which informed solar design and financial modeling. Case studies integrating all of these inputs provide roadmaps for developers and site owners looking to begin the development process.

Conferences

Project team members have been invited to speak at a number of national and local conferences and meetings throughout the funding period, and after.

- SXSW Eco (2015)
- Community of the Future, ComEd Workshop (February 2016)
- Solar Market Pathways - Workshop presentation on Stakeholder engagement (June 2016)
- Solar Power PV Expo 2016 - Community Solar- Mission Driven to Market Driven (November 2016)
- ISC Energy Data Workshop at NREL (March 2017)
- Green Town Fox Valley (April 2017)
- US Green Building Council and American Institute of Architects: Chicago Thrives Resilience Symposium (April 2017)
- TRC Solutions – Developing Solar on Landfills and Brownfields (June 12, 2017)
- Minnesota Energy Fair – Midwest Energy Transformation (June 17, 2017)
- Solar Power 2017 – Community Solar Technical Session (July 11, 2017)
- Chicago Southland Economic Development Commission (July 28, 2017)
- Prairie State College – Become a Solar Ready Community Workshop (September 2017)
- Solar Power International – Low Income Community Solar (Sept 2017)
- US Green Building Council Drink Up & Drawdown (September 2017)
- South Suburban Mayors and Managers Association Community Development Meeting (September 2017)
- CELICA Webinar – Community Solar Business Case Review (September 7, 2017)
- Solar Power International Midwest Workshop (October 2017)

- Institute for Sustainable Communities – New Tools to Accelerate Solar Development (October 27, 2017)
- IBEW – Building Strategic Solar Partnerships in Illinois (November 15, 2017)
- Opening Doors to Community Solar: Insights from Cook County, IL & Other Local Governments Webinar - IREC (November 2017)
- American City and County/Energy Times conference Sustainability panel (November 2017)
- Willmette Go Green meeting (November 2017)

Websites

There are two main websites for the project:

1. https://www.cookcountyil.gov/service/solar-energy

   This website was the working space for the project as we went along, a place for project members and stakeholders to access reports, meeting presentations and background information.

2. https://www.cookcountyil.gov/communitysolar/

   This site was developed to feature the final report and case studies. Each case study has a page with a summary, full case study and supporting documents available. We will continue to build out this website as a resource for community solar.

In addition, Elevate Energy hosts the Community Solar Business Case tool on their website in addition to it being available on the County's website.

https://www.elevateenergy.org/community-solar/communitysolarbusinesscasetool/

Networks and Collaborations

At the final stakeholder advisory group meeting in September, there were over 100 attendees and they agreed that they would like to continue to receive information regarding community solar throughout the next year and were interested in the possibility of quarterly conference calls or meetings in order to monitor the roll out of the Illinois incentive programs.

Cook County and IREC hosted a webinar on November 9th as a part of this continuing education for the stakeholder group. The webinar was targeted towards site owners, particularly local governments who are interested in participating in community solar either as participants or through development of a project on their own land or buildings. Over 170 individuals were registered for the webinar. Deborah Stone, Chief Sustainability Officer, Cook County presented on an overview of Illinois' regulatory progress and timeline as well as the tools and resources available. Brian Millberg, the Energy Manager for the City of Minneapolis, MN outlined the considerations necessary

for governments when developing an RFP for community solar projects. Samantha Bluemer, Energy Conservation Specialist with Will County, IL discussed the steps necessary to prepare a community for solar development, including solar-ready zoning, stakeholder engagement and integrated planning.

Based on their participation in the Cook County solar project stakeholder group, the Metropolitan Mayors Caucus and the Solar Foundation learned about and then applied for and received funding to participate in the Department of Energy's SolSmart program. Cook County is participating along with more than a dozen municipalities to work towards developing solar-readypermitting processes and codes that will help solar installers more easily navigate a very large metropolitan area with many layers of government.

This Illinois Solar for All working group, which now has over 70 participants, was formed to bring the best practices and policies to the Illinois energy landscape that would serve to maximize benefits to the economically disadvantage households and communities that the targeted communities in the FEJA are intended to serve. Many of the participants have been active in the project's stakeholder advisory group and will continue the work of solar market pathways project to focus policies and incentives to bringing those without access to traditional solar installations into the renewable energy market.

Project Products

The products listed in the chart below were those outlined as deliverables in the project's SOPO. In addition to these final deliverables, meeting presentations from stakeholder meetings were made available on the project's website and working group notes, presentations and discussions were available to working group members on the Base Camp site.

POLICY & PROGRAM DESIGN			
Best Practices Analysis	August 2015	Compiled from leading experts on community solar, analysis identifies model programs and provides a framework for accelerating community solar in Cook County.	https://www.cookcountyil.gov/sites/default/files/service/cookcountysunshottask3bestpractices.pdf
Economic and Policy Barriers Resolution Work Plan	May 2016	Identifies economic and policy barriers as well as potential resolutions for developing community solar.	https://www.cookcountyil.gov/sites/default/files/service/policy-resolutions-work-plan.pdf
FINANCE & ECONOMICS			
Value Proposition – Part I	May 2016	Analysis of the value proposition for shared solar subscribers and system owners, finding a positive business case for both parties under the base case scenario.	https://www.cookcountyil.gov/sites/default/files/service/value-proposition.pdf

Value Proposition – Part II	April 2017	Building off the previous value proposition, this analysis includes utility impacts and incorporates provisions of the Future Energy Jobs Bill, passed in December 2016. Found a positive business case for system owners and subscribers as long as federal tax credits, SRECs and utility rebates are available to developers. Also found that as a wires-only utility, ComEd would not be able to realize the benefits of shared solar.	https://www.cookcountyil.gov/sites/default/files/service/cook-county-smp-task-5-1-value-proposition-report.pdf
Utility Billing Impacts of Community Solar	May 2016	Analyzes the potential bill crediting processes for subscriber management of a community solar project.	https://www.cookcountyil.gov/sites/default/files/service/bill-crediting-analysis.pdf
Community Solar Business Case Tool	March 2017	Spreadsheet that allows users to calculate the costs and benefits of a community solar project for developers and subscribers.	http://www.elevateenergy.org/wp/wp-content/uploads/Community-Solar-Business-Case-Tool.xlsm
Community Solar Local Benefits Analysis	August 2017	Simulates costs and benefits at a hypothetical site to derive total local net benefits, including job creation, economic activity and environmental impacts of increased deployment of community solar within Cook County.	https://www.cookcountyil.gov/sites/default/files/service/final-local-benefits-analysis-report-080917.pdf
OTHER COOK COUNTY SOLAR MARKET PATHWAYS RESOURCES			
State of Community Solar in Cook County	June 2015	Details the current state of community solar in Cook County as of June 2015. Despite growing interest in solar, there were no community solar projects installed in Cook County.	https://www.cookcountyil.gov/sites/default/files/service/cookcountycommunitysolaropportunityassessmentpart162915.pdf
Opportunity Assessment	June 2015	Quantifies shared solar market potential by identifying suitable sites for community solar installations and potential solar capacity for those sites. Total community solar capacity in Cook County is over 9,000 megawatts, enough to power the annual energy consumption of more than 1.2 million single-family homes.	https://www.cookcountyil.gov/sites/default/files/service/cookcountycommunitysolaropportunityassessmentpart262915.pdf

Case Studies & Case Study Overview	September 2017	Overview details evaluation process for 15 potential community solar sites; case studies show viability of community solar in wide range of circumstances.	https://www.cookcountyil.gov/communitysolar/casestudies
Final Report	September 2017	Overview of the project and the most relevant findings from the case studies and other products.	https://www.cookcountyil.gov//sites/default/files/community_solar_for_cook_county.pdf
Cook County Solar Map	October 2016	The solar suitability map is a public platform for municipal planners, property owners, and developers to identify rooftops and parcels of vacant land that can accommodate large solar arrays.	https://www.elevateenergy.org/cc-solar-map/

Computer Modeling

Computer modeling was used for two of the project deliverables, The Community Solar Business Case Tool and the Local Benefits Analysis, for which the JEDI was used.

Community Solar Business Case Tool (used as input to the Task 5.1 Community Solar Value Proposition Analysis and Task 5.2 & 5.3 Local Benefits Analysis)

The purpose of the community solar business case tool is to allow users to model the costs and benefits of a community solar project to different stakeholders, specifically the system owner and subscriber. The model can be used as a screening tool for communities, site owners, and developers interested in siting a community solar project. The model can be used to provide interested parties with insights about the economic viability of a potential project, and the directional impact of changing key variables, and communities and site owners can leverage the outputs when seeking proposals for construction. Two versions of the model are available online: the first is a generic model that is intended to be customized for use by stakeholders across the county. The second is an Illinois-specific model, which has been pre-populated with Illinois electricity rates and available incentives. Both versions of the model are excel-based and can be accessed here.

The model was designed to be flexible and allows the user to toggle between certain key inputs, including the system type (ground mount, rooftop, or parking lot canopy), ownership model, subscriber model (whether they buy their panels upfront or lease them over time), and the difficulty of subscriber acquisition. They key financial outputs of the model include Net Present Value for the subscriber and developer, as well as the Internal Rate of Return and Return on Investment. The model also calculates the panel purchase price and panel lease price that a developer would need to charge to break even given the selected inputs, so the user can make an informed decision about what price point may be appropriate.

- All calculations can be viewed by hovering over the cells in the workbook. The specific metric calculations leveraged include:

- Net Present Value: NPV = ∑ {C / (1+r)^t} - I, where:
    - C is the expected cash flow per period
    - R is the discount rate
    - T is the period
    - I is the initial investment
- Return on Investment: ROI = net benefits/total costs
- Internal Rate of Return: 0 = ∑ {C / (1+IRR)^t} } - I
    - C is the expected cash flow per period
    - R is the discount rate
    - T is the period
    - I is the initial investment

Default values were derived through literature reviews and vetted with stakeholders at GTM Research, the National Renewable Energy Laboratory, the National Community Solar Partnership, and a working group of local developers. The tool mechanics were also assessed by reviewers at the National Renewable Energy Laboratory. Any identified calculation mistakes were revised before posting the model publicly. Theoretical strengths include: level of granularity in cost inputs, assessment of subscriber acquisition costs, and flexibility in modeling benefit streams. Limitations include being bound to a discrete set of ownership structures and a simplified cost of capital analysis. The model is not intended to be used for budgeting purposes; results are estimates, not precise forecasts. The model does not come pre-populated with incentive data or subscriber credit rates for states outside of Illinois.

The only hardware requirement is macro-enabled Microsoft Excel, Documentation is found in: A "How-To" guide for the model which can be found on the Elevate Energy website here.

National Renewable Energy Laboratory Jobs and Economic Development Model (used as input to the Task 5.2 & 5.3 Local Benefits Analysis)

The goal of the Local Benefits Analysis is to scale up the simulated costs/benefits at a hypothetical community solar site to derive the total local net benefits of increased deployment of community solar projects within Cook County. The analysis is intended to include an assessment of the local benefits associated with the construction and maintenance of the community solar installations including job creation, economic activity and environmental impacts. NREL's JEDI model was used for this analysis. The model description below was copied from the National Renewable Energy Laboratory About JEDI Models webpage. The Jobs and Economic Development Impact (JEDI) models are user-friendly screening tools that estimate the economic impacts of constructing and operating power plants, fuel production facilities, and other projects at the local (usually state) level. JEDI results are intended to be estimates, not precise predictions.

Based on user-entered project-specific data or default inputs (derived from industry norms), JEDI estimates the number of jobs and economic impacts to a local area that

can reasonably be supported by a power plant, fuel production facility, or other project. For example, JEDI estimates the number of in-state construction jobs from a new wind farm.

Jobs, earnings, and output are distributed across three categories:

- Project Development and Onsite Labor Impacts
- Local Revenue and Supply Chain Impacts
- Induced Impacts

The JEDI models run in Excel. All JEDI models apply the same basic user interface. Users download the appropriate JEDI model and then enter basic information about a project, including the state, location, year of construction, and facility size. The model then estimates the project costs (i.e., specific expenditures), and the economic impacts in terms of jobs, earnings (i.e., wages and salary), and output (i.e., value of production) resulting from the project.

The model theory description below was copied from the National Renewable Energy Laboratory JEDI Methodology webpage. Each JEDI model uses the same basic input-output methodology. That is, dollars spent on a power generation project in a state, county or region are analyzed to determine their employment and economic impact within the local area. Local spending results from using:

- local labor (e.g., concrete pouring jobs)
- services (e.g., engineering, design, legal)
- materials (e.g., wind turbine blades)
- or other components (e.g., nuts and bolts)
- The portion of project spending that occurs locally (i.e., in the geographic area being analyzed) can be adjusted by the user (to reflect location- and project-specific details) under the "local share" category.

The mathematics description below was copied from the National Renewable Energy Laboratory JEDI Methodology webpage. JEDI models utilize economic data (multipliers and consumption patterns) derived from the Minnesota IMPLAN Group (MIG) state-level data to estimate the local economic activity and the resulting impact from new energy generation plants. MIG compiles and aggregates national and regional economic and demographic data to calculate inter-industry linkages and the relationships between changes in demand for goods and services, and the associated economic activity at the local, state and regional levels. State multipliers for employment, wage and salary, and output and personal spending patterns are derived from the MIG accounting software using currently available data. Changes in spending patterns brought about by investments in power plants, fuel production facilities, or other projects are matched with appropriate industry multipliers. If the year for which the expenditures (dollars) are entered does not match the model's multiplier data year, the JEDI model applies price deflators to account for changes in actual dollar value. The summary results are then converted back to the original dollar year entered by the user.

JEDI model defaults are based on interviews with industry experts and project developers. Economic multipliers contained within the model are derived from Minnesota IMPLAN Group's IMPLAN accounting software and state data files. NREL has a webpage that details the limitations of JEDI models. These limitations include

- Results are estimates, not precise forecasts
- Results reflect gross impacts and not net impacts
- Results are based on approximations of industrial input-output relationships
- Results are based on the assumption that all industrial inputs and factors of production are used in fixed proportions and respond perfectly elastically
- Results are dependent on the accuracy and appropriateness of the project description
- Results are not a measure of project profitability or viability
- Results do not include intangible effects

The only hardware requirement is macro-enabled Microsoft Excel.

Each JEDI model (which can be downloaded here) comes with a tab of instructions. NREL also maintains a webpage dedicated to interpreting JEDI model results, accessible here.

Conclusions

The Cook County project team satisfied all of the milestone and go/no-go decision points in the course of the grant period.

Since this project began the landscape for development of community solar projects in Cook County has changed dramatically. Community solar has gone from an esoteric topic of conversation among a few interested in renewable energy, to a common topic with a legislative mandate for 400 megawatts of community solar development by 2030.

The project, and in particular the Stakeholder Advisory Group, helped to establish a space in which many of the primary policy makers and advocates were able to learn from the research and reports provided and bring that information to their respective roles in the process. In particular, the policy working group discussed and developed a set of best practice considerations for subscriber and system characteristics which informed the negotiations that later took place on the FEJA.

Another benefit of the project to the general development of the community solar marketplace in Northeastern Illinois, was the participation of project as the first test sites for ComEd's new pre-interconnection screening service. The project team submitted 15 sites for the streamlined, "pre-interconnection" analysis. This pre-interconnection analysis is intended to identify interconnection issues early on and without a full interconnection process so project developers can avoid financially unfeasible projects. Of the 15 sites submitted by our project, two properties passed the "simple" screen; nine passed the "moderate" screen; and four sites failed those screens and were deemed "complex" with one requiring additional analysis. For our project this meant we were able to

quantify costs of interconnection, based on these categories, much earlier in the development process. Our team provided feedback on the reporting from ComEd and they are now offering the pre-interconnection analysis service and reported at our last Stakeholder Advisory Group Meeting that they've already received inquiries on projects totaling several hundred MW.

In developing complete case studies for 15 sites there were a number of findings that are detailed in the final report, "Community Solar for Cook County." Most importantly, we found that 14 of the 15 sites can economically support community solar projects even with conservative assumptions about incentive pricing. Showing that community solar projects are economically feasible in a dense urban area, with a variety of solar designs, subscription types and ownership models is important to Cook County because although subscriptions can be linked to any project within the utility service area, the location of the development will determine where construction jobs occur. Siting is also important in that locations with greater visibility also provide educational opportunity and therefore have a positive impact on replication. This project proves out the idea that community solar doesn't have to be built on large greenfields in utility scale projects for it to work.

Budget and Schedule

The approved DOE share of the project budget was $1,238,308. Cook County (CCDEC) incurred costs expensed to DOE in the amount of $1,158,362.75. The total project costs were $93,915.67 below the total project budget. Three factors contributed to the project coming in below budget. The main factor was a decision to move the majority of the sub-recipient's sub-contractor's work on solar designs for the case study sites to Elevate Energy and Microgrid Energy which were able to provide a better product at no charge. CCDEC also did not incur all of the anticipated costs for travel and supplies. Combined these project lines came in $22,988.84 below budget. These in turn affected Cook County's indirect rate which came in $24,755.28 below budget. CCDEC did incur personnel and fringe costs above the approved project budget. The exceedances totaled $18,265.87. The final cost share rate was 26.8% of contractual costs, 1.1% above the approved cost share rate.

Throughout the project there were only three significant staff changes on the project team. In September of 2015, Mat Elmore of Elevate Energy moved to Colorado and was replaced on the project by Vito Greco. In May of 2016, Sarah Wochos, Midwest Co-Legislative Director at the Environmental Law and Policy Center left ELPC was replaced on the team by MeLena Hessel, Policy Advocate. In February 2017, Ellen O'Connor, the Business Manager for the Cook County Department of Environmental Control left the Department, her role was taken over by Christopher Lipman in May 2017.

One request for a time extension was submitted in early spring of 2016 when it was clear that due to delays in the County's purchasing process, the engineering contractor would not be able to begin work in time to meet the original project end date of June 2017. However, this extension, along with the unexpected number of original site submittals, and the positive outcomes for sites from the utility's pre-screen, allowed for the increase of the number of sites which would have complete case studies done from seven to fifteen.

Path Forward

At the final Stakeholder Advisory Group meeting, the participants indicated that they are interested in staying involved, particularly in learning more about the program decisions as the Illinois Power Agency progresses with its planning into the next year and then tracking developments - where they are happening and their subscription models as they come online. Cook County has agreed to continue to facilitate these updates and provide the opportunity for in person or online meetings throughout the next year.

The County is also building out the website we've created as a part of the project. Currently the final report and all case studies along with the supporting documents are available. We are building out the resource page with information for subscribers, site owners and developers, as well as local governments. In addition all of the project team organizations are continuing to make presentations and participate in workshops; focusing on presenting the learnings from the project as well as learning more about what the current needs are for stakeholders in this space. One example of this is that municipalities have been reaching out as they are being contacted by developers, asking for information about how to proceed as potential host sites or subscribers. The webinar co-hosted on 11/9 with IREC provided information on request for proposals and planning and development considerations to over 80 participants.

Press Coverage

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http://www.chicagotribune.com/bluesky/originals/ct-cook-county-solar-panel-co-ops-bsi-20170403-story.html

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http://www.dailyherald.com/news/20171102/lester-arlington-heights-showing-interest-in-adding-tuk-tuk-shuttles

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