

*** All present are expected to conduct themselves in accordance with our City's Core Values ***



OFFICIAL NOTICE AND AGENDA

Notice is hereby given that the Solar Array Task Force of the City of Wausau, Wisconsin will hold a regular or special meeting on the date, time and location shown below.

SOLAR ARRAY TASK FORCE

Thursday, January 18, 2023 at 4:00 p.m.

City Hall (407 Grant Street, Wausau WI 54403) - Board Room

Location:

Members:

Chad Henke, John Robinson, Jay Coldwell, Paul Svetlik, Susan Woods

AGENDA ITEMS

- 1 Approval of Minutes from previous meeting (12/11/2023).
- 2 Discussion and possible action to review and propose changes to the presentation for the January community meeting.
- 3 Discussion and possible action on scheduling future meetings.
- 4 Public Comment.

Adjourn

Signed by Chad Henke, Chairperson

This Notice was posted at City Hall, on the City of Wausau website, and sent to the Daily Herald newsroom on 01/12/2024 @ 4:00PM. Questions regarding this agenda may be directed to the City Clerk.

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 (ADA), the City of Wausau will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs or activities. If you need assistance or reasonable accommodations in participating in this meeting or event due to a disability as defined under the ADA, please call the ADA Coordinator at (715) 261-6622 or ADAServices@ci.wausau.wi.us to discuss your accessibility needs. We ask your request be provided a minimum of 72 hours before the scheduled event or meeting. If a request is made less than 72 hours before the event the City of Wausau will make a good faith effort to accommodate your request.

SOLAR ARRAY TASK FORCE

Date and Time: Thursday, December 11, 2023, at 5:00 pm, City Hall, Board Room

Members Present: Chad Henke (C), Paul Svetlik, Jay Coldwell, Susan Woods

Members Excused: John Robinson

Others Present: Mayor Rosenberg, Eric Lindman, Kody Hart

Noting the presence of a quorum Chairperson Henke called the meeting to order at 5:00 P.M.

Approval of Minutes from previous meeting (10/16/2023 and 11/16/2023).

Coldwell requested a correction to the 11/16/2023 minutes to update comments made on usage rate increases. The comment should be updated to instead factor in anticipated electricity rate increases over the time period for the cost analysis and was incorrectly referring to water/sewer rates usage in the minutes.

Svetlik requested that John Kahon, Parks, Recreation & Forestry Department Forester, be attributed specifically in the 11/6/2023 minutes.

Motion by Coldwell, seconded by Svetlik, to approve the minutes with the proposed changes. Motion carried 4-0.

Discussion on power usage from the new water treatment facility and estimated increase with new GAC treatment process.

Woods asked for clarification if the solar array would only be offsetting the electricity usage at the new water treatment plant. It is only offsetting that facility.

Coldwell questioned the electric usage of the facility. It was stated that the switchgear at the facility can handle a certain amount of electricity so there is a maximum capacity of the intake from the solar array. There are also many other factors that go into what electricity can be produced by the solar array and used in the facility.

Discussion on costs for placement of a solar array at various locations and primary cost drivers for capital cost differences.

Henke asked for an outline of the various factors that go into the differences in cost of constructing an array in a particular manner. The base cost of having a 1-megawatt array was analyzed for the site options with other factors including distance from the water treatment facilities, access points for construction, and sighting concerns.

Coldwell asked for an outline of the array option within the Village of Maine, the Bay Shore site. It was stated that there would be fewer sighting concerns as it is far away from surrounding homes but that there would be additional construction cost for building the infrastructure to carry produced electricity across a greater distance.

Svetlik questioned if the Northeast Fixed and Bay Shore site would require concrete ballasting. It was stated that those sites appear to be greenfield sites however there would be a larger cost to grading the land and clearing of trees and bushes at the Bayshore site. Svetlik questioned what panel sizes were used in the cost estimate. It was stated that each panel is relatively small so they can be easily installed and stand at 12 to 14 feet tall on the racking.

Henke stated that these options along with the cost breakdown should be presented at a January community meeting. Woods requested that the presentation include the price changes due to drivers of cost of the different options. Coldwell requested that the cost drivers be clearly bulleted in the presentation. Svetlik requested that each option have a separate slide in the presentation along with the bulleted cost factors.

Svetlik questioned if any more information was attained by staff on the structure of the water facility roof and its ability to hold a solar array. The structure of the building will work with an array but there was still a question on the roofing material and its ability to be bolted through.

Discussion on possible additional costs for placement of the solar array in the Village of Maine, related to ground mount solar arrays.

Woods questioned if there were any downsides to having one array in two municipal jurisdictions. It was stated that there would be a need to have to counter approval challenges from the Village of Maine as they now have an ordinance in place. There would be no additional cost outside of existing known permits.

Discussion and possible action on scheduling future meetings.

Henke questioned availability of task force members to attend the next meeting for the purpose of fine tuning the presentation in preparation of the January community meeting.

Woods questioned if the January community meeting was set. Svetlik stated that the meeting is slated for January 31, 2024, from 6:30 to 7:30 P.M. in room A1068 at Northcentral Technical College (the same place in which the last community meeting was held). It was questioned if the size of the room would be appropriate. For the time being it would be appropriate. If there is a need for a larger room, staff would reach out to NTC to make those arrangements.

It was stated that Thursday, January 18, 2024, at 4:00 P.M. will be the next meeting of the Solar Array Task Force.

Public Comment

A member of the public questioned the discrepancies in the different solar array options. Furthermore, that member of the public questioned specific details on the clearing of trees at the Well House site.

A member of the public questioned what the goal of the January community meeting as to if it would be to select site options. It was stated that community feedback would be attained on the options and then the task force would take that feedback and come up with more detailed information. Woods stated that the community neighborhood would inform which plans are brought to consultants for further analysis as scrutinizing each option would not be viable when only one option will move forward.

The details of developing a return-on-investment analysis were explained for the public to be informed on the next steps. It was stated that goals and outcomes of the project would need to be outlined first to come up with an accurate ROI.

A member of the public questioned if the pending PFAS lawsuit that the city is involved with will factor into paying for the water treatment facility and possibly the array itself. Mayor Rosenberg responded that the city needs to secure the funds prior to allocating them out. The city is looking to possibly retire debt of the facility and utilize other funding from the federal government.

Adjourn

Motion by Coldwell, seconded by Svetlik, to adjourn. Motion carried.
Meeting adjourned at 5:58 P.M.



**CITY OF WAUSAU
SOLAR ARRAY
TASK FORCE**

January 24th, 2024

TASK FORCE HISTORY

- Started meeting in the spring of 2023
- Members

Chad Henke – Chair

Paul Svetlik – Vice Chair

John Robinson

Susan Woods

Jay Coldwell

Goal is to make a recommendation for the Water Utility and City Council

TASK FORCE TIMELINE

- Part 1

- Collect Solar Background Information

- Effectiveness of Solar

- System Lifecycles

- Utility Costs and Needs

- New Utility costs

- Solar Project Funding available

TASK FORCE TIMELINE CONT.

- Part 2

Develop options

Size, Location, Configuration

Gather public input on options. That is why we are here today.

- Part 3

Evaluate options

Long/Short Term Effectiveness, Practical, Monitorable, Cost

Public input and comment period in March 2024

TODAY

- Discussion on size of the array
- Discussion on location of the array and cost differences
- Eric to discuss Task Force goals, current locations, costs
- Paul will lead Question and Answer

TASK FORCE DISCUSSION SUMMARY-JUNE 2023

- Utilization and construction of solar generated power for City use follows the City's adopted Strategic Plan and the City's adopted resolution for Supporting Reduction of Greenhouse Gas Emissions and Energy Security.
- Utility is challenged to find innovative ways to reduce operational costs moving forward. Solar energy is a proven technology to reduce energy costs long term.
- Rate payers of the utility pay for the infrastructure and decisions on these initiatives. Need to look at benefits to all rate payers and balance any concerns brought forward about the project.
- Consider solar generation and use at locations that have the most beneficial impact for all rate payers in the city.
- Consider resiliency and to support services and operations to all city residents.
- Installation of solar generating infrastructure will consider the area or neighborhood it is to be installed and adapt the project to work with the neighborhood during design of the facility.
- Provide city wide educational outreach to notify the public of the city's objectives and inform rate payers of benefits, short and long term Established a benchmark goal of a 10-year ROI.

TASK FORCE GOALS AS DISCUSSED

- ROI goal of 10-years
- Minimize impact to neighborhoods where solar is installed. Neighborhood feedback and suggestions considered throughout the design of the proposed system.
- Design a solar array appropriately sized to increase resiliency of the treatment facility and be able to run portions of the facility during power outages.
- Maximize grant opportunities and rebates to reduce capital costs for shorter ROI.
- Consider solar generation at locations that have the most beneficial impact for all rate payers in the city.
- Design the solar array so that it may be expanded in the future and consider the possibility of power storage in the future.
- Provide city wide educational outreach to notify the public of the city's objectives and inform rate payers of benefits.

ARRAY SIZE

- Compare similar solar array size at various locations
 - ~1 MW size array – Electrical switch gear at the facility is sized for this size of array
 - From preliminary calculations this size array would provide about 40% of the current facility power usage for direct use with some overgeneration and sell back to WPS
 - Looked at 3 primary locations plus using available roof top space

ARRAY LOCATIONS AND COSTS

- 3 primary locations plus using available roof top space
 - Well House Array -\$3,800,000
 - NE Fixed Array - \$7,500,000
 - Bay Shore Array - \$5,300,000
 - Roof Top Array – Ruled out design engineer response:
 - Solar panels should not be mounted on the DWTF and the PFAS building:*
 - Buildings are designed for future removal of roof to accommodate IEX and GAC vessel changeout*
 - Structural loads for solar panels, equipment and additional snow load were not included in the building design*
 - Installation of solar panels on the buildings' EPDM roofing is possible, but less than ideal*

WELL HOUSE ARRAY



SCENARIO 1 - WELL HOUSE ARRAY
APPROX 6 ACRES
SINGLE-AXIS TRACKER
ASSUME 680 W DC PER MODULE, 1500 VOLT SYSTEM
ASSUME 1.5 DC/AC
2464 MODULES
1.68 MW DC, 1.118 MW AC (1120 AMPS AT 480V)

ClarkDietz					
PROJECT NO.					
CLIENT					
DATE					
DESCRIPTION	SCENARIO 1 - WELL HOUSE ARRAY				
PROJECT NO.	W0400110				
REVISION NO.	E000-1				
PROJECT NAME	WAUSAU DRINKING WATER TREATMENT FACILITY SOLAR				

NE FIXED ARRAY



SCENARIO 2 - NE FIXED ARRAY
APPROX 5.4 ACRES
FIXED ARRAY
ASSUME 680 W DC PER MODULE, 1500 VOLT SYSTEM
ASSUME 1.5 DC/AC
3368 MODULES
2.29 MW DC, 1.52 MW AC (1830 AMPS AT 480V)

ClarkDietz	
WALSAU DRINKING WATER TREATMENT FACILITY SOLAR	
SCENARIO 2 - NE FIXED ARRAY	
W0400110	
E000-2	

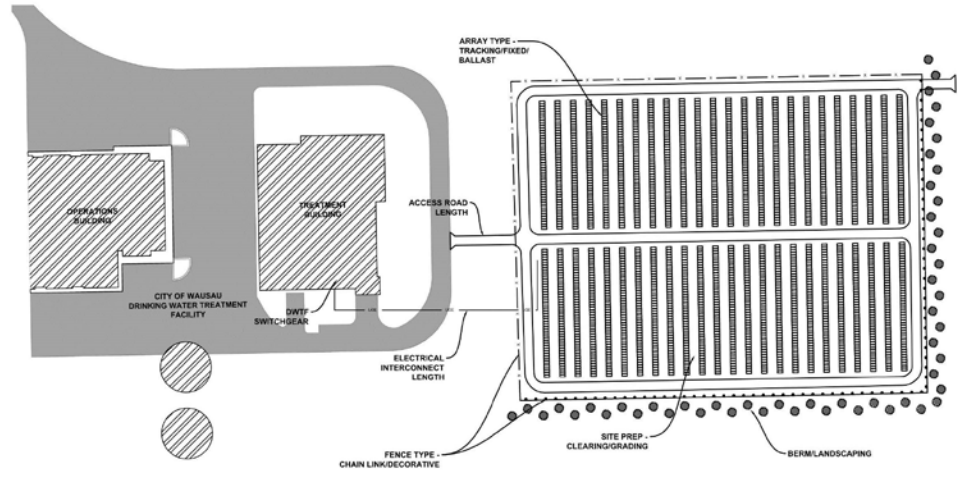
BAY SHORE ARRAY



PROJECT TITLE	WAUSAU DRINKING WATER TREATMENT FACILITY SOLAR
PROJECT NO.	
DATE	
SCALE	
PROJECT NO.	SCENARIO 3 - BAY SHORE ARRAY
PROJECT NO.	W0400110
PROJECT NO.	E000-3

ARRAY COSTS AND COST DRIVERS

Solar Array Drivers of Cost Diagram and Example 1.02 MW Array



Solar Array Estimated Costs and Drivers of Cost

	1.02 MW Wellhouse Array- Single Axis Tracker	1.02MW NE Fixed Array- Fixed Ballast	1.02 MW Bayshore Array- Fixed
Estimated Cost*	\$3,800,000	\$7,500,000	\$5,300,000
Significant Drivers of Cost			
Array Type - Fixed, Tracking, Ballasted		X	
Site Prep - Clearing, Grading		X	X
Electrical Interconnect & Access Road Length		X	X
*These estimates are planning level only. Actual costs may vary due to equipment availability, material and labor costs at time of procurement, and current bidding environment. Other drivers may affect these costs if additional scenarios are considered.			

FUNDING SOURCES AND OPTIONS

- Inflation Reduction Act - Percentage of construction costs
- Inflation Reduction Act – May have other opportunities upcoming
- WI Office of Energy Innovation (WI OEI) – Grants through the PSC
- Possible other BIL funding with the Dept. of Energy (DOE)

DISCUSSION AND QUESTIONS

