

# Battle Ground Town Council

Meeting Minutes, July 17, 2023

Attending: Council President James Miller, Councilors Matt Coppock, Steve Hahn, Greg Jones, Mary Jo Totten. Also attending: Clerk Treasurer Georgia Jones.

Guest: David Freeman

This meeting is a work session to address items not covered on July 10. Greg Jones called the meeting to order at 6:00 p.m. Additions to the agenda include developer David Freeman, a donation request, budget transfers, scrap equipment, waste contract approval, snow plow and truck expenditure.

## **Development information**

David Freeman shared a concept sketch that he is working with for a planned commercial development. He is contacting developers with various specialties to construct different aspects of the plan, with his vision for architecture and traffic movement. The plan offers space for a town hall/community center if the council would like that location.

## **Waste hauling contract**

After consideration of bids and options, James Miller moved to approve the Waste Management bid for 5 year duration, weekly trash and biweekly recycling pickup. Second of Matt Coppock, motion carried with unanimous vote.

## **Street Barn Repair, New Salt Barn**

Necessary repairs to the Street Barn will be arranged with Ron Holladay, by Greg Jones and James Miller. Project estimate for budgeting is \$10,000.

The salt barn replacement is now a current project. The requirements are an 8" concrete floor, concrete lower walls and a high dome roof to allow delivery trucks to offload directly into the building. Matt Coppock will work with Ron Holladay to secure a current price and construction method.

## **Town Hall and Community Center**

A vacant lot on South Railroad Street is available. James Miller shared an architect's rough sketch of potential site plan/construction for consideration. The building construction price estimate is \$300-350/square foot, or approximately \$1.6M plus an amount for the parking lot. This location would not require much site preparation compared to other sites that currently have dwellings. The council needs to know the price of the lots. Matt Coppock had a conflict and left the meeting at 7:20 p.m.

## **Solar Project**

There was continuing discussion of the financial feasibility of working with Solential company to place a solar array at the sewage plant location to offset rising costs of electrical power. The cost of adding backup battery makes the project cost more than it would generate in power revenue, however installing the panels alone appears to be a reasonable risk and the backup battery could be placed later if the cost/revenue equation will support the investment.

A current government program would reimburse 30% of the installation, and the council could consider using a 10-15 year loan to support half of the remainder, and allocating Economic Development funds for the rest. This would pay off the project in half the expected life of the panels. Georgia Jones will

investigate the State Revolving Fund for low-cost loan options, and James Miller will request clarification on pro forma information supplied by Solential representatives.

## BG solar Installation info

After running multiple different options through budget pricing, system analysis modeling with the proposed Tipmont rate tariff and financial pro-forma analysis one project option looks viable financially. The other options had cost attributes that just didn't perform well in a 40 year analysis.

The option that appears to be viable is the smaller solar array at the waste water plant with no battery. The details associated with this project are as follows:

Current site electric usage – 430,680 kWh/year, 808 kW/year  
 Proposed Array size – 147 kW DC  
 Proposed base budget cost – \$345,000  
 Investment tax credit – \$103,500 (30%)  
 Net budget cost – \$241,500  
 Projected solar energy production – 227,621 kWh/year  
 Solar energy that is excess and will be sold to Tipmont – 76,988 kWh/year; the remainder will be used directly in the plant  
 Proposed site electric usage – 292,069 kWh/year; demand stays the same as current.  
 Proposed financing – 30 year BOT @ 4.5%  
 Using the data above, projected maintenance costs, and Tipmont's proposed 4-part electric rate we have calculated the proforma savings against the current situation per the table below.

FINANCE COSTS - (SOLAR - Town of Battle Ground - Waste Water)		
RESULTS		
NAMEPLATE (DC)		147 kW
SAVINGS	BOT	
1st Year	\$	3,045
5 Yr Accum	\$	20,748
25 Yr Accum	\$	232,397
Lifetime Accum	\$	823,180

### Small Array Battle Ground - Waste Water, 6301 Prophets Rock Rd, West Lafayette, IN 47906, USA

**Report**

**Project Name:** Battle Ground - Waste Water

**Project Address:** 6301 Prophets Rock Rd, West Lafayette, IN 47906, USA

**Prepared By:** David Burns  
dburns@solential.com

**System Metrics**

**Design:** Small Array

**Module DC Nameplate:** 146.9 kW

**Inverter AC Nameplate:** 120.0 kW  
Load Ratio: 1.22

**Annual Production:** 218.7 MWh

**Performance Ratio:** 84.0%

**kWh/kwp:** 1,489.3

**Weather Dataset:** TMY, 0.01° Grid (40.49,-86.86), NREL (psm3)

**Simulator Version:** 86889782d6-c30bc21c0a-f288a5da50-f3c93275c5

**Project Location**

**Monthly Production**

**Sources of System Loss**



# Annual Production

### Annual Production

Description	Output	% Delta
<b>Irradiance (kWh/m<sup>2</sup>)</b>		
Annual Global Horizontal Irradiance	1,529.0	
POA Irradiance	1,773.1	16.0%
Shaded Irradiance	1,746.7	-1.5%
Irradiance after Reflection	1,695.7	-2.9%
Irradiance after Soiling	1,662.8	-2.0%
<b>Total Collector Irradiance</b>	<b>1,662.8</b>	<b>0.0%</b>
Nameplate	244,422.6	
<b>Energy (kWh)</b>		
Output at Irradiance Levels	243,167.1	-0.5%
Output at Cell Temperature Derate	236,188.4	-2.9%
Output After Mismatch	227,566.0	-3.7%
Optimal DC Output	226,855.1	-0.3%
Constrained DC Output	224,380.1	-1.1%
Inverter Output	219,843.1	-2.0%
<b>Energy to Grid</b>	<b>218,743.9</b>	<b>-0.5%</b>
<b>Temperature Metrics</b>		
Avg. Operating Ambient Temp	14.3 °C	
Avg. Operating Cell Temp	23.9 °C	
<b>Simulation Metrics</b>		
Operating Hours	4320	
Solved Hours	4320	

### Condition Set

Description	Condition Set 2
Weather Dataset	TMY, 0.04° Grid (40.49, -85.85), NREL (psm3)
Solar Angle Location	Meteo Lat/Lng
Transposition Model	Perez Model
Temperature Model	Sandia Model
Rack Type	a b Temperature Delta
Fixed Tilt	-3.56 -0.075 3°C
Flush Mount	-2.81 -0.0455 0°C
East-West	-3.56 -0.075 3°C
Carport	-3.56 -0.075 3°C
Soiling (%)	J F M A M J J A S O N D
	2 2 2 2 2 2 2 2 2 2 2 2
Irradiation Variance	5%
Cell Temperature Spread	4° C
Module Binning Range	-2.5% to 2.5%
AC System Derate	0.50%
Trackers	Maximum Angle 60°
Module Characterizations	Module 144HC M10 Bifacial 540 (Heliene)
Component Characterizations	Device Solectna XGI 1000-60/60 (Yaskawa)
	Backtracking Enabled
	Uploaded By HeliScope
	Characterization Spec Sheet Characterization, PAN
	Uploaded By HeliScope
	Characterization Spec Sheet

### Components

Component	Name	Count
Inverters	Solectna XGI 1000-60/60 (Yaskawa)	2 (126.0 kW)
Strings	10 AWG (Copper)	17 (2,727.6 ft)
Module	Heliene, 144HC M10 Bifacial 540 (540W)	272 (146.9 kW)

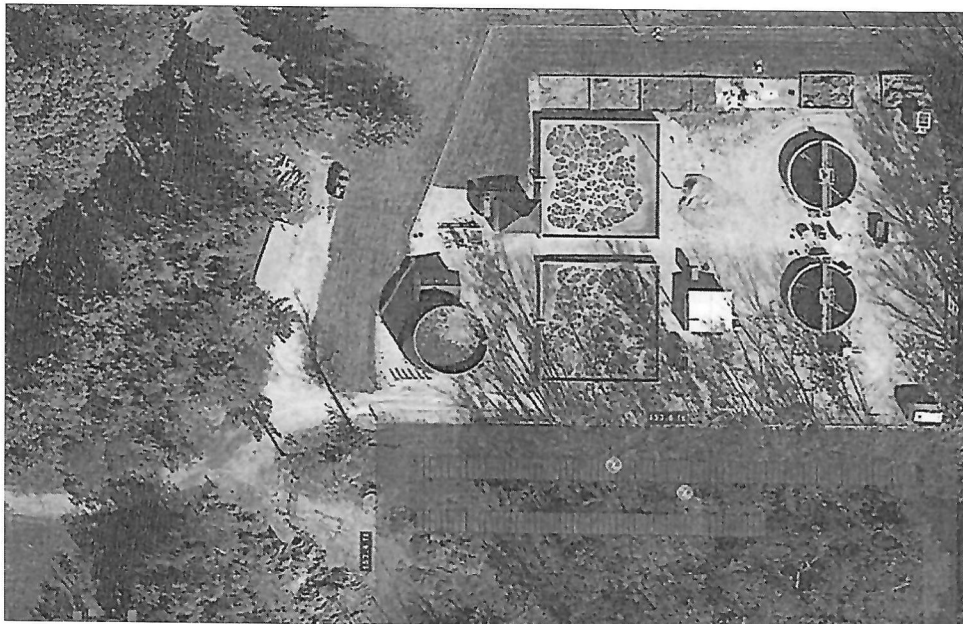
### Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone		16-16	Along Racking

### Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Array	Fixed Tilt	Portrait (Vertical)	30°	180°	20.0 ft	2x8	17	272	146.9 kW

# Location at the Waste Treatment Plant



**Declare scrap equipment**

The clerk’s office owns a printer that the manufacturer has stopped supporting with service or repair parts, and a desktop computer that has an older operating system and insufficient memory for today’s uses. Mary Jo Totten moved to declare these two items scrap and send them to E-recycling. Second of James Miller, motion carried with unanimous vote (4 Aye)

**Transfer Appropriations**

The council discussed how to pay for the major expense of the Woods Edge force main stoppage and line repair. Because the Hawks Nest project has not started construction, the loan payment that is due in July can be split and the principal paid by the loan. This budget allocation can be used for waste hauling expense, sludge removal, and engineering expense to investigate a new route for the Woods Edge force main. Mary Jo Totten moved to approve the loan payment and budget line transfer from 6201001776 bond/loan payment (98,000) to 6201763 Collection repairs (\$68,000), 6201001764 Sludge Removal (\$10,000) and 6201001730 Professional Services (\$20,000). Second of Steve Hahn, motion carried with unanimous vote.

**Milestone retainage payment**

It is anticipated that the Tomahawk Lane project will soon be approved for final payment of retainage to Milestone. At that time the cost will be allocated based on the retainage identified in Pay Estimates # 1-8. The amounts per fund: \$19177 to Wastewater, \$19177 to Storm Water, \$43946 to MVH, and \$9940 to Rainy Day. The latter amount is the retainage attributed to the ARPA funds that were assigned to pay for replacing old water lines along with the other utilities prior to the street reconstruction. Mary Jo Totten moved to accept the allocations as listed, with second of Steve Hahn. Motion carried with unanimous vote.

**Donation Request**

The Museum at Prophetstown is having a fundraiser for “The Barn” and asked if the town would be a sponsor. The minimum sponsorship is \$500. The council felt this was too high for current budget. Greg Jones moved to donate \$100 to support the mission of the museum in the Battle Ground community. Second of Mary Jo Totten, motion carried with unanimous vote.

**Truck with snow plow**

Steve Hahn requested approval to purchase a used truck and snow plow as recommended by Ron Holladay. James Miller moved to allow an amount not to exceed \$38,000. Second of Steve Hahn, motion carried with unanimous vote.

**Motion** to adjourn 8:03 p.m. by Mary Jo Totten with second of Steve Hahn.

  
Georgia Jones, Clerk Treasurer

  
James Miller, Council President

Memorandum of Open-Door Law Compliance  
Battle Ground Town Council

Date: July 17, 2023

Time: 6:00 p.m.

Members Present

in Person: James Miller, Steve Hahn, Mary Jo Totten, Greg Jones, Matt Coppock

Also Present in Person: Georgia Jones

Guest Present in Person: David Freeman

Guest Present virtually: None

Electronic Means of Communication Used For Members and Public: Zoom.us

Attest:

A handwritten signature in black ink that reads "Georgia Jones". The signature is written in a cursive style with a horizontal line underneath the name.

Georgia Jones, Clerk-Treasurer, Financial Clerk