

Matthew G. Bevin  
Governor

Charles G. Snavely  
Secretary  
Energy and Environment Cabinet



Commonwealth of Kentucky  
**Public Service Commission**  
211 Sower Blvd.  
P.O. Box 615  
Frankfort, Kentucky 40602-0615  
Telephone: (502) 564-3940  
Fax: (502) 564-3460  
psc.ky.gov

Michael J. Schmitt  
Chairman

Robert Cicero  
Vice Chairman

Daniel E. Logsdon Jr.  
Commissioner

September 26, 2016

## PARTIES OF RECORD

Re: Case No. 2016-00269

Attached is a copy of a memorandum which is being filed in the record of the above-referenced case. If you have any comments you would like to make regarding the contents of the memorandum please do so within five days of receipt of this letter.

If you have any questions, please contact Quang Nguyen, Commission Staff Attorney, at 502-782-2586.

Sincerely,

A handwritten signature in blue ink that reads "Talina R. Mathews".

Talina R. Mathews  
Executive Director

QN/ph

Attachments

## INTRA-AGENCY MEMORANDUM

### KENTUCKY PUBLIC SERVICE COMMISSION

**TO:** Case File

**FROM:** Quang D. Nguyen, Staff Attorney

**DATE:** September 22, 2016

**RE:** Case No. 2016-00269  
Application of East Kentucky Power Cooperative, Inc. for Issuance of a Certificate of Public Convenience and Necessity, Approval of Certain Assumption of Evidences of Indebtedness and Establishment of a Community Solar

Pursuant to an Order issued on September 13, 2016, an informal conference was held on September 14, 2016, at the Commission's offices in Frankfort, Kentucky. The purpose of the informal conference was to discuss East Kentucky Power Cooperative, Inc.'s ("EKPC") application for, among other things, a certificate of public convenience and necessity to construct a community solar facility. A list of the attendees is attached hereto.

EKPC provided a handout Power Point presentation covering its proposed community solar project. The handout is attached to this memo. EKPC detailed the background history of the solar project, noting that it began three years ago as a result of the collaborative that was formed subsequent to the settlement reached in the matter involving the retirement of Smith Unit 1. EKPC also explained that its members have made multiple requests for a solar facility and that a survey conducted by its collaborative revealed that 34 percent of its members identify with as being "green," either "actively green" or "conveniently green." EKPC further explained that its proposed solar facility fits into its strategic plan of diversifying its generation portfolio and that the solar project would provide an alternative to those members who are unable to install on-site solar panels at their premises either due to cost or because they are renters or due to the physical location of their property. EKPC also noted that due to a lack of renewable generating resources, companies like Facebook prefer to locate operations in states offering renewable generating options.

EKPC stated that it opted to implement a community solar facility because financing options to capture tax credits were too complex given that it is a non-profit cooperative and due to EKPC's belief that implementing a utility-scale solar project under the net metering provisions would not be a sustainable policy. Regarding its decision to construct the project and obtain subscribers rather than build in phases, EKPC stated that contractors are reluctant to provide firm pricing based on uncertain

delivery dates, would be reluctant to agree to bind themselves to uncertain construction dates, and that the uncertainty in deadlines would increase the cost of the project. EKPC further stated that the tariffs would be difficult to develop absent a firm contract price, that substation requirements do not lend themselves to incremental builds, and marketing efforts would be more fruitful when customers could view an operational solar facility and take immediate advantage of the solar project rather than waiting until the next phase is constructed.

EKPC then discussed the tariff structure of the community solar project, noting that the members' retail tariffs would not change and retail customers would continue to receive their bill in the same familiar format. EKPC further stated that participating customers in the solar project would receive a bill credit that reflects the proper PJM energy market price for solar energy. EKPC indicated that the tariff structure ensures that participating customers will not be subsidized by non-participating customers. EKPC discussed the two settlement process: 1) historical bill and 2) credit for the solar energy value. The result in the final bill is the net of the two settlements and would not impact the environmental surcharge, fuel adjustment clause, or other billing determinates on the historical bill. EKPC points out that the proposed community solar project compares favorably to other community solar programs, does not conflict with EKPC's view on net metering, allows participants to monetize the solar renewable energy credits, and allows for the transferring of licenses.

There being no further discussions, the informal conference was adjourned.

Attachments

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF EAST KENTUCKY POWER )	CASE NO.
COOPERATIVE, INC. FOR ISSUANCE OF A )	2016-00269
CERTIFICATE OF PUBLIC CONVENIENCE AND )	
NECESSITY, APPROVAL OF CERTAIN )	
ASSUMPTION OF EVIDENCES OF )	
INDEBTEDNESS AND ESTABLISHMENT OF A )	
COMMUNITY SOLAR )	

=====

September 14, 2016 Informal Conference

=====

Please sign in:

NAME

REPRESENTING

<u>Quang Nguyen</u>	<u>PSC</u>
<u>Molly Katen</u>	<u>PSC Legal</u>
<u>Matthew Boen</u>	<u>PSC -FA</u>
<u>Allison Honaker</u>	<u>Goss Sanford</u>
<u>David Sanford</u>	<u>Goss Sanford - EKPC</u>
<u>David Crews</u>	<u>EKPC.</u>
<u>Bryan Wells</u>	<u>EKPC</u>
<u>Patrick Wood</u>	<u>ETPC.</u>
<u>Julia Tucker</u>	<u>EKPC</u>
<u>Brad Young</u>	<u>EKPC</u>
<u>JEFF JOHNSON</u>	<u>PSC</u>
<u>Jody Kyler-Cohn</u>	<u>KIUC by telephone</u>





# Cooperative Solar



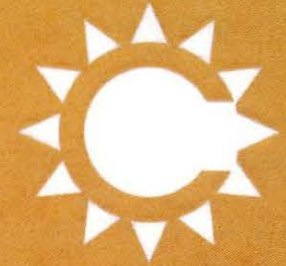
Kentucky's  
Touchstone Energy  
Cooperatives®



EAST KENTUCKY POWER COOPERATIVE

A Touchstone Energy Cooperative 

# EKPC Solar Project - Genesis

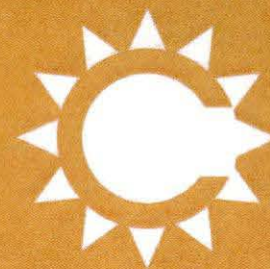


- Cooperative Solar's roots are in the Collaborative
  - Public Interest Groups advocated for a community solar project
  - EKPC and its Owner-Members are open to solar
  - Analysis performed in the Collaborative showed a surprising number of retail customers identify as green
- Owner-Members have had multiple requests for solar
- EKPC's Strategic Plan has had a goal to diversify its portfolio since 2011





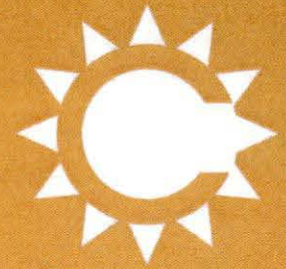
# EKPC Solar Project - Genesis



- There are a growing number of commercial and industrial companies that have sustainability and renewable energy goals
- Kentucky has not been a consideration for companies like Facebook because of the lack of renewables in the state
- Provides an alternative to on-site solar



# Obstacles to Community Solar

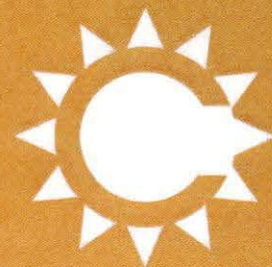


- Financing options for non-profit Cooperatives to capture tax credits are complex
- EKPC and Owner-Members did not want to jeopardize the territorial assignment act
- EKPC believes Net Metering is not a sustainable policy
- ~~Rate redesign (16 tariff filings)~~
- ~~Complex crediting structures~~



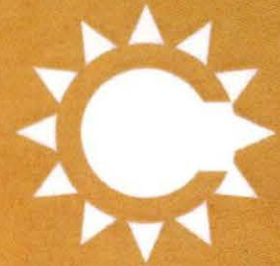


# Community Solar Tariff Structure



- Retail tariffs for Owner-Members do not change
- Retail customers continue to get the same bill they have always gotten
- The existing billing structure distributes distribution, transmission and generation expenses fairly to all customers
- Crediting bills for the value of solar in the PJM market provides the proper value signal for solar energy
- This structure ensures customers licensing panels are not subsidized by the balance of the customers

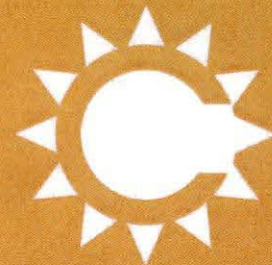
# Community Solar Tariff Structure



- Community Solar enrollees' bills are two separate settlements
- The first settlement is their historical bill
- The second settlement is a credit for the value their panel license creates
- The final bill is the net of the two settlements
- Since they are two separate settlements there are no changes required to the ES, FAC or other billing determinates on the historical bill

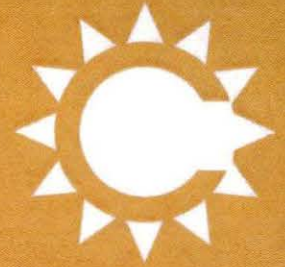


# Key Benefits



- Value on par or better to on-site solar
- Option to monetize the SRECs
- Compares favorably to other community solar programs
- Does not conflict with EKPC's view on Net Metering policy
- Owner-Member Net Metering tariffs still conform  
.....
- Licenses are transferable

# Key Benefits

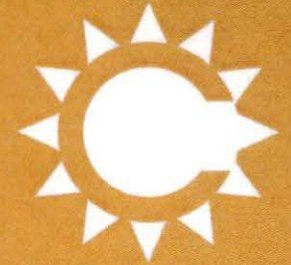


- **Broader Availability**
  - Renters
  - Homes with roofs that are not favorably aligned to the sun
  - Homes that have roofs shaded by trees
  - Businesses that do not have adequate roof or property to meet their renewable goals

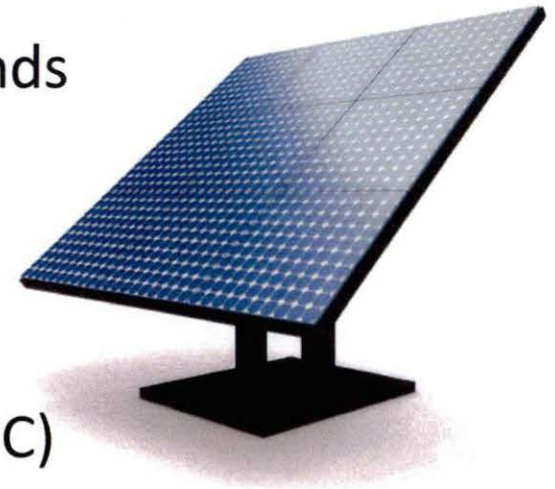




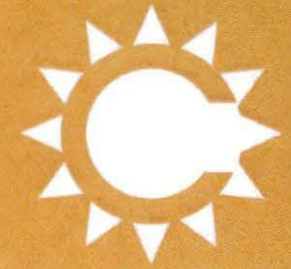
# EKPC Solar Project



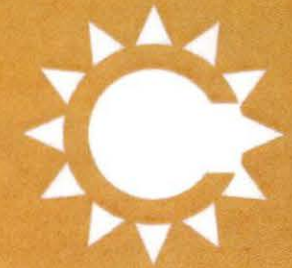
- Solar Project (EKPC-Owned)
- Financed with Clean Renewable Energy Bonds
- Located on EKPC campus
- ~ 10 MW DC
- ~ 8.5 MWs AC
- Panels – Canadian Solar (335 watts/panel DC)
- Inverters – Eaton Power (2 MW)
- 32,300 panels (30,400 fixed/1900 tracking)



# EKPC Solar Project





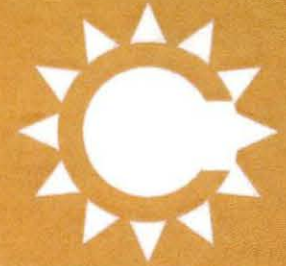


# EKPC Solar Project

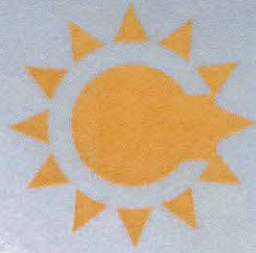




# EKPC Solar Project





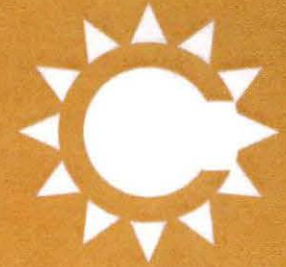


# Cooperative Solar Project Cost





# EKPC Solar Project Cost



- \$17.7 Million
- 10 MWs DC/8.5 MWs AC
- \$1.77/Watt DC/\$2.08/Watt AC
- Projected energy cost without maintenance and property taxes – 25 year fixed – 4.2 cents per kWh
- Projected maintenance and tax expense for 2017 assuming a 20% capacity factor – 0.79 cents per kWh
- Projected energy cost for 2017 – 4.99 cents per kWh

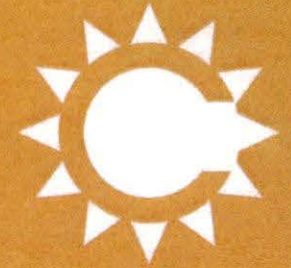




# Cooperative Solar Solar Tariff





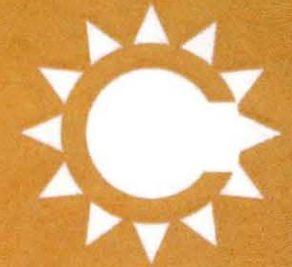


# Community Solar Tariff

- Subscription Req. – No
- Increment – 335W DC
- Upfront payment – \$460
- Monthly payment – \$0
- Energy credit – PJM LMP
- REC credit – Customer choice
- Capacity credit – PJM capacity value of solar
- Maintenance expense – As experienced

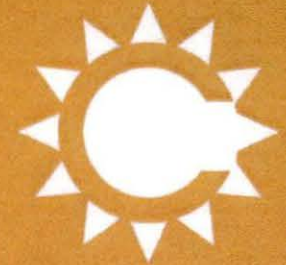


# Community Solar Tariff



- Commitment – 25 years
- Transfers – Yes
- Limits – 100% of energy requirement
- Energy carry over – Yes

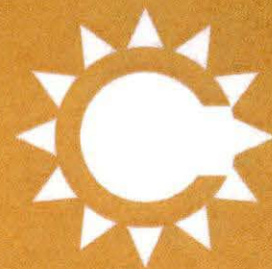
# Project Scale?



- Benefits
  - 10 MW DC RFP attracted developers with access to lower equipment costs
    - Panels
    - Inverters
    - Racking
  - Lower substation costs
  - Lower mobilization costs
  - Lower regulatory costs
  - Reduced financing burden
  - Lower EKPC development expenses and burdens
  - Consistent pricing across 16 Owner-Members

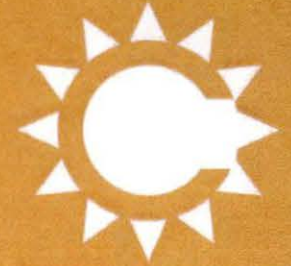


# Prior Subscription



- Contractors are reluctant to provide pricing for uncertain delivery dates
- Contractors are reluctant to agree to bind themselves to uncertain construction dates
- Contractors increase quote costs to deal with uncertainty
- Tariffs are difficult to develop without a firm contract price
- Substation requirements do not lend themselves to incremental builds
- Physical assets support marketing
- Customers are not patient

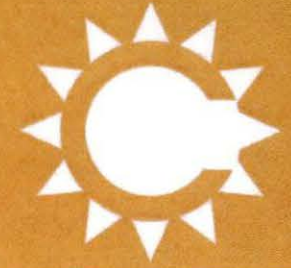
# Enrollment and Administration



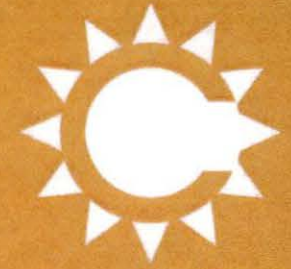
- Establishing a central system for license enrollments and for cooperative solar administration
- Retail members will be able to enroll online by:
  - Providing name and account number
  - Paying online with VISA or MasterCard
  - Accepting license agreement Ts & Cs
  - Receiving license agreement via email
- Retail members will be able to enroll via paper application also



# Enrollment and Administration



- Central system will track licensed panels via retail member account #s, by co-op, by serial numbers, by purchase timelines, by REC , etc.
  - System will report these details to the co-ops monthly
  - System will notify co-op of new enrollments when they happen
  - System will report these details to EKPC whole billing
- Working with NISC and SEDC (and co-op staff) to adjust retail billing systems for Cooperative Solar credits
  - Line item will be added for solar credits (1 line)
  - Evaluating an automated upload process via SFTP from the system to the co-op billing systems to automate the bill credits for the retail member bills



## Up Front Cost

- Tariff is structured to be an alternative to on-site solar
- After the initial payment, bills should show a credit each month
- Easier path to implementation (Enrollment/Crediting)
- Concerns with a continual monthly charge
  - Buyers remorse – the charge will exceed the credit every month
  - Customers may grow weary of seeing that they are losing money each month and exit the program



## nCREBS vs Tax Credits



- As a tax-exempt entity, EKPC would have had to set up a taxable subsidiary and partnered with a taxable entity to take advantage of the federal tax credit, which involved several risks and costs
- In lieu of the tax credit, nCREBs provide an interest subsidy of about 3% per year, which offered a similar advantage to the tax credit (on an NPV Basis) with much less complexity and clear title to the property
- Current estimate of the net financing cost using nCREBS is about 0.9%





Cooperative Solar

*Thank You!*



EAST KENTUCKY POWER COOPERATIVE

A Touchstone Energy Cooperative 



\*David S Samford  
Goss Samford, PLLC  
2365 Harrodsburg Road, Suite B325  
Lexington, KENTUCKY 40504

\*Jody Kyler Cohn  
Boehm, Kurtz & Lowry  
36 East Seventh Street  
Suite 1510  
Cincinnati, OHIO 45202

\*Honorable Kurt J Boehm  
Attorney at Law  
Boehm, Kurtz & Lowry  
36 East Seventh Street  
Suite 1510  
Cincinnati, OHIO 45202

\*Honorable Michael L Kurtz  
Attorney at Law  
Boehm, Kurtz & Lowry  
36 East Seventh Street  
Suite 1510  
Cincinnati, OHIO 45202

\*East Kentucky Power Cooperative, Inc.  
4775 Lexington Road  
P. O. Box 707  
Winchester, KY 40392-0707