



KMEA & Evergy Community Solar Partnership

Ottawa, KS 12-6-2021



KMEA
KANSAS MUNICIPAL
ENERGY AGENCY



Internal Use Only



Proposed Structure

- Evergy would size, build, and own the community solar project in order to take advantage of the Investment Tax Credit's (ITC's)
- After 7 years, KMEA/City would have option to purchase the facility and perform the O&M to help lower the leveled cost of energy for the term of the project.
- Both parties are flexible on local contractors and others to complete project.



Benefits of Community Solar

- Community involvement
 - **Education tool for local schools and community groups**
- Power feeds directly to end use customers
 - **No market congestion cost—behind the meter**
 - **No additional transmission cost**
- Ownership opportunities
- Resource diversification
- Economic development
- Project won't require SPP interconnection study
- Storage can easily be added to facility to help deploy power at peak times
- Creates local solar jobs
 - **Site can be used as a training opportunity for staff**



Items Not ITC Eligible

- Transformers
- Interconnection to distribution grid
- Fencing
- Lay down / staging area
- Seeding / vegetation screening



Economics

ASSUMPTIONS:

- Interconnection, site prep, fence, aux construction power, land cost, and property tax excluded
- Solar accreditation at 35%
- City purchases year 8
- Borrowing rate 2.5%
- O&M costs increase at 2% annually
- Capacity factor at 26.95% (Average for NE KS)
- Capacity market credit at \$2.25 kW-m

	5 MW
30 Year PPA (2.5% Escalation)	\$39.75
35 Year Levelized Cost of Energy	\$32.92

5 MW

Year	PPA (Evergy Owner)	Finance + Ownership Costs*	Value of Capacity	Total Cost of Ownership	Annual MWh	\$/MWh
1	\$ 473,231		\$ (47,250)	\$ 425,981	11,905	\$ 35.78
2	\$ 482,636		\$ (47,250)	\$ 435,386	11,846	\$ 36.75
3	\$ 492,229		\$ (47,250)	\$ 444,979	11,786	\$ 37.75
4	\$ 502,012		\$ (47,250)	\$ 454,762	11,727	\$ 38.78
5	\$ 511,989		\$ (47,250)	\$ 464,739	11,669	\$ 39.83
6	\$ 522,165		\$ (47,250)	\$ 474,915	11,611	\$ 40.90
7	\$ 532,543		\$ (47,250)	\$ 485,293	11,552	\$ 42.01
8		\$ 475,874	\$ (47,250)	\$ 428,624	11,495	\$ 37.29
9		\$ 477,217	\$ (47,250)	\$ 429,967	11,437	\$ 37.59
10		\$ 478,586	\$ (47,250)	\$ 431,336	11,380	\$ 37.90
11		\$ 479,983	\$ (47,250)	\$ 432,733	11,323	\$ 38.22
12		\$ 481,408	\$ (47,250)	\$ 434,158	11,267	\$ 38.54
13		\$ 482,861	\$ (47,250)	\$ 435,611	11,210	\$ 38.86
14		\$ 484,343	\$ (47,250)	\$ 437,093	11,154	\$ 39.19
15		\$ 485,855	\$ (47,250)	\$ 438,605	11,098	\$ 39.52
16		\$ 516,020	\$ (47,250)	\$ 468,770	11,043	\$ 42.45
17		\$ 517,794	\$ (47,250)	\$ 470,544	10,988	\$ 42.82
18		\$ 519,600	\$ (47,250)	\$ 472,350	10,933	\$ 43.21
19		\$ 521,440	\$ (47,250)	\$ 474,190	10,878	\$ 43.59
20		\$ 523,313	\$ (47,250)	\$ 476,063	10,824	\$ 43.98
21		\$ 525,222	\$ (47,250)	\$ 477,972	10,770	\$ 44.38
22		\$ 527,166	\$ (47,250)	\$ 479,916	10,716	\$ 44.79
23		\$ 529,147	\$ (47,250)	\$ 481,897	10,662	\$ 45.20
24		\$ 531,164	\$ (47,250)	\$ 483,914	10,609	\$ 45.61
25		\$ 532,297	\$ (47,250)	\$ 485,047	10,556	\$ 45.95
26		\$ 533,442	\$ (47,250)	\$ 486,192	10,503	\$ 46.29
27		\$ 534,596	\$ (47,250)	\$ 487,346	10,450	\$ 46.63
28		\$ 127,017	\$ (47,250)	\$ 79,767	10,398	\$ 7.67
29		\$ 128,194	\$ (47,250)	\$ 80,944	10,346	\$ 7.82
30		\$ 129,381	\$ (47,250)	\$ 82,131	10,295	\$ 7.98
31		\$ 98,801	\$ (47,250)	\$ 51,551	10,243	\$ 5.03
32		\$ 52,916	\$ (47,250)	\$ 5,666	10,192	\$ 0.56
33		\$ 18,521	\$ (47,250)	\$ (28,729)	10,141	\$ (2.83)
34		\$ 18,591	\$ (47,250)	\$ (28,659)	10,090	\$ (2.84)
35		\$ 18,662	\$ (47,250)	\$ (28,588)	10,040	\$ (2.85)

*Excludes Property Taxes that would start in Year 11



Tracking Technology

TRACKING

- A solar project 1 MW and greater in size would be eligible for a tracking system.
 - Greater output from facility since it moves with the sun
- In general, 6-8 acres per MW for a tracking array
 - Depends on topography of the land
 - So, 5 MW system 30-40 acres would be required

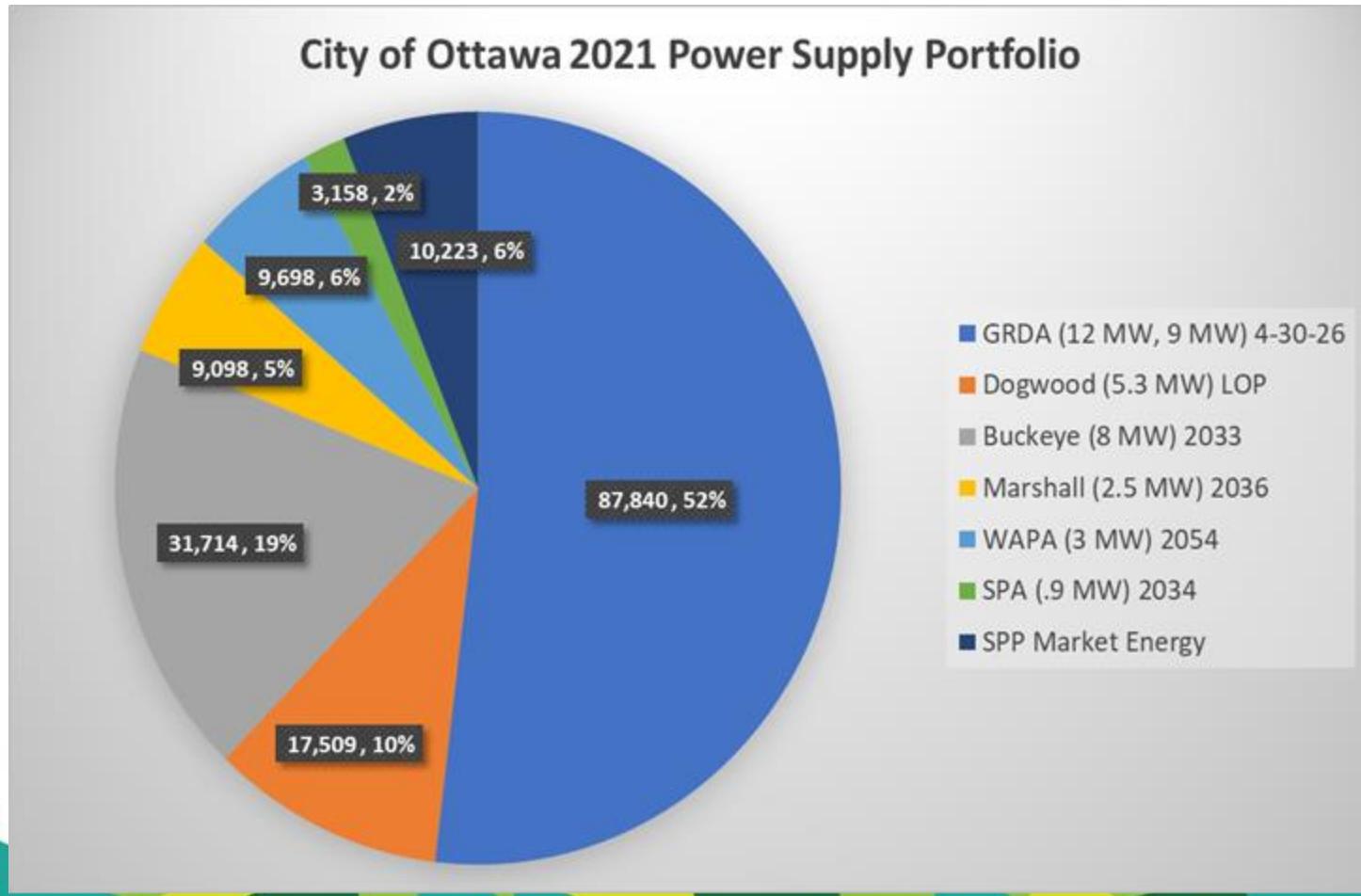


Projected Timeline for COD

- Planning phase starts Q4 2021
- Commercial Operating Date (COD) 2024-2025
- Circumstances for delayed COD:
 - Land procurement
 - Material delays/shortages
 - Qualified labor shortages

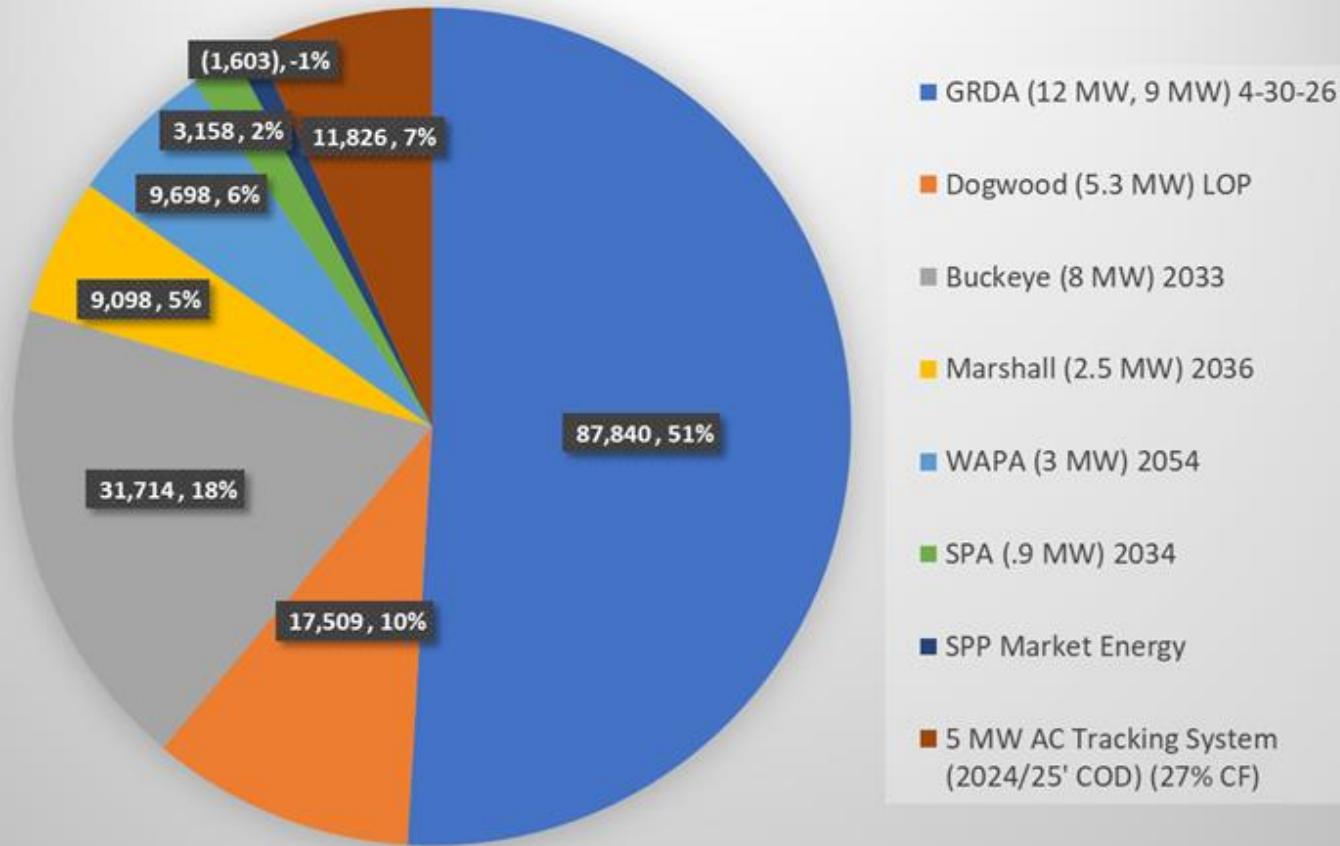


City of Ottawa 2021 Power Supply Portfolio



City of Ottawa 2024/25' Power Supply Portfolio with 5 MW Community Solar Project

City of Ottawa 2024/25' Power Supply Portfolio with 5 MW Community Solar Project





Next Steps

- If interested in learning more about a KMEA/Evergy community solar project, please contact Neal Daney at KMEA:

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Questions?

