



• I • C • L • E • I

Local
Governments
for Sustainability

The global cities network

www.iclei.org

Solar For All: Minimum Costs to Local Governments and Maximum Solar for their community



Highlighting innovative local solutions from Beaverton, OR and Tompkins County, NY

09.17.2014

WWW.ICLEIUSA.ORG





Mission

Our mission is to build, serve and drive a movement of local governments to advance deep reductions in greenhouse gas emissions and achieve tangible improvements in local sustainability.



ICLEI Network at a glance

- Members comprise about 25% of the total population of the United States
- States with the largest ICLEI Network base
 - California
 - New York
 - Massachusetts
 - Florida
 - Washington
- Communities served by ICLEI
 - Under 50k – 48%
 - 50k – 250K – 31%
 - 250k – 500k – 11%
 - 500k – 1 million – 5%
 - Over 1 million - 5%



Members' Only Webinar Series

It's an opportunity to create and further promote best practices and learning within the ICLEI Network

Webinars To Date

- City of Yonkers NY's LED Streetlight Retrofit project
- Urbana, IL and Denton, TX's ClearPath Experience
- Solar For All with Beaverton, OR and Tompkins County, NY

Upcoming Webinars

- Green Business Challenge with Office Depot Grant Recipients
- Adaptation and Resiliency projects



Exclusive Member Benefits



- Access to the ICLEI Member Network
- Cutting edge tools and technical assistance
- Climate Protection and Sustainability Resources
 - Mitigation, Adaptation, Resilience & Sustainability
- Media, Communications & Outreach Support
- Recognition Opportunities
- Elected Official Engagement through the Resilient Communities for America Campaign

ClearPath Update

The next generation of ICLEI's software for local governments managing energy, resources, and GHG emissions, ClearPath provide end-to-end support for the ICLEI Five Milestone Process

Over 160 ClearPath users since March 2014 release

4th Module – Monitoring & Tracking Module will be available in the next few months

SunShot Solar Outreach Partnership



SolarOPs Resources

Resources

- Case Studies
- Fact Sheets
- How-To Guides
- Model Ordinances
- Technical Reports
- Sample Government Documents

The screenshot shows the Solar Outreach Partnership website. At the top, there is a navigation bar with links for Home, About, Events, Blog, Resources, and Technical Assistance. Below the navigation bar is a search bar. The main content area is titled "RESOURCES" and includes a "FILTER BY" section with dropdown menus for "Any Category", "Any Type", and "Date", along with a "GO" button. The resources are listed in a grid format, with three featured items on the left and a column of "Upcoming Events" on the right. The featured items include:

- Solar Powering Your Community** (December 12, 2013): A comprehensive resource developed by the U.S. Department of Energy to assist local governments and stakeholders in building sustainable local solar markets.
- Solar Permitting, Inspection, and Interconnection Toolkit** (September 15, 2014): A toolkit providing clear, efficient, and cost-effective ways to simplify and streamline solar permitting, inspection, and interconnection (PII) procedures.
- Renewable Energy Tariffs for Large Utility Customers: An Emerging Option to Encourage Greater Solar PV Development** (September 15, 2014): A report examining the potential benefits to solar PV technology, customers, utilities, and the public that can be achieved through renewable energy tariffs.

The "Upcoming Events" column lists:

- Solar for All: A Community Solar Webinar** (09/17/14): A free webinar featuring the city of Beaverton, Oregon's Solar on Reservoirs project, and Tompkins County, NY's solarize program.
- Solar Powering Your Community Workshop: Des Moines, IA** (09/24/14): A free workshop with national and local experts hosted by the Des Moines Area Metropolitan Planning Organization.
- Solar Powering Your Community Workshop: Dover, DE** (10/01/14): A free workshop with national and local experts hosted by the Delaware Sustainable Energy Utility.

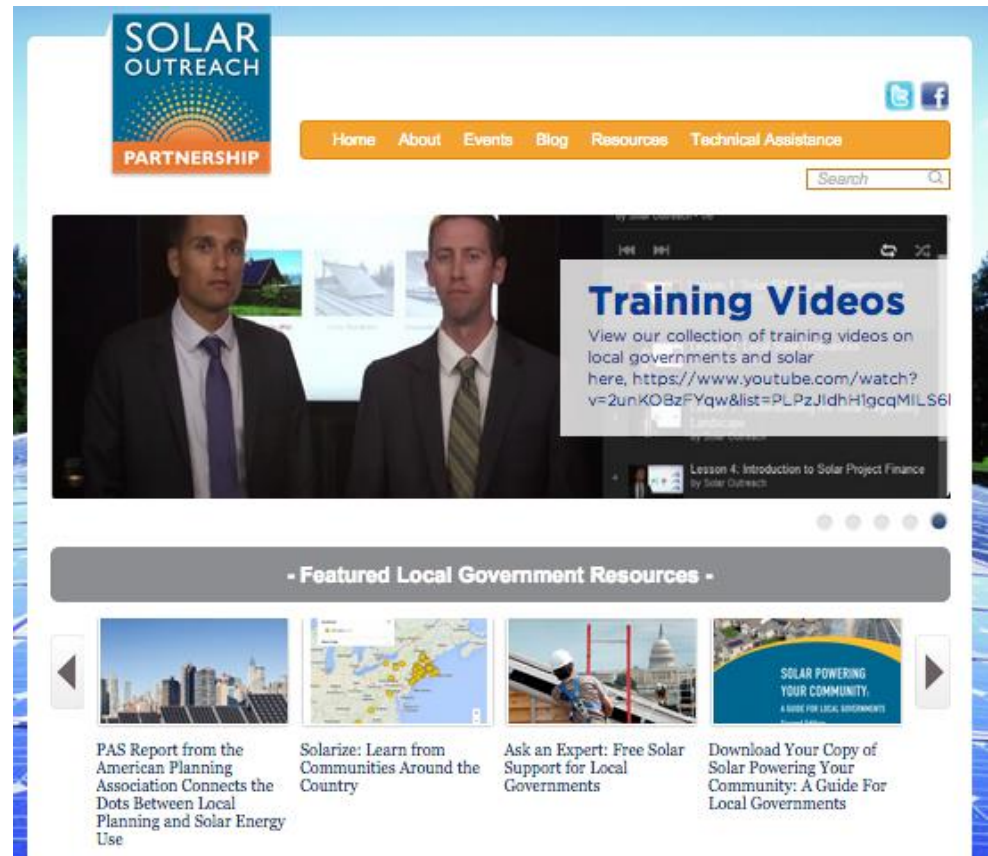
www.solaroutreach.org

WWW.ICLEIUSA.ORG

SolarOPs Technical Assistance

Technical Assistance

- ‘Ask an Expert’ Web Portal
- Peer Exchange Facilitation
- In-Depth Consultations
- Customized Trainings
- Regional Workshops



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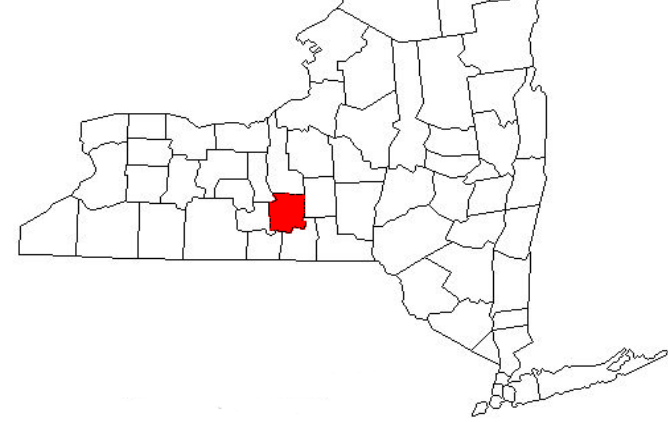
Solar Tompkins:

**Successes and Lessons Learned in a Local
Community Effort to Accelerate the Switch
to Renewable Energy in New York**



Tompkins County, New York

- Ithaca
- Cornell Lakes
- Finger



Population 101,564

Size (sq. miles) 492



About Tompkins County

- ICLEI member since 2001
- Energy, GHG Emissions, Adaptation integrated into Comprehensive Plan
- Goal - 80% reduction in emissions by 2050
 - 20% of emissions from residential
 - Average electricity - 7,800 kWh per household/year
- 510 solar arrays now, up from 93 in 2008



Roots of Solar Tompkins

- Anti-fracking activists looking for positive solutions – kitchen table conversations
- Pilot project in 3 towns in 2012-2013
- Asked County to sponsor expansion countywide – supporting 80% reduction goal
 - Funded by locally-based Park Foundation



Early Work

- Formed Solar Tompkins Board of Directors to develop and administer program - volunteer representatives from each of the 10 towns/city, one from Tompkins Planning Dept, and one from Cornell Cooperative Extension
- Had early meeting with potential installers, learned that the size, in terms of geography (over 300,000 acres) and number of installations (300-500), did not fit “solarize” model easily
- How to achieve big goals and still make it easy for consumers while not hurting local installers?
- Wrestled with this for 6 months before moving ahead and hiring Program Director to work with installers to find solution
- Incredibly fortunate to find former installer with relationships in community





community

Solar in New York

New York has a rapidly growing solar market that after years of being the 9th or 10th state in the US, is working to be in the top 5.

This is driven by dramatically reduced solar prices globally, New York having a decent solar resource, and New York's strong policies and financial incentives supporting solar, which have taken significant steps forward in the last couple years.

New York has about 300 MW of installed solar PV to date across the state.



New York does need, however, to rapidly increase its solar adoption rate from doubling the total amount of solar every 20-24 months to doubling at least every 12 months or faster.

For national context, California – the leading solar state in the US – has 7,808 MW of solar, and doubled their entire amount of solar in the last 12 months.

For longer-term context, in order for New York to reach 100% renewable energy (including electricity, heating, transportation, and industrial activities) by 2050, solar PV needs to make up around 35% of New York's energy supply and that will require 168,000 MW of solar PV.



Solar Tompkins

Solar Tompkins is a non-profit, community solar initiative in the “Solarize model” focused on facilitating a large sustained increase in the rate of solar PV adoption in Tompkins County, NY. It was inspired by a pilot program Solarize Tompkins SE in 2013.

Our specific goal is to facilitate the installation of at least 300 solar PV systems (equivalent to over 2 MW) this year, which would double the existing residential solar PV capacity installed to-date in the county.



Like “Solarize” projects across the country and here in the North East, the program seeks to eliminate the few remaining barriers to solar adoption by providing:

Attractive 20% lower-than-market pricing that decreases further through a tier structure as more people go solar through the program

A simple process with vetted technology and installation partners

County-wide educational outreach events on the affordability and accessibility of solar PV and how it works

A community-wide program with deadlines to build enthusiasm and generate the impetus for adoption now!



Behind the Scenes

NYSERDA's new Community Solar Program under the NY Sun Initiative is working to provide some funding and resources to Solarize projects going forward

Solar Tompkins has 100+ volunteers

We also have student volunteers from SUNY Cortland's Sustainable Energy Systems Master's Program

Solar Tompkins is thinking of continuing its programming in the future to focus on commercial solar adoption or adoption of other key renewable energy/energy efficiency technologies like heat pumps.



Unique Program Features

The size of the program is larger than any other single program we have seen.

We have 3 competitively selected installer partners for the program to ensure we have enough capacity to handle everyone, and also to be as inclusive as possible while still keeping it simple.

2 of our 3 installer partners were specified in the RFP to be “local” – which was defined as any company with a physical place of business within a 35 mile radius of downtown Ithaca, NY in 2013



Firms or consortiums can participate in the program at a variety of scales by bidding in and offering the capacity they can handle above a minimum floor.

An installer partner can be a single firm or a collaboration of two or more firms.

The program is guided by a mandatory set of best practice standards for equipment, installation, and customer service that all installer partners must meet and exceed.





VALLEY GRANGE
NO 215

COMMUNITY MEETING HERE!



SOLARTOMPKINS.ORG



How This Has Worked

People have enrolled in the Solar Tompkins program at educational community meetings or via the Solar Tompkins website. Enrolling has meant that you are seriously interested in looking at solar through the program, but it comes with no obligation or cost.

We have asked everyone enrolling in the program to preliminarily select one of our installer partners to work with, and presented the rationale for that in detail at the meetings and online.



All enrollees can always switch installer partners if needed. Enrollees have then gotten a basic site review in person from the installer partner they select, and a discounted solar quote for an upfront purchase, purchase through a low-interest loan, and/or a lease option.

Enrollees have then signed contracts to have their new solar systems installed, and installations started in August 2014 and will run through June 2015.

Our community quality assurance and evaluation program has just started in September 2014.





:: © 2014 :: Taitem ::

Success So Far

We held 34 Solar Tompkins events across the county in June, July, and early August 2014. Of these, 22 were weekday evening or weekend community meetings, and the other 12 were brown bag lunches at places like Cornell University, Ithaca College, Tompkins County, City of Ithaca, Tompkins Community Action, and Cayuga Medical Center.

Over 1,300 families enrolled in the Solar Tompkins program, exceeding our target. We ran enrollment for just over 2 months - from the program launch on May 27th through the close of enrollment August 8th.

Each installer partner was successful getting enrollees – They received 341, 575, and 387 enrollees respectively.



Almost 200 families having decided to move forward with solar through the program so far. This is about 1.5 MW of solar and almost 2/3rds to our goal of doubling the amount of residential solar in Tompkins County this year.

Two out of the three installer partners are already into Tier 3 pricing (the best pricing tier) and the other is close behind in Tier 2.

Our contract signing deadline has been October 1st, but we are doing a one-time extension of that to November 1st because of the extreme interest in the program.



What Has Driven The Program

Solar panels are being produced quicker and cheaper than ever before.

Incentives and tax breaks exist now, but not indefinitely and are decreasing.

There are several great and affordable ways to acquire or finance a solar PV system.

Now is the most important time to do ones part in halting the worst aspects of climate change and reducing the other pollution associated with fossil fuels.



Lessons Learned

Direct non-profit work in this area appears to be very effective.

Multi-installer programs are viable and can work well.

Having a program director with industry experience was very valuable.

Having best practice standards in a program such as this was important, as it created a level playing field for installers and also built community confidence.



Resources

A video of one of our community solar meetings, a copy of the meeting presentation slides, and our handouts from the meetings are all available here -

<http://www.solartompkins.org/community-meeting-presentation.html>



Questions and Contact Info

More information is available on our website –

www.solartompkins.org

Please also feel free to contact us directly with any questions or interest –

- Katie Borgella, Deputy Commissioner of Planning, Tompkins County, kborgella@tompkins-co.org
- Melissa Kemp, Solar Tompkins Program Director, melissa@solartompkins.org





Solar on an Urban, Underground Reservoir

Cindy Dolezel
Sustainability Manager

**We have land.
They have solar panels.**



A solar contractor will use City land and construct a solar array on top of an underground reservoir

The City will receive long-term, discounted electricity rates for water pumping demands



Energy Efficiency



**Estimated annual energy savings:
660,744 kWh/year**

Estimated energy savings: \$50,000/year



Sorrento Pumping Station

**Estimated annual energy savings:
56,727 kWh/year**

Estimated energy savings: \$4,500/year

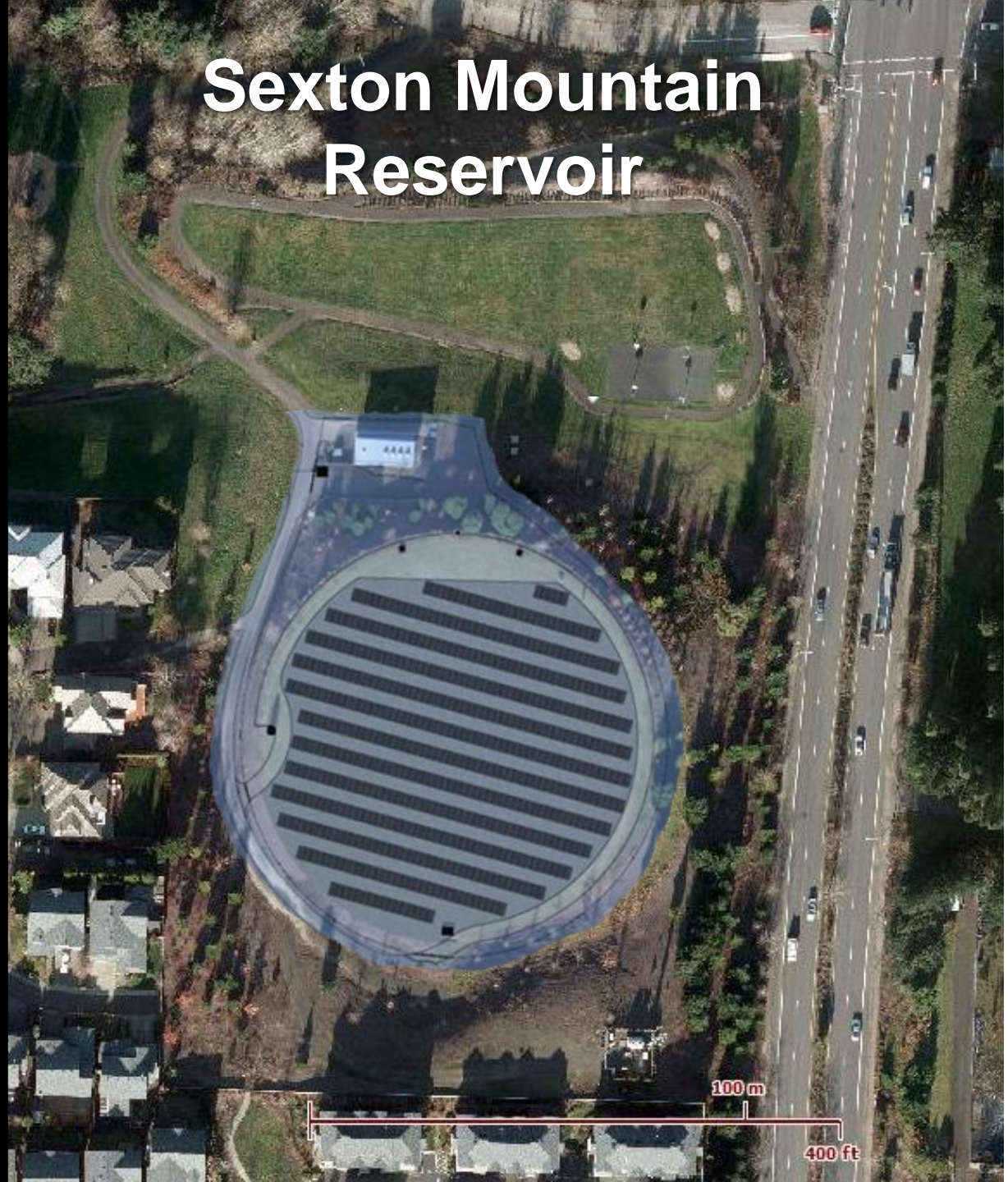
Sexton Mountain Reservoir

Solar array on top

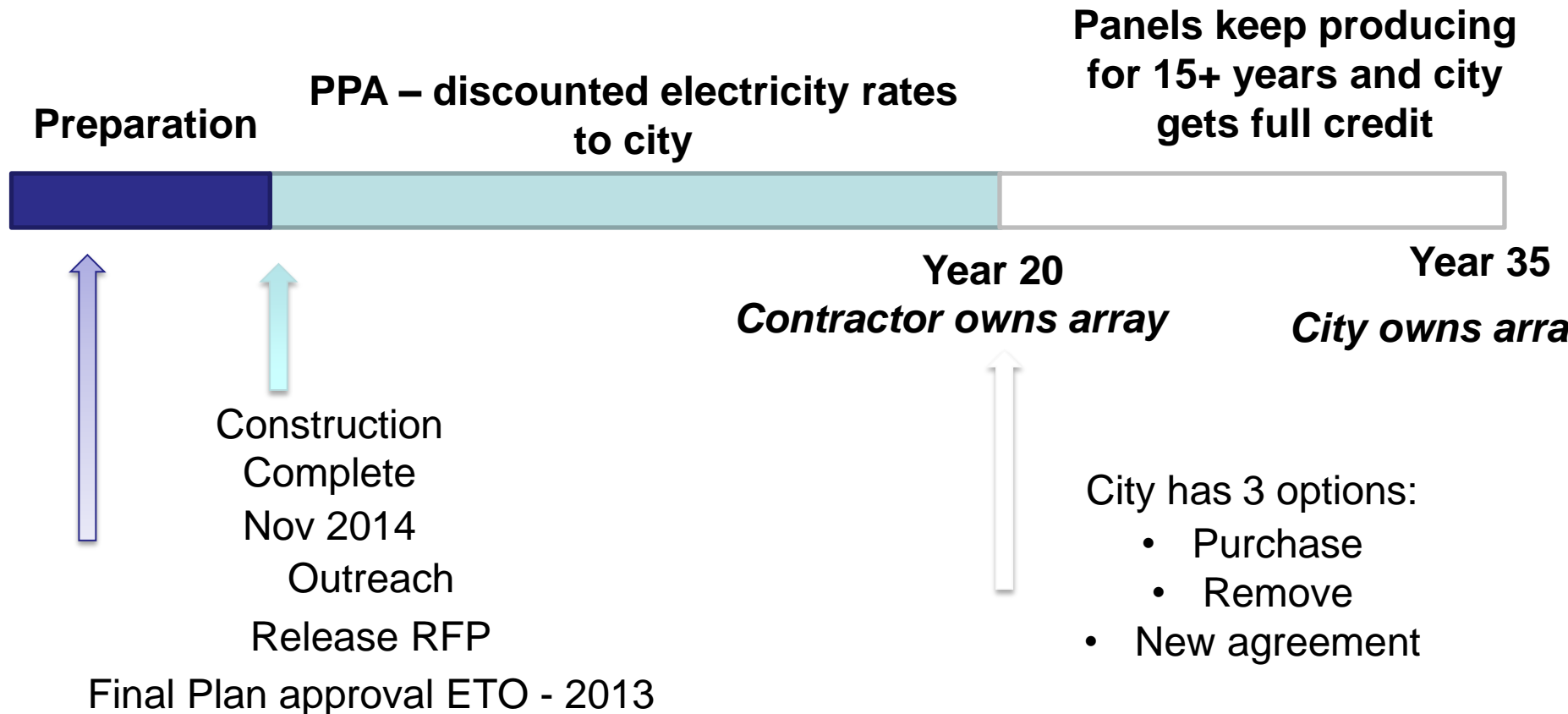
Secures critical asset

Reduces energy costs

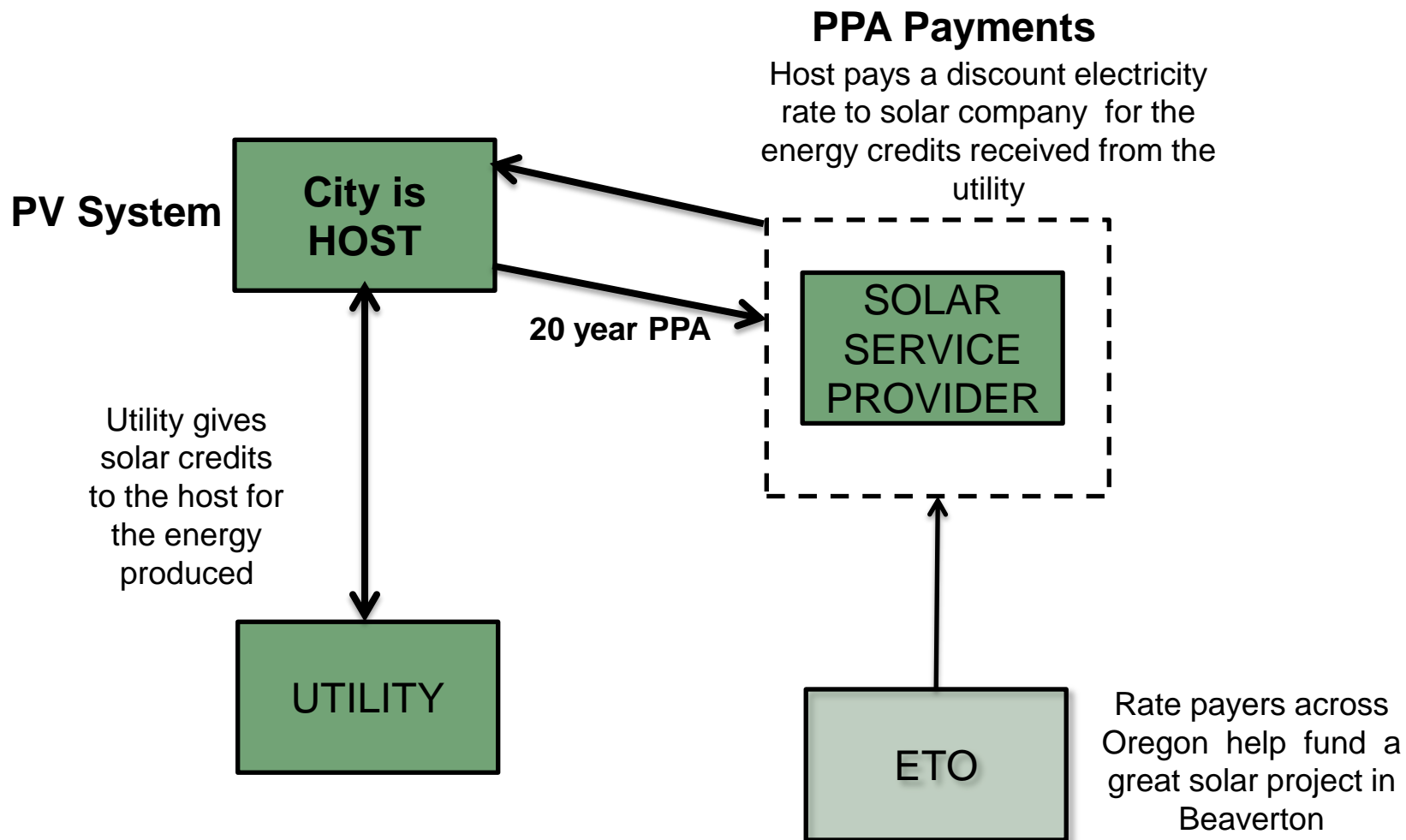
Supports sustainability objectives



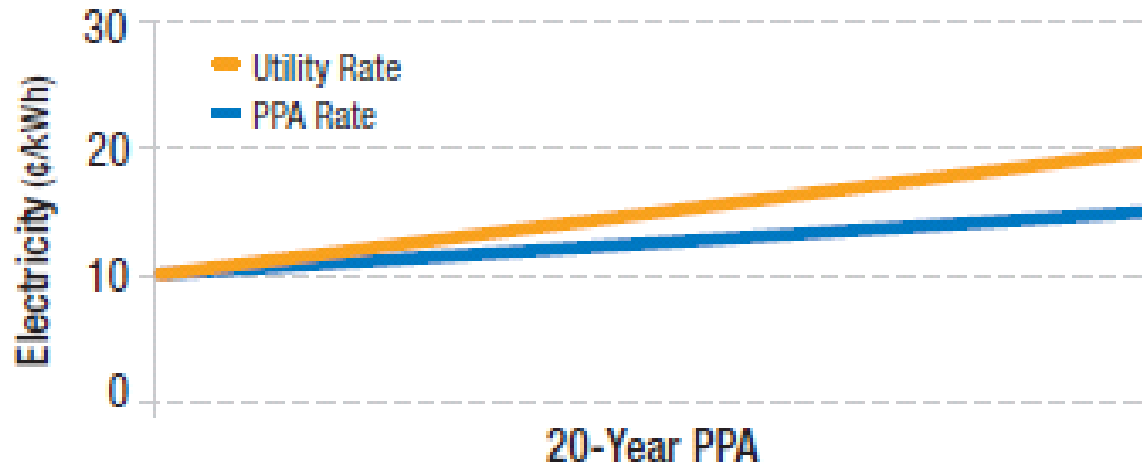
Life of the Project



What is a Power Purchase Agreement?



What we expect



6 cents per kWh, 2% escalation:

- Over 20 years, \$17,000 *average annual savings*
- Over 35 years, \$33,000 *average annual savings*



Citizen Feedback

Solar in my back yard, that is **great!**

Sounds like a win, win.

We use the top of the reservoir for a dog run, so we don't want it fenced off.

I think you **should** fence off my drinking supply, so the animals are not on it.



Why Pursue Solar

Support our city goals to:

Use resources wisely, improve infrastructure, cost effective services

Create a plan and track efforts to reduce carbon footprint

Promote sustainable technologies

Reduce electricity use, emissions, and use more renewables

Integrate sustainability into city operations and development

Smart Investments and Critical Infrastructure

- Dual purposing city land for revenue generation
- Promoting clean energy
- Minimal maintenance
- Emergency management
- Securing a critical asset
- Back up generation (future)

Engaging the community

Real time monitoring

Educational signs at site

Open house to celebrate installation of the system

Live webpage for inquiries and information

A few facts about solar panels

Technology has changed little

Strong and very reliable

Don't reflect- they absorb as much as possible

Degrade very slowly – often still producing at 90% after 25 years



Beaverton Library

[Animated View](#) | [Switch to Classic View](#) | [FeedBack](#)



[Site Overview](#) | [Environmental Footprint](#) | [Project Details](#) | [Site Analytics](#)

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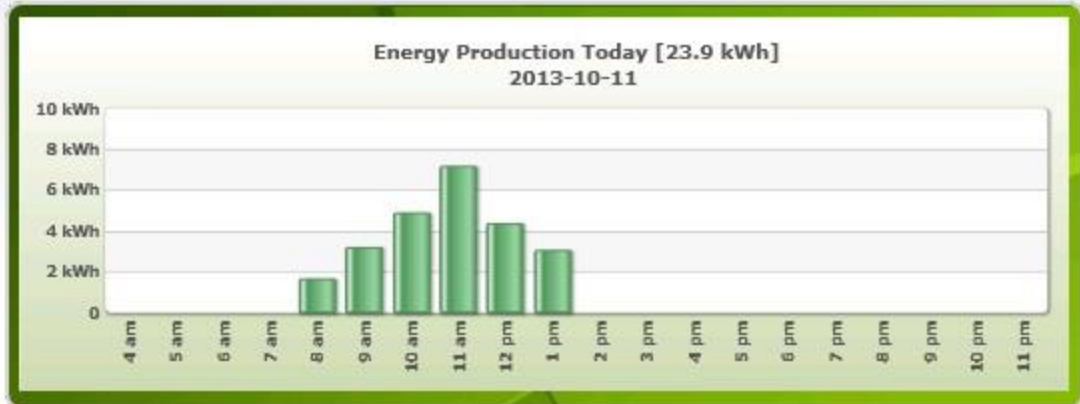
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ONLINE



53° F

Wind Speed 0 mph [N]
Cloudcover 50 %



powered by SOLECTRIA RENEWABLES

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Sexton Mountain Reservoir

Cindy Dolezel
Sustainability Manager

www.BeavertonOregon.gov/Sexton



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