



CITY OF HAGERSTOWN, MARYLAND

Hagerstown Light Department

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Date: March 05, 2026

To: Scott Nicewarner, City Administrator
Nancy Hausrath, Director of Utilities

From: Nathan Fridinger, Deputy Director of Electric Operations
Jason Bachtell, Electric Engineering Manager

Re: Distributed Energy Resources – Solar and Battery Energy Storage Systems

Action: March 10, 2026 – Work Session Discussion

The Hagerstown Light Department staff has the following comments based on an email circulated by Councilmember Bell on January 22, 2026 to explore the reduction in municipal operating costs, increase energy stability, and potentially provide financial relief to residents with solar energy generation by determining the feasibility of a project (1) on City-owned buildings and (2) for the community.

1. Net Energy Metering

Net Energy Metering is the process of installing solar generation behind the retail meter where the system interconnects to the metered electrical service to reduce energy use. Bills are processed monthly using the net energy reading, which is equal to the difference between the quantity of energy delivered and the quantity of energy received. The City's Utility Billing software is configured to generate bills for single accounts and currently has over forty net energy metering participants.

To consider behind the meter solar generation on City owned buildings, the integrity of the structures must be examined to accommodate the additional weight of the system and wind loading. Structures to explore could include the parking decks, indoor field house, and the Public Works administrative office. The most recent 12-month electric bills generated for these accounts total 1,785,802 kWh of energy use with the field house contributing roughly 74%.

2. Utility Scale Solar Array

There are two possible applications to consider for utility scale solar array project:

- a. A Community Solar Program
 - i. As a municipally owned electric utility, the Hagerstown Light Department is exempt unless a project plan is developed and adopted by the Maryland Public Service Commission.
 - ii. Requires customer enrollment and participation.
 - iii. Introduces burden of maintenance, administration, tracking/reporting, and software development.
- b. As a stand along Utility Distributed Energy Resource (DER) to hedge against system peak loads in the summer months.

In either application, all energy generated by the system must be separately metered and reported to the wholesale energy supplier. The supplier would invoice HLD as if the energy was delivered to account

for energy purchased by the supplier to meet HLD's forecasted energy needs. The supplier would then apply a credit for the energy output at the applicable market price.

Siting a utility scale solar project poses a challenge within the constrained HLD service territory due to the lack of available open space. For a utility scale ground mounted solar array to be effective, it must be large in area. Locations to explore could include a portion of the property south of the former MELP or the Wastewater property north of Funkstown. Both locations would require a significant amount of tree removal to provide for a viable project.

Other expenses would include electric distribution facility upgrades and extensions, fence installation, security measures, system output monitoring and maintenance, and project payback.

3. Battery Energy Storage Systems (BESS)

Preliminary analysis has been performed to project energy cost savings benefit of a BESS installation which can provide instantaneous hedging against system peak demands to decrease the HLD's designated Peak Load Contributions (PLCs), contained in a manageable footprint.

The City has the option to partner with a third party for the installation, maintenance, and operation for a twenty-year term. HLD's consultants, GDS Associates, used comparable data to project energy cost savings for a system with 20MW of output capacity capable of discharging for four (4) hours. Given the total energy sales of 346,565,221 kWh sales during calendar year 2025, a projected annual purchase power cost savings of roughly \$1.9M would be realized across HLD's customer base or roughly \$5.50 per month for a customer with 1,000 kWh of energy use.

Recommendations

- Explore the feasibility of a roof-top solar array installation located at the Hagerstown Field House and seek any upcoming grant funding opportunities.
- Develop and advertise a Request for Proposal of a Battery Energy Storage System located at the Frederick Street Substation site.