



DEMEC Lewes BPW Wellfield Solar Proposal Briefing and Initial Recommendations

Delaware Municipal Electric Corporation

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Lewes Board of Public Works Staff Provided Solar Photovoltaic Project Goals

- ▶ Build utility owned self generation in the community
- ▶ Provide additional solar to the community as a whole



Solar Photovoltaic Proposals

- ▶ DEMEC was requested to seek solar proposals for the Lewes Board of Public Works (Lewes BPW) wellfield site.
- ▶ The following is a summary and initial recommendation for the wellfield project. DEMEC reviewed:
 - ▶ Two proposals for power purchase agreements (PPA)
 - ▶ Two proposals for engineer, procure, and construct (EPC) agreements



IGS Solar Proposal - PPA



Solar layout

Lewes BPW Wellfield
Kings Highway, Lewes, DE
System Type: Fixed Tilt
Ground Mount
Size (kW - DC): 955
Year 1 Production (kWh):
1,353,235
Fixed Rate/kwh: \$0.0886
Term: 25 Years

DE Shaw Solar Proposal - PPA

NO
PHOTO
AVAILABLE

A solar layout was not
included with proposal

**Lewes BPW Wellfield
Kings Highway, Lewes,
DE**

System Type: Fixed Tilt
Ground Mount

Size (kW - DC): 1,200

Year 1 Production (kWh):
2,004,000

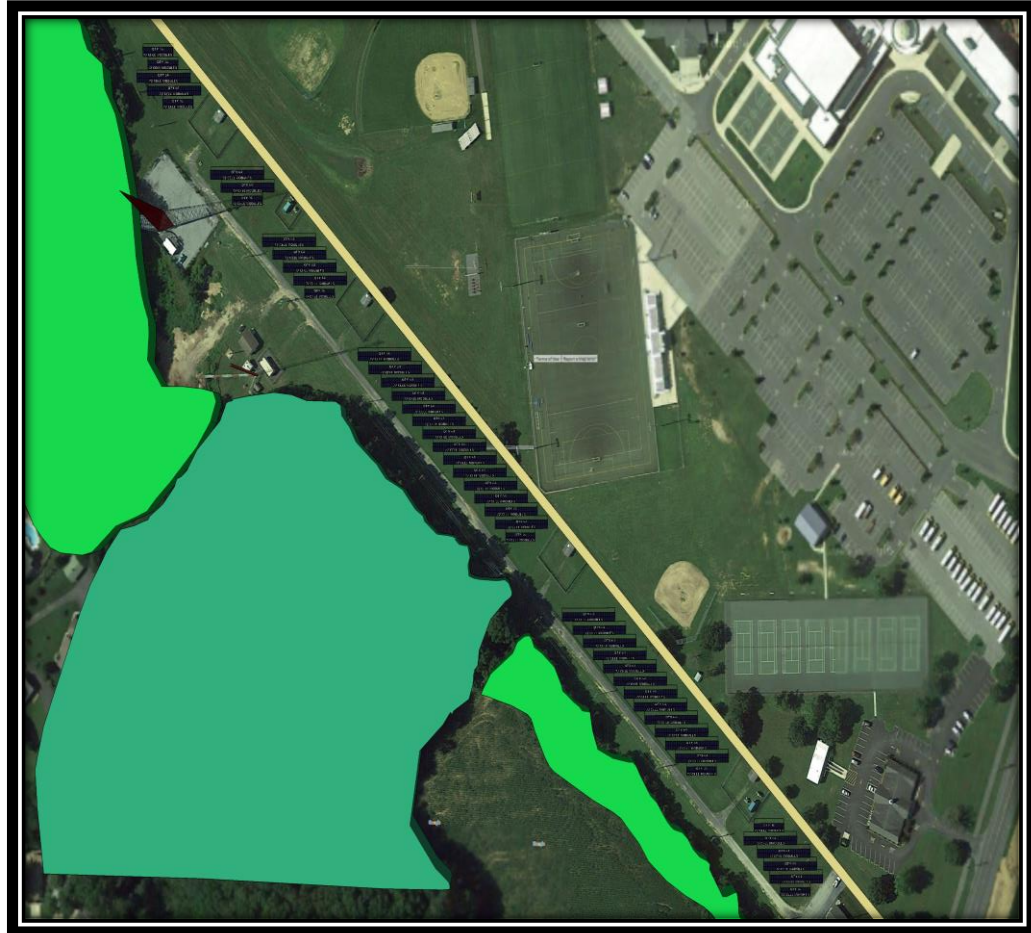
Fixed Rate/kwh: \$0.1004

Term: 25 Years



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Soliar Proposal- EPC



Solar layout

**Lewes BPW Wellfield
Kings Highway, Lewes,
DE**

System Type: Fixed Tilt
Ground Mount

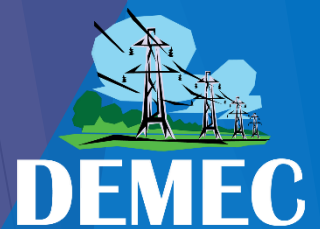
Size (kW - DC): 965

Year 1 Production (kWh):
1,243,888

Cost Estimate:

\$2,249,000

Effective Rate 25 years:
\$0.0804



CMI Electric Proposal- EPC

NO
PHOTO
AVAILABLE

A solar layout was not
included with proposal

**Lewes BPW Wellfield
Kings Highway, Lewes,
DE**

System Type: Fixed Tilt
Ground Mount

Size (kW - DC): 1,031

Year 1 Production (kWh):
1,425,445

Cost Estimate:

\$1,464,000

Effective Rate 25 years:

\$0.0436



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Vendor Proposal Comparison

Vendor	System Size (kW)	1 st Year Production (kwh)	*PPA Rate / **Effective Rate	Contract Type
IGS Solar	955	1,353,235	\$0.0886	Power Purchase Agreement (PPA)
DE Shaw	1,200	2,004,000	\$0.1004	Power Purchase Agreement (PPA)
Solair - DE company	965	1,243,888	\$0.0804	Engineer, Procure, Construct (EPC)
CMI Electric - DE company	1,031	1,425,445	\$0.0436	Engineer, Procure, Construct (EPC)

*PPA Rate - is the rate paid to a third party per kwh delivered

**Effective Rate - is the estimated rate per kwh. It is calculated by dividing the initial system cost by the estimated kwh production over a term.



Vendor Proposal Price Exclusions

Generally vendors do not include these costs in initial proposals due to uncertainty:

- ▶ Interconnect
- ▶ Utility Upgrades
- ▶ Site Internet Installation and Annual Operating
- ▶ Civil and Environmental Site Engineering & Evaluations
- ▶ Electrical System Evaluations and additional testing (i.e. grounding step and touch potential)
- ▶ Onsite Security Systems Requirements of the Utility
- ▶ Any atypical additional upgrades or testing necessitated by the electric utility or by state or local regulations for a solar array system installation
- ▶ System Operations Training (if requested)

These vendors specially did not include these costs in their proposals:

- ▶ Land Lease Costs (IGS Solar and DE Shaw). EPC agreements do not include these costs
- ▶ Fence Upgrade Costs for Improvements to 6 feet with Barbwire or 7 feet (Solair)
- ▶ Permitting (Solair)

Greater price certainty will be gained from deeper site evaluations if initial pricing is determined to be favorable.



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DEMEC Analysis and Recommendations

- ▶ Analysis - EPC pricing appears more competitive than PPA
- ▶ Analysis - These are only four presented options. Other better options may exist. If a better option arises, DEMEC will consider that option as well.
- ▶ Recommended Net Steps:
 - ▶ Provide current EPC vendors additional time to refine their proposals and costs after a site visit and consultation with Lewes BPW staff
 - ▶ Allow DEMEC additional time to review and evaluate revised EPC proposals and concurrently continue to evaluate any newly received and reasonable vendor proposals in order to provide a recommendation to the Lewes BPW.



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Delaware Municipal Electric Corporation

If you have questions or need further
information:

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Thank You