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Landfill Solar Field

Council File 191604:

February 20th, 2020

Presented by:

Environmental Collaboration Office &
Department of City Development





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Climate Goals with Limited Financial Resources

- ▶ 25% by 2025 Renewable Energy Goal
- ▶ City-County Task Force on Climate and Economic Equity established 40% community wide carbon reduction goal by 2030



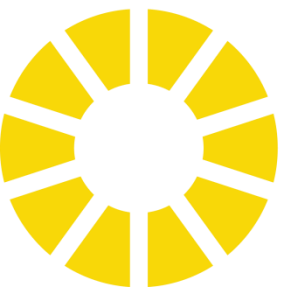


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Utility Scale Solar

- City needs approximately 15 MW of renewable energy to meet 25% by 2025 goal for municipal electric use only
- Rooftop solar alone won't get it done
- Utility collaboration is fastest path toward tackling climate change

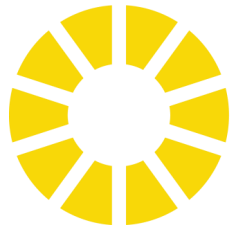




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Landfill Solar Summary

- ▶ Largest solar project in the City of Milwaukee, covering 8 acres with 7,280 solar panels; 2.25 MW.
- ▶ Costs the City nothing to build or maintain
- ▶ Documented progress toward the City's renewable energy goals and keeps about 15 rail cars of coal from being burned every year.
- ▶ Generates approximately \$90,000 per year in revenue for the City that could support additional climate action.
- ▶ Provides grid resilience to the adjacent 128 Air National Guard and can act as an emergency recovery asset in the event of a regional grid failure
- ▶ Approved by the Public Service Commission of Wisconsin through the We Energies Solar Now tariff
- ▶ Gives the City valuable experience in large scale solar projects



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Location: 1600 E College Ave



128th Air Refueling
Wing



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Land Selection

- ▶ ECO and DCD considered multiple sites for the proposed solar project
- ▶ Site is a closed landfill that is not suitable for development
- ▶ Secure fencing
- ▶ Keeps rooftops open for future city-owned solar
- ▶ The solar panels will be weighted down with concrete ballasts and rest on top of the clay cap. About 32 acres remain for future solar development.
- ▶ No objections to the project from General Mitchell Airport
- ▶ Site is directly adjacent to 128th Air Refueling Wing of the Air National Guard and solar supports grid resilience and national security



**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 128TH AIR REFUELING WING (ANG)**

24 January 2020

MEMORANDUM FOR MAYOR TOM BARRETT
MILWAUKEE COMMON COUNCIL

FROM: 128 ARW/CC
1919 E GRANGE AVE
MILWAUKEE WI 53207

SUBJECT: Common Council File #191604

1. The 128 ARW is an ardent proponent of the City Of Milwaukee approving the solar energy project on the brownfield site at 1600 College Ave. While the 128 ARW understands that this proposal is a transaction between WE Energies and the City of Milwaukee, there is a potential additional benefit to this project that may prove in an emergency situation to be of great benefit to the greater Milwaukee area and our nation as a whole.
2. The potential additional benefit of the solar project is due to the point that it connects to the We Energies' electrical grid which happens to be the same line that serves the 128 ARW. This will enable the 128 ARW to purchase and utilize the output of the solar facility at times when the overall electrical grid is not functioning. During such an emergency, the solar facility would not be capable of selling its output to the normal grid customers and it is also during such a time when our abilities as a National Guard unit may be called upon by our State and our Nation to aid in recovery efforts. In short, the solar facility that you are contemplating has the benefit of becoming an emergency recovery asset simply by virtue of where you are contemplating locating it in the community. As an Air National Guard unit, we welcome the opportunity to purchase the output of the solar facility, under our existing utility rates, in a contingency situation and can assure you that the solar facility's continuous presence next to our base is most welcome. Indeed, the presence of this facility may greatly assist our abilities during an electrical grid outage to accomplish our dual mission of supporting the State of Wisconsin and the United States of America.
3. Please contact me with any questions at 414-944-8405 / james.v.locke3.mil@mail.mil

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Commander

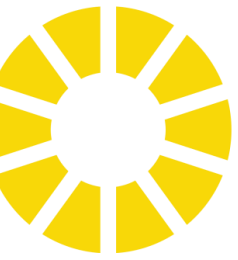
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Process

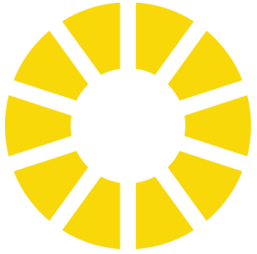
- ▶ The resolution allows We Energies to conduct final engineering of the project and work for DNR and FAA approvals and finalize site access with Air National Guard for construction and grid connections
- ▶ Appropriate City Officials can execute the lease agreements once above approvals are in hand
- ▶ Lease revenues are intended to support additional climate action



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Lease Revenues

- ▶ Lease payment is based on MISO (regional grid operator's) value of solar and is approved by PSC tariff. It is not a fixed annual amount.
- ▶ \$90,000 lease revenue in year 1
- ▶ Future year lease payments are based on actual solar production and capacity accreditation formula, which is subject to change.
- ▶ Negotiated clause that allows says: "If the tariff authorizing the "Solar Now" Solar PV System Hosting Pilot Program is revised to provide a greater monthly payment to customers than provided in this Agreement, then the Lease Payment shall be amended to reflect the increased monthly payment available to other customers
- ▶ City is paying nothing for the system, so revenues that come in less than projected do not jeopardize repayment of the system.
- ▶ Revenues are intended to support additional climate action projects, such as additional rooftop solar or energy efficiency projects.



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Community Support

- ▶ Air National Guard's 128th Refueling Wing
- ▶ Clean Wisconsin
- ▶ Milwaukee Equity and Climate Alliance
- ▶ NAACP Milwaukee Branch
- ▶ League of Women Voters of Milwaukee County
- ▶ 350 Milwaukee
- ▶ Marquette Students for an Environmentally Active Campus
- ▶ 128th Community Council

