

**COUNTY OF MILWAUKEE
INTEROFFICE COMMUNICATION**

DATE: April 21, 2014

TO: Supervisor Marina Dimitrijevic, Chairwoman, County Board of Supervisors
Supervisor Michael Mayo, Sr., Chairman, Transportation, Public Works and
Transit Committee

FROM: Gordie Bennett, Sustainability Director, DAS-Facilities Management

SUBJECT: **Requested Follow-Up to File No. 14-91, A Resolution to Increase the
Adoption of Solar Energy by Milwaukee County Government
(INFORMATIONAL)**

BACKGROUND

As requested by the Milwaukee County Board in File No. 14-91, the Office of Sustainability has prepared this preliminary analysis of solar energy opportunities at County-owned properties other than General Mitchell International Airport.

UNDERLYING ASSUMPTIONS & REQUIREMENTS

The following is the basic framework used by the Office of Sustainability to determine potential solar energy opportunities at County-owned properties other than General Mitchell International Airport:

1. In practice, solar energy systems are usually implemented on rooftops, parking lots/structures, or undeveloped land.
2. Parking lots/structures were excluded from this analysis because corresponding GIS data was unavailable.
3. Additionally, the analysis excluded undeveloped land managed by General Mitchell International Airport (GMIA) or the Department of Parks, Recreation & Culture (DPRC) because:
 - a) Per File No. 14-91, GMIA is required to study solar energy opportunities for its properties.
 - b) It may not be desirable to install large solar energy systems on undeveloped land being used for parks, recreation, and leisure.
4. To accommodate solar energy systems, rooftops and undeveloped land should be relatively flat, clear of trees, equipment, buildings, and other potential sources of shading, and have ample southern exposure.
5. In addition, rooftops should be in good working condition and structurally

sound, and typically no more than seven years old.

6. Moreover, undeveloped land should be free from significant erosion and environmental contamination.
7. In general, the cost per installed kilowatt of solar energy is significantly lower for one-Megawatt (MW) or larger systems. Thus, only County-owned properties capable of accommodating such systems were considered.
8. A one-MW solar energy system requires approximately five acres of cleared land or 150,000 square feet of open rooftop space.

RESULTS OF PRELIMINARY ANALYSIS

1. The following County-owned land parcels are at least five acres in size and are not being used by DPRC or the Airport Division. However, it appears **none of these parcels are suitable for hosting solar energy systems** due to topography, tree cover, and/or land use – see notes for each parcel.

Parcel	Taxkey	Address	Area (acres)	Notes
1	7448985001	8230 W Rawson Ave, Franklin	7	Part of The Rock Sports Complex future development
2	7448985002	8230 W Rawson Ave, Franklin	11	Part of The Rock Sports Complex future development
3	8500003000	8885 S 68th St, Franklin	126	Hunger Task Force Farm & Fish Hatchery / Root River Parkway
4	8519995004	S 76th St, Franklin	39	Hunger Task Force Farm & Fish Hatchery / Root River Parkway
5	8519995007	W Puetz Rd and S 68th St, Franklin	18	Hunger Task Force Farm & Fish Hatchery / Root River Parkway
6	8659978003	9050 S Annette Pl, Oak Creek	12	Hilly and largely forested; eastern part is near railroad; residential area to west
7	8699993000	3810 E American Ave, Oak Creek	10	Largely forested; eastern part is near railroad; residential area to west
8	8839999002	9000 S 68th St, Franklin	51	Hunger Task Force Farm & Fish Hatchery / Root River Parkway
9	8849994000	S 68th St and Ryan Rd, Franklin	75	Hunger Task Force Farm & Fish Hatchery / Root River Parkway
10	9699016000	3340 E Co. Line Rd, Oak Creek	7	Largely forested and near stream

2. The following County-owned facilities have rooftops that are at least 150,000 square feet, appear to be relatively flat and clear of equipment, and have southern exposure. These rooftops may be able to accommodate one-MW or larger solar energy systems.

Facility	Address	Rooftop Area (square feet)
CATC Complex	9501 Watertown Plank Rd, Wauwatosa	162,957
Fleet Maintenance	10320 Watertown Plank Rd, Wauwatosa	225,959
House of Correction*	8885 S 68th St, Franklin	238,276
MCTS Hillside Complex	1942 N 17th St and 1525 W Vine St, Milwaukee	179,069

* Includes rooftop areas for the following buildings: 1) Admin 600 and 400 Bed Dormitory Addition; and 2) Dormitory Bldg Boiler House and Stack.

3. In addition, a number of smaller MCTS rooftops may be suitable for hosting large (but likely less than one MW) solar energy systems:
- Fiebrantz Complex, 1900 W Fiebrantz Ave, Milwaukee (77,430 sf)
 - Fond du Lac Station, 3203 W Fond du Lac, Milwaukee (107,143 sf)
 - Kinnickinnic Complex, 1710 S Kinnickinnic Ave, Milwaukee (117,598 sf)
4. Any additional evaluation(s) of solar energy opportunities at County-owned properties should include:
- Structural analysis by licensed professional engineer(s)
 - Professional solar energy site assessment(s)
 - Consideration of applicable local, state, and federal regulations
 - Identification of solar energy incentives and financing mechanisms
5. Additional evaluation(s) could cost anywhere from several thousands of dollars to tens of thousands of dollars per site evaluated.

Prepared by: Gordie Bennett, Sustainability Director

Approved by:


Julie A. Esch, DAS – Director of Operations

Chairwoman Marina Dimitrijevic
Supv. Michael Mayo, Sr.
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Cc: Kelly Bablitch, Chief of Staff, County Board
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