

AGENDA BILL

**Beaverton City Council
Beaverton, Oregon**

SUBJECT: A Resolution Authorizing the Mayor to Sign a Lease and a Power Purchase Agreement with Oak Leaf Energy Partners Ohio, LLC to Host a Solar Photovoltaic System at the Sexton Mountain Reservoir and to Purchase the Electricity Generated Onsite

FOR AGENDA OF: 01-21-14 **BILL NO:** 14018

Mayor's Approval: *RME (MPT)*

DEPARTMENT OF ORIGIN: CEDD

DATE SUBMITTED: 01-14-14

CLEARANCES: City Attorney *W. B. Kin*
CAO *RME*
Finance *Alv. Chaire*
Engineering *Co*
Sustainability *CDL xl*

PROCEEDING: CONSENT AGENDA

- EXHIBITS:** Resolution
1. Rate Schedule
2. Termination Value and Purchase Option Price Schedule
3. Estimated Savings Schedule

BUDGET IMPACT

EXPENDITURE	AMOUNT	APPROPRIATION
REQUIRED \$24,700	BUDGETED \$302,922*	REQUIRED \$-0-

*Account Number 501-75-3701-682 Water Fund – Capital Projects – Water System Improvements – Construction Account. The \$24,700 Expenditure Required amount is the cost to purchase and install the fence around the Sexton Mountain Reservoir Site which encompasses the solar photovoltaic system. The \$302,922 Amount Budgeted represents the remaining appropriation in the Construction Account and the cost of the fence can be absorbed within the remaining appropriation.

RECOMMENDED ACTION:

City Council adopts the attached Resolution which will authorize the Mayor to sign a lease and related agreements with Oak Leaf Energy Partners Ohio, LLC in a form acceptable to the City Attorney and consistent with the attached proposed term sheet.

HISTORICAL PERSPECTIVE:

The City of Beaverton owns approximately 5.1 acres of property located at or near the 8500 Block of SW Murray Boulevard, Beaverton OR 97005, which is commonly referred to as the Sexton Mountain Reservoir. In December 2013, Oak Leaf Energy Partners won a competitive request for proposal process the City conducted to select a firm to install, own and maintain a solar photovoltaic (PV) system at the Sexton Mountain Reservoir.

INFORMATION FOR CONSIDERATION:

Oak Leaf Energy Partners is one of the leading solar energy companies currently operating in the United States, both in terms of installed capacity and the portfolio of projects under development. The firm was founded in 2005 and acts as the lead developer in concert with large tax equity investors and solar PV technology manufacturers to deploy commercial and utility scale renewable energy projects. Over the last five years, the firm has collectively financed, constructed, operated and/or maintained over 40,000 kW of solar projects, including six projects at water and wastewater treatment plants.

Oak Leaf Energy Partners proposes to build a commercial scale (413.522 kW) PV array at the City's Sexton Mountain Reservoir to produce approximately 497,000 kWh of energy in the first year. The firm will construct the PV power system using SolarWorld panels and Advanced Energy inverters, two companies with substantial

operations in Oregon. Local electricians, apprentices, and materials handlers will install the panel array. As a part of the construction of the PV system, Oak Leaf will install and maintain a fence around the system's perimeter and install and maintain an internet-based solar electricity monitoring system that will allow the general public to remotely monitor, analyze and view historical and live solar electricity data through the City's website.

If Council accepts the proposal by adopting the attached Resolution, the City will grant Oak Leaf access to approximately 2.1 acres of the Sexton Mountain Reservoir site for construction and maintenance purposes under the terms of the proposed lease. The lease is for a term of 20 years, plus an additional five years upon the parties' mutual agreement, unless and until terminated earlier. Oak Leaf will pay rent for use of the property in the form of a nominal amount of cash (\$5 per year for 20 years, prepaid) and the discharging of its obligation under the lease to finance, permit, procure, construct, operate, insure and maintain the PV power system and related site improvements at no cost to the City.

In a separate power purchase agreement (PPA), the City will agree to buy for the next 20 years (subject to annual appropriations) all of the solar energy produced by the reservoir's PV array to offset electricity use onsite at the Sexton Mountain Reservoir. The PPA will renew for an additional five years if the lease is extended as well. The purchase price per kWh for the electricity produced from the array for 20 years is set forth in Exhibit 1. The PPA provides that the purchase price for the electricity will be \$0.0683/kWh for the first year, which is below the current price of electricity supplied by an electric utility. The price of the electricity produced by the PV array will escalate at a rate of two percent annually for 20 years, which is below the expected 2.2% annual price increase in electricity prices supplied by electric utilities over the same period. The City estimates it will save approximately \$95,599 in electricity cost over the 20-year term of the PPA (Exhibit 3).

The PPA also provides the City with a call option to purchase the entire Sexton Mountain Reservoir PV energy facility on the agreement's sixth, tenth and fifteenth anniversary. The exercise price for each option year is set forth in Exhibit 2. If the City purchases the facility, the lease will terminate and the electricity generated by the PV system can be consumed by the City at no cost, but the responsibility to operate and maintain the PV system becomes the City's responsibility. Those operation and maintenance costs include physical maintenance (including inverter replacement, which can be costly) and monitoring, as well as financial aspects such as insurance.

The PPA also establishes an annual "Termination Value" for the system if the agreement should terminate by means other than a buyout. The termination values are set forth in Exhibit 2.

The City has agreed to pay \$24,700 to Oak Leaf to offset the cost of the company's construction of a fence around reservoir and PV system. By doing so, the City keeps the PPA electricity rate lower after the 20 to 25 year term of the PPA. If the City did not reimburse Oak Leaf for the cost of the fence, the City would, in essence, be taking out a 20 year loan to pay for the fence at an estimated cost of \$54,831.

If the City does not exercise an option to purchase the system by the end of the PPA in year 20, the City can purchase the system at fair market value, negotiate to extend the PPA for an additional five years, or order Oak Leaf at its own expense to remove the system and restore the property to its current condition.

Taken together, the proposed lease and PPA offer the City a long-term, reliable supply of clean electricity and the potential for significant savings on its electricity costs. If authorization to enter into the lease and related power purchase agreement is granted, the Sexton Mountain Reservoir PV energy facility is expected to be producing electricity on or before May 22, 2014, the commencement deadline date set by the Energy Trust of Oregon in connection with its reservation of incentive funding of \$355,421 for the project.

RESOLUTION NO. 4217

**A RESOLUTION AUTHORIZING THE MAYOR TO SIGN
A GROUND LEASE WITH OAK LEAF ENERGY PARTNERS OHIO, LLC
FOR LAND LOCATED AT, ON OR NEAR
THE SEXTON MOUNTAIN RESERVOIR**

WHEREAS, the City Council has been informed of and approved the key terms and conditions provided in a ground lease relating to the lease of approximately 2.1 acres of real property located at, on or near the Sexton Mountain Reservoir located near the 8500 Block of SW Murray Boulevard, in Beaverton, Oregon; and

WHEREAS, the City Council has determined that the lease of said property to Oak Leaf Energy Partners Ohio, LLC under the terms and conditions of the referenced lease is in furtherance of the public interest; and

WHEREAS, the City Council wishes to authorize the City to enter into the ground lease agreement with Oak Leaf Energy Partners Ohio, LLC; now, therefore,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF BEAVERTON, OREGON:

The Mayor is hereby authorized and instructed to sign the ground lease agreement between the City of Beaverton and Oak Leaf Energy Partners Ohio, LLC providing substantially the same terms and conditions as described in this Resolution's associated Agenda Bill, and any other documents necessary to complete the obligations contained in the ground lease agreement.

ADOPTED by the Council this _____ day of January, 2014.

APPROVED by the Mayor this _____ day of January, 2014.

AYES: _____

NAYS: _____

ATTEST:

APPROVED:

CATHERINE JANSEN, CITY RECORDER

DENNY DOYLE, MAYOR

City of Beaverton
 Rate Schedule Under The
 Power Purchase Agreement With Oak Leaf Energy Partners of Ohio

Exhibit 1

Project Year	kWh Generated	Rate Per kWh
1	497,448	\$ 0.0683
2	495,707	\$ 0.0697
3	493,972	\$ 0.0711
4	492,243	\$ 0.0725
5	490,520	\$ 0.0739
6	488,803	\$ 0.0754
7	487,093	\$ 0.0769
8	485,388	\$ 0.0785
9	483,689	\$ 0.0800
10	481,996	\$ 0.0816
11	480,309	\$ 0.0833
12	478,628	\$ 0.0849
13	476,953	\$ 0.0866
14	475,283	\$ 0.0884
15	473,620	\$ 0.0901
16	471,962	\$ 0.0919
17	470,310	\$ 0.0938
18	468,664	\$ 0.0956
19	467,024	\$ 0.0976
20	465,389	\$ 0.0995

City of Beaverton

Exhibit 2

Schedule of Termination Values and Purchase Options
 For the Sexton Mountain Solar Array Facility Under the
 Power Purchase Agreement With Oak Leaf Energy Partners of Ohio

Year	Termination Value		Purchase Option
1	\$1,266,474		
2	\$1,158,204		
3	\$1,061,282		
4	\$963,015		
5	\$858,864		
6	\$748,912		\$748,912
7	\$722,709		
8	\$691,748		
9	\$656,079		
10	\$615,212		\$615,212
11	\$568,615		
12	\$515,706		
13	\$455,847		
14	\$388,344		
15	\$312,437		\$312,437
16	\$265,954		
17	\$231,265		
18	\$196,575		
19	\$161,885		
20	\$115,632		Fair Market Value

Color Legend

- Yellow are Figures Provided by PPA Contractor
- Green are Figures Provided by the City
- Blue is a Summation Calculation

**City of Beaverton
Estimated Savings Calculation
Through Power Purchase Agreement Pricing From Oak Leaf
2.2% PGE Utility Rate Escalator**

Exhibit 3

Construction Year 0 2014	Operational Year 1 2014	Operational Year 2 2015	Operational Year 3 2016	Operational Year 4 2017	Operational Year 5 2018	Operational Year 6 2019	Operational Year 7 2020	Operational Year 8 2021	Operational Year 9 2022	Operational Year 10 2023
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- Energy Trust of Oregon Incentive
- Estimated Production Degradation
- Estimated Annual Production
- Cumulative Annual Production
- Utility Rate Escalator
- Electric Utility Rate (current rate paid in year 1)
- PPA Rate Escalator
- PPA Rate
- City of Beaverton Savings (per kWh)
- City of Beaverton Cost Savings per year
- City of Beaverton Cumulative Cost Savings

\$ 355,421										
0.35%										
497,448	495,707	493,972	492,243	490,520	488,803	487,092	485,387	483,688	481,995	
497,448	993,155	1,487,127	1,979,370	2,469,890	2,958,693	3,445,785	3,931,172	4,414,860	4,896,855	
2.2%										
\$ 0.0750	\$ 0.0767	\$ 0.0783	\$ 0.0801	\$ 0.0818	\$ 0.0836	\$ 0.0855	\$ 0.0873	\$ 0.0893	\$ 0.0912	
2.0%										
\$ 0.0683	\$ 0.0697	\$ 0.0711	\$ 0.0725	\$ 0.0739	\$ 0.0754	\$ 0.0769	\$ 0.0785	\$ 0.0800	\$ 0.0816	
\$ 0.0067	\$ 0.0070	\$ 0.0073	\$ 0.0076	\$ 0.0079	\$ 0.0082	\$ 0.0085	\$ 0.0089	\$ 0.0092	\$ 0.0096	
\$ 3,333	\$ 3,462	\$ 3,595	\$ 3,731	\$ 3,871	\$ 4,014	\$ 4,162	\$ 4,313	\$ 4,468	\$ 4,628	
\$ 3,333	\$ 6,795	\$ 10,390	\$ 14,121	\$ 17,992	\$ 22,006	\$ 26,168	\$ 30,481	\$ 34,949	\$ 39,577	

Operational Year 11 2024	Operational Year 12 2025	Operational Year 13 2026	Operational Year 14 2027	Operational Year 15 2028	Operational Year 16 2029	Operational Year 17 2030	Operational Year 18 2031	Operational Year 19 2032	Operational Year 20 2033
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- Estimated Annual Production
- Cumulative Annual Production
- Total kWh produced over 20 years
- Utility Rate Escalator
- Electric Utility Rate (current rate paid in year 1)
- PPA Rate Escalator
- PPA Rate
- City of Beaverton Savings (per kWh)
- City of Beaverton Cost Savings per year
- City of Beaverton Cumulative Cost Savings
- City of Beaverton Total Savings 20 years

480,308	478,627	476,952	475,283	473,620	471,962	470,310	468,664	467,024	465,389
5,377,163	5,855,790	6,332,742	6,808,025	7,281,645	7,753,607	8,223,917	8,692,581	9,159,605	9,624,994
9,624,994									
\$ 0.0932	\$ 0.0953	\$ 0.0974	\$ 0.0995	\$ 0.1017	\$ 0.1040	\$ 0.1062	\$ 0.1086	\$ 0.1110	\$ 0.1134
\$ 0.0833	\$ 0.0849	\$ 0.0866	\$ 0.0884	\$ 0.0901	\$ 0.0919	\$ 0.0938	\$ 0.0956	\$ 0.0975	\$ 0.0995
\$ 0.0100	\$ 0.0104	\$ 0.0108	\$ 0.0112	\$ 0.0116	\$ 0.0120	\$ 0.0125	\$ 0.0129	\$ 0.0134	\$ 0.0139
\$ 4,791	\$ 4,959	\$ 5,132	\$ 5,309	\$ 5,490	\$ 5,676	\$ 5,867	\$ 6,063	\$ 6,264	\$ 6,471
\$ 44,368	\$ 49,327	\$ 54,459	\$ 59,768	\$ 65,258	\$ 70,934	\$ 76,801	\$ 82,864	\$ 89,128	\$ 95,599
\$ 95,599									