



**CITY OF NEWARK
DELAWARE**

2A

TO: Mayor & Council

FROM: Conservation Advisory Commission

SUBJECT: Green Energy Fund Reimbursement Program for Private Projects

DATE: June 13, 2017

BACKGROUND

The money in the Green Energy Fund is based on the amount of electricity sold by the city. Each resident pays a certain percentage of their bill into the Green Energy Fund that can then be distributed to support sustainable energy or energy conservation projects. At present, Green Energy funds are disbursed along the following three categories:

1. Private projects (PV, Wind Turbine, Fuel Cell, Geothermal, and Solar Water Heater)
2. Public renewable energy installations (solar parks, wind turbines, etc.)
3. Municipal energy conservation projects

There is concern that the reimbursement rates for Category 1 above (Private Projects) are overly generous when compared with nationwide trends and with other cities in Delaware. Furthermore, costs for renewable energy projects, in particular solar PV, have declined substantially. Therefore, this resolution is aimed at reducing reimbursement rates for private projects (residential, non-residential, and non-profit). The intended goal is that, by reducing each individual payout, Green Energy funds will be distributed among a greater number of recipients, which will help to increase the penetration of green energy projects amongst the community-at-large in Newark.

RESOLUTION FOR PATH FOWARD

Green Energy Fund Incentive Levels for Private Projects (Trifurcation 1)

	Current Incentive Details	Proposed Incentive Details		
		Residential	Non-Residential	Non-Profit
PV	33.33% of installation costs up to NTE* caps for residential and business (\$7500/\$15,000)	<ul style="list-style-type: none"> • \$0.50 per watt for first 5kW • \$0.20 per watt over 5kW • Max grant \$3500 	<ul style="list-style-type: none"> • \$0.50 per watt for first 5kW • \$0.20 per watt over 5kW • Max grant \$3500 	<ul style="list-style-type: none"> • \$1.05 per watt • Max grant \$3500
Wind	33.33% of installation costs up to NTE caps for residential and business (\$7500/\$15,000)	<ul style="list-style-type: none"> • 33.33% of installation costs • Max grant \$3500 	<ul style="list-style-type: none"> • 33.33% of installation costs • Max grant \$3500 	<ul style="list-style-type: none"> • 33.33% of installation costs • Max grant \$3500
Fuel Cells	50% of installation costs up to NTE set caps for residential and business (\$7500/\$15,000)	<ul style="list-style-type: none"> • 33.33% of installation costs • Max grant \$3500 	<ul style="list-style-type: none"> • 33.33% of installation costs • Max grant \$3500 	<ul style="list-style-type: none"> • 33.33% of installation costs • Max grant \$3500
Geothermal	50% of installation costs up to NTE caps for residential and business (\$3,000/\$20,000) OR \$500/ton whichever is lower	<ul style="list-style-type: none"> • \$800 per ton for first 2 tons • \$700 per ton over 2 tons • Max grant \$4400 	<ul style="list-style-type: none"> • None - SEU already provides a geothermal grant to Non-Residential customers 	<ul style="list-style-type: none"> • None - SEU already provides a geothermal grant to Non-Profit customers
Solar Hot Water	50% of DHW installation costs up to NTE caps for residential and business (\$3,000/\$10,000 or \$5,000/\$10,000 for radiant systems)	<ul style="list-style-type: none"> • \$1.00/OG300 or Licensed DE Professional Engineer Calculated kWh Saved • Max grant \$3500 	<ul style="list-style-type: none"> • None - SEU already provides a solar hot water grant to Non-Residential customers 	<ul style="list-style-type: none"> • None - SEU already provides a solar hot water grant to Non-Profit customers

*NTE stands for Not to Exceed

Notes:

1. PV: In the proposed incentives, PV system size at which residential and non-residential grants max out is 10kW. The Non-Profit maxes out at 3.33 kW. Non-profits typically have less funding to pay for a system so a higher \$/watt incentive is more meaningful. However, a non-profit **would not** be excluded from applying for a non-residential grant, which provides a lower incentive per watt but incentivizes more watts. In addition, a

proposed PV cap of \$3500 would ensure that more customers have access to the limited funding; it is consistent with other utility incentives; and it will make Newark's solar incentive more sustainable.

2. Wind and Fuel Cells: There has been zero interest in wind and fuel cell so far. Nevertheless, the CAC does not wish to preclude future applications. The payout has been reduced to 33.33% and the max grant amount reduced to \$3500 to match PV.
3. Geothermal: The incentive has been made consistent with the state incentive. The max payout of \$4400 allows a max size of 6 tons, which is the upper end for residential systems. Incentives for Non-Residential and Non-Profit have been removed as the Sustainable Energy Utility already provides grants to those entities.
4. Solar Hot Water: The incentive has been made consistent with the state incentive. The max payout of \$3500 matches that for PV systems. Incentives for Non-Residential and Non-Profit have been removed as the Sustainable Energy Utility already provides grants to those entities.

George Irvine, Chair
Conservation Advisory Commission

cc: Tom Coleman, Acting City Manager
Tim Filasky, Acting Public Works & Water Resources Manager



Newark Green Energy Fund Incentive Structure Discussion

Scott Lynch, VP Asset Development

Delaware Municipal Electric Corporation

September 3, 2019

Solar Incentive Comparison

Residential

City of Newark

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$7,500**
- ▶ Incentive Structure:
 - ▶ First 5,000 watts eligible for \$1.00 per watt
 - ▶ Next 5,000+ watts eligible for \$0.50 per watt

Delmarva Power

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$3,000**
- ▶ Incentive Structure:
 - ▶ First 50,000 watts eligible for \$0.50 per watt

Delaware Electric Coop

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$2,500**
- ▶ Incentive Structure:
 - ▶ First 5,000 watts eligible for \$0.50 per watt
 - ▶ Next 5,000+ watts eligible for \$0.20 per watt



Solar Incentive Comparison

Non-Residential

City of Newark

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$15,000**
- ▶ Incentive Structure:
 - ▶ First 5,000 watts eligible for **\$1.00 per watt**
 - ▶ Next 5,000+ watts eligible for **\$0.50 per watt**

Delmarva Power

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$3,000**
- ▶ Incentive Structure:
 - ▶ **Flat \$3,000 incentive per project**

Delaware Electric Coop

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$3,500**
- ▶ Incentive Structure:
 - ▶ First 5,000 watts eligible for **\$0.50 per watt**
 - ▶ Next 5,000+ watts eligible for **\$0.20 per watt**



Solar Incentive Comparison

Non-Profit

City of Newark

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$10,000**
- ▶ Incentive Structure:
 - ▶ Eligible for **\$1.25 per watt**

Delmarva Power

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$41,250**
- ▶ Incentive Structure:
 - ▶ First 5,000 watts eligible for **\$1.50 per watt**
 - ▶ Next 5,000+ watts eligible for **\$0.75 per watt**

Delaware Electric Coop

- ▶ Solar incentive based on system size
- ▶ Max incentive per customer = **\$3,500**
- ▶ Incentive Structure:
 - ▶ First 5,000 watts eligible for **\$1.05 per watt**
 - ▶ Next 5,000+ watts eligible for **\$0.52 per watt**



Solar Incentive

Residential Example

- ▶ System Size: 5,525 watts
- ▶ System Cost: \$14,365
- ▶ Cost/Watt: \$2.60
- ▶ Incentives:
 - ▶ City of Newark \$5,262.50 Grant
 - ▶ Delmarva Power \$2,762.50 Grant
 - ▶ Delaware Electric Coop \$2,605.00 Grant



Solar Incentive

Non-Residential Example

- ▶ System Size: 25,000 watts
- ▶ System Cost: \$65,000
- ▶ Cost/Watt: \$2.60
- ▶ Incentives:
 - ▶ City of Newark \$15,000.00 Max Grant
 - ▶ Delmarva Power \$3,000.00 Flat Grant
 - ▶ Delaware Electric Coop \$3,500.00 Max Grant



Solar Incentive

Non-Profit Example

- ▶ System Size: 8,000 watts
- ▶ System Cost: \$20,800
- ▶ Cost/Watt: \$2.60
- ▶ Incentives:
 - ▶ City of Newark \$10,000.00 Max Grant
 - ▶ Delmarva Power \$9,750.00 Grant
 - ▶ Delaware Electric Coop \$3,500.00 Max Grant



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Conclusions

- ▶ There is **no need to over incentivize solar** photovoltaics more than any other electric utility.
- ▶ The Newark Green Energy Fund could assist more customers by adjusting to the Delmarva Power or Delaware Electric Coop incentive structure. **(Adjusting would stretch solar incentives further since most applicants are residential.)**
- ▶ There is also a case for no incentive for solar photovoltaics as the prices have dropped in recent years making systems more cost competitive. **Instead incentive funds could be put towards more community wide benefit programs such as more community renewable and energy efficiency projects.**



Recommendation Option #1

- ▶ Adjust to Newark Green Energy Fund incentive structure for solar photovoltaics to match the Delaware Electric Cooperative structure.
- ▶ Adjust the Newark Green Energy Fund maximum incentive amount for solar photovoltaics to match the Delaware Electric Cooperative.



Recommendation Option #2

- ▶ Discontinue solar photovoltaics incentives for individuals, businesses, and non-profits from the City of Newark Green Energy Fund
- ▶ Allow funds collected in the incentive pool for individuals, businesses, and non-profits to be drawn from to support Newark's other citywide incentives pools:
 - ▶ Community Renewable Energy
 - ▶ Energy Efficiency



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Questions?

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