

Jefferson County
Board of Commissioners
Agenda Request

To: Board of Commissioners
Philip Morley, County Administrator

From: Frank Gifford, Public Works Director *FG*

Agenda Date: March 4, 2013

Subject: Hoh Shop Equipment Shed Project-
Incentive Agreement with Clallam County PUD
County Project No.: 180 543 1858

Statement of Issue:

Execution of the Incentive Agreement with the Clallam County PUD.

Analysis/Strategic Goals/Pro's & Con's:

This Agreement will secure payment of a cash incentive from the Clallam County PUD. This incentive program is in association with the Electrical Improvements project work for this facility carried out in the Fall of 2012. This funding is incentive for the energy saving lighting retrofit at the Hoh Shop.

Fiscal Impact/Cost Benefit Analysis:

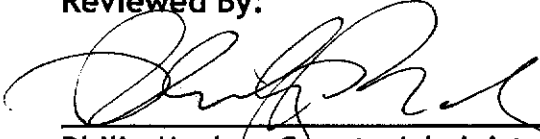
Clallam County PUD has proposed an incentive amount of \$3,360.00.

Recommendation:

We recommend that this Agreement for Incentive funding be signed by the BoCC. Please sign and return three originals to Public Works, Clallam County PUD will then execute the Agreement. We will return one fully executed original to your office.

Department Contact: Gordon D. Ramstrom, Architectural Projects Planner, 385-9160

Reviewed By:



Philip Morley, County Administrator

2/27/13

Date

CLALLAM COUNTY PUD COMMERCIAL/AGRICULTURE/INDUSTRIAL
CONSERVATION IMPLEMENTATION AGREEMENT

This agreement is entered into this **23rd day of August, 2012**, between the Public Utility District No. 1 of Clallam County, (hereafter referred to as "District") and **Jefferson County Public Works** (hereafter referred to as "owner or legally authorized representative") of building located at **5632 Upper Hoh Road in Forks, Washington.**

REPRESENTATION

WHEREAS, the District participates in the Conservation Acquisition Agreement Commercial and Industrial Lighting Offer (CAA C&ILO) Program for Commercial and Industrial Lighting and has adopted a policy to obtain cost-effective resources including energy conservation in order to meet future customer electric energy requirements; and participate in regional conservation programs with the Bonneville Power Administration.

WHEREAS, the Facility Owner is the owner or leaseholder authorized to physically improve the facility at **5632 Upper Hoh Road in Forks, Washington.**

THEREFORE, the District and the Facility Owner agree as follows:

AGREEMENTS

In consideration of the above representations and the following covenants and conditions, the parties agree as follows:

1. **Scope of Work.** The participant shall install all the lighting measure, designated in Exhibit A within the facility at the above described location, in accordance with all the CAA C&ILO Rebate Specification and Requirements described in **Exhibit A, B, C, D, E and F.** Failure to meet all specifications and requirements may result in a reduction elimination of incentives.
2. **Award of Funds.** Upon installation of the Conservation measures by the Owner or its contractor and inspection and approval by the District, the District agrees to award to the Facility Owner **\$3,360 or 70% of the retrofit cost, whichever is less, upon approval of said installation by the District.** This award is subject to the program Acquisition Payment limits described in **Exhibit A, B and C.**
3. **Use of Billing Information.** Owner agrees to allow the District to provide monthly electrical billing information to BPA or its contractors for evaluation purposes for a period of two (2) years following occupancy of the building and for the twelve (12) months prior to measure installation for existing buildings. Should this billing information not be releasable without tenant approval following occupancy, Facility Owner further agrees to allow the District to request from those tenants that the monthly electrical billing information for their spaces be supplied to BPA or its contractors for the same consecutive time period.
4. **Evaluation of Program.** The Participant agrees to assist the District in evaluating the benefits of the program. This may include but is not limited to follow-up visits at the facility.
5. **Energy Savings Verification.** The Participant agrees to allow the District access to the facility to inspect all installed Measures to ensure that they are installed correctly and that the Measures meet the program requirements.

6. **Disclaimer.** Participant acknowledges that, due to the variability of energy use, it is not possible to accurately predict energy savings and that by providing information in good faith concerning the benefits of the energy savings strategies and by entering into this Agreement, the District does not warrant energy savings.
7. **Acknowledgement.** The Participant acknowledges that District did in no way influence the choice of specific brands of equipment; therefore, the owner is solely responsible for the quality, performance, and durability of said equipment.
8. **Hold Harmless.** The Participant hereby agrees, on behalf of himself/herself and/or his/her company, corporate officers, employees, agents, assignees, and successors of interest, to hold harmless, indemnify, and defend, the BPA, the District, and their officials, employees, agents and assigns, from and against any and all actions, causes of action, claims, damages, and costs arising out of, or in any way connected with, the provision of design and financial assistance for the building identified above.
9. **Codes and Permits.** The Owner agrees to secure permits and comply with all applicable federal, state, and local codes and requirements in the design and installation of all energy efficiency measures. Where permits are required, installation must be approved by appropriate building officials. The Building Owner agrees to maintain compliance documents in their files and to have them available for review if requested.
10. **Environmental Requirements.** The Building Owner and their contractors or agents acting on their behalf, agree to comply with environmental requirements, including PCB Ballast disposal, Historic Preservation, Ventilation, and other items described therein.
11. **Legal Authority.** By signature below, the undersigned hereby acknowledges that he is the Building Owner or authorized representative.
12. **Completion Date.** The installation of the lighting measures shall be completed by the **31st day of March, 2013**. If installation is not completed by this date this Agreement shall terminate unless otherwise mutually agreed to in writing.

O. Mattias Järvegren
 Public Utility District
 No. 1 of Clallam County
 P.O. Box 1090
 Port Angeles, WA 98362

**Building Owner or
 Legally Authorized Representative**
 Jefferson County **PUBLIC WORKS**
 623 Sheridan Street
 Port Townsend, WA 98368
 (360) 385-9380

By: _____

JEFFERSON COUNTY PUBLIC WORKS

Check to be issued to?

Date: _____

91-6001322

Federal Tax ID No.

Incorporated? Yes No

Approved as to form only:

David Almey 2/20/13

 Jefferson Co. Prosecutor's Office

 Authorized Signature

Date: _____

Exhibit A

Line Number	Space	Annual Hours	Equipment		Performance Metrics					Incentive Details						
			Quantity	Equipment	kWh/year - Adjusted for HVAC	kW	Watts/ fixture	Lumens	Lumens/ W	Name	Amount	Total Incentive(\$)				
DEEMED MEASURES																
1	Shop	1,304	Baseline	3	T12 4ft - Bi-Pin/Standard Lamp, w/Magnetic Ballast - 34 Watts - 2 Lamps	Baseline	321	0.2	82	11,604	47	A2	\$50	\$150		
			Proposed	3	New-Fixtures - T8 4ft High-Performance - HP Lamp, w/ Normal Light Output Ballast - 32 Watts - 2 Lamps	Proposed	215	0.2	55	15,550	94					
			Controls		[no controls]	Savings or Percent Increase	106	0.1		34%	100%				\$0	\$0
			Notes, Existing Notes, Proposed													
2	Shop	1,304	Baseline	14	T12 8ft - 8ft HO/High-Output Lamp, w/Magnetic Ballast - 110 Watts - 2 Lamps	Baseline	4,599	3.5	252	188,046	53	K2	\$80	\$1,440		
			Proposed	18	New-Fixtures - T8 4ft High-Performance - HP Lamp, w/ Normal Light Output Ballast - 32 Watts - 4 Lamps	Proposed	2,511	1.9	107	181,044	94					
			Controls		[no controls]	Savings or Percent Increase	2,088	1.6		-4%	76%				\$0	\$0
			Notes, Existing Notes, Proposed													
3	Office	1,304	Baseline	4	T12 4ft - Bi-Pin/Standard Lamp, w/Energy-efficient Ballast - 40 Watts - 2 Lamps	Baseline	459	0.4	88	19,471	55	A2	\$50	\$200		
			Proposed	4	New-Fixtures - T8 4ft High-Performance - HP Lamp, w/ Normal Light Output Ballast - 32 Watts - 2 Lamps	Proposed	287	0.2	55	20,733	94					
			Controls		[no controls]	Savings or Percent Increase	172	0.1		6%	70%				\$0	\$0
			Notes, Existing Notes, Proposed													
4	Exterior	4,380	Baseline	4	HID - (HPS, MH & MV) - Mercury Vapor Magnetic Ballast - 100 Watts - 1 Lamp	Baseline	2,190	0.5	125	10,400	21	C1	\$40	\$160		
			Proposed	4	New-Fixtures - CFL & Cold Cathode - Hard-Wired - 42 Watts -	Proposed	753	0.2	43	10,760	63					
			Controls		[no controls]	Savings or Percent Increase	1,437	0.3		3%	201%				\$0	\$0
			Notes, Existing Notes, Proposed													
5	Exterior	4,380	Baseline	2	Incandescent - Reflector Lamp - 75 Watts - 1 Lamp	Baseline	657	0.2	75	1,404	9	C1	\$40	\$40		
			Proposed	1	New-Fixtures - CFL & Cold Cathode - Hard-Wired - 26 Watts -	Proposed	118	0.0	27	1,440	53					
			Controls		[no controls]	Savings or Percent Increase	539	0.1		3%	470%				\$0	\$0
			Notes, Existing Notes, Proposed													
NON-STANDARD MEASURES																
1		0	Baseline	0	- - Watts - Lamps	Baseline	0	0.0	0	0	0		\$0	\$0		
			Proposed	0	- - - Watts - Lamps	Proposed	0	0.0	0							
			Controls		[no controls]	Savings or Percent Increase	0	0.0							\$0	\$0
			Notes, Existing Notes, Proposed													
ADDITIONAL MEASURES																
1																
2																

Exhibit B

Line Number	Space	Annual Hours	Equipment		Performance Metrics					Incentive Details						
			Quantity	Equipment	kWh/year - Adjusted for HVAC	kW	Watts/ fixture	Lumens	Lumens/ W	Name	Amount	Total Incentive(\$)				
DEEMED MEASURES																
1	Equipment shed	1,304	Space Type Industrial - Automotive Facility		Baseline	3,989	3.1	0	0	0	H1	\$120	\$1,680			
			Proposed	14	New Fixtures - T8 4ft High-Performance - HP Lamp, w/ Normal Light Output Ballast - 28 Watts - 4 Lamps	Proposed	1,734	1.3	95	126,255				95		
			Controls		[no controls]	Savings or Percent Increase	2,255	1.7							\$0	\$0
			Notes, Existing													
Notes, Proposed																
NON-STANDARD MEASURES																
1		0	Space Type -		Baseline	0	0.0	0	0	0		\$0	\$0			
			Proposed	0	- - - Watts - Lamps	Proposed	0	0.0	0							
			Controls		[no controls]	Savings or Percent Increase	0	0.0							\$0	\$0
			Notes, Existing													
Notes, Proposed																
ADDITIONAL MEASURES																
1																
2																

Exhibit C

Total Incentive

Total incentive from Exhibit A -	\$1,950.00
Total Incentive from Exhibit B -	\$1,680.00
Total incentive -	\$3,630.00

Exhibit D
PROGRAM REQUIREMENTS FOR MEASURES IN EXISTING FACILITIES

1. GENERAL PROGRAM REQUIREMENTS

- (a) The facility where the Lighting Measures are installed shall be nonresidential and served by the District.
- (b) The total incentive shall not exceed 70 percent of the total project cost.
- (c) All projects must reduce the affected calculated energy use by 25 percent or greater, where:

$$\text{Percent Watt Reduction} = 100 \times (\text{Input Watts of Installed Lighting} \times \text{Operating Hours}) \div (\text{Input Watts of Removed Lighting} \times \text{Operating Hours}).$$

- (d) All Ballasts and Luminaires shall be UL rated.
- (e) **Ballast Warranty:** All electronic Ballasts shall be warranted against defects in material and workmanship for a minimum of three years, except for those Ballasts listed under sections 5(a), 5(b), and 5(l) of this Project which shall be warranted for five years. The warranty shall include either a 10-dollar replacement labor allowance or complete replacement including labor by an agent of the manufacturer.
- (f) **Lamp Warranty:** Lamps shall be warranted against defects in material and workmanship for two years. The warranty shall provide for replacement Lamps.
- (g) **Compact Fluorescent Light Warranty:** CFLs shall be warranted for at least one year, or for the manufacturer's stated life of the CFL.
- (h) All Ballasts shall be capable of starting the Lamps at the appropriate ambient (surrounding) temperatures. Examples of such ambient temperatures include indoor heated, indoor non-heated, normal outdoor, and cold climate outdoor.
- (i) The owner shall ensure that all materials, including Polychlorinated Biphenyls (PCB) Ballasts are disposed of, or recycled, in accordance with current environmental laws.

2. INDIVIDUAL MEASURE REQUIREMENTS

- (a) **High Performance T8 Fluorescent Lamps and Electronic Ballasts**
 - (1) This Measure can be installed as part of a Retrofit or included as part of a new Fixture.
 - (2) This Measure must replace a T12 Fluorescent, T8 De-Lamp, incandescent, Mercury Vapor lighting, standard T8.

- (A) a CRI equal to or greater than 80;
 - (B) a Lumen Maintenance equal to or greater than 90 percent;
 - (C) a Lamp life equal to or greater than 20,000 hours; and
 - (D) any 4-foot F32T8 (Fluorescent 32 watt T8) Lamps shall have initial output equal to or greater than 2,800 Lumens.
- (5) Lamp/Ballast combinations shall have an Efficacy of equal to or greater than 80 Lumens per watt.

Lamp/Ballast Efficacy = (Initial Lamp Lumens × No. of Lamps × Ballast Factor) ÷ Ballast Input Watts.

(c) Hardwired Compact Fluorescent

- (1) This Measure includes both Hardwired Compact Fluorescent Fixtures and Retrofits.
- (2) The Ballast input watts shall be from 7 to 99 watts.
- (3) This Measure must replace existing incandescent or Mercury Vapor lighting.
- (4) Any Hard-wired Retrofits must remove the existing screw-in Lamp sockets. Recessed Fixtures must include a reflector designed for the new Lamp.
- (5) Lamps shall have:
 - (A) a CRI equal to or greater than 80;
 - (B) a Lumen Maintenance equal to or greater than 80 percent; and
 - (C) a Lamp life equal to or greater than 10,000 hours.
- (6) Ballasts shall have:
 - (A) a power factor equal to or greater than 90 percent;
 - (B) a THD less than or equal to 33 percent;
 - (C) a Lamp current crest factor of less than or equal to 1.7, Class A sound rated; and

Where ENERGY STAR® specifications do not apply, substitutions may be allowed with prior written approval from BPA.

(f) **LED or Cold Cathode Signs**

- (1) This Measure includes new LEDs or Cold Cathode signs.
- (2) This Measure must be a Retrofit or replace an existing incandescent or neon sign.
- (3) The new signs must meet the ENERGY STAR® specifications for energy efficiency. These specifications are located on the EPA Energy Star website located at:

http://www.energystar.gov/index.cfm?c=lighting_pr_lighting

- (4) The input power must be less than 5 watts per face.

(g) **Induction Lamp Luminaire**

- (1) This Measure shall be new, however, in some cases, high-quality Fixtures may be retrofitted. Such Fixtures shall be heat tested to ensure that the Retrofit configuration is within the manufacturer's required temperature range.
- (2) This Measure must replace existing incandescent or Mercury Vapor lighting.
- (3) The Lamps shall have:
 - (A) a CRI equal to or greater than 80; and
 - (B) a Lamp life equal to or greater than 80,000 hours.

(h) **High-Output Fluorescent Luminaire**

- (1) This Measure is a Luminaire that may include new T5, T8, or long twin-tube PL. The Lamps can be either standard or high-output Lamps. The Luminaire must be either 4-foot or 8-foot in length.
- (2) The Ballast input watts shall be from 85 to 600.
- (3) This Measure must replace:
 - (A) T12 Fluorescent/magnetic Ballasts;
 - (B) Mercury Vapor;

- (3) The infrared sensors shall require an unobstructed view of targeted motion.
- (4) All sensors shall be tuned after installation for proper coverage, sensitivity, and time delay.
- (5) The timers and the occupancy sensors shall be rated for the controlled wattage.
- (6) The timer may be either electronic or mechanical.

(k) **High Output Fluorescent Retrofit**

- (1) High Output or Very High Output T12 Fluorescent equipment shall be retrofitted with T8 High Output Lamps and Ballasts. This Measure does not require a new Fixture. The Lamps and the Ballasts shall be new.
- (2) The input watts of the existing Luminaire shall be greater than 200 watts.
- (3) The Lamps shall have:
 - (A) a CRI equal to or greater than 80;
 - (B) a Lumen Maintenance equal to or greater than 90 percent; and
 - (C) a Lamp life equal to or greater than 18,000 hours at existing conditions.
- (4) Lamp/Ballast combination shall have an Efficacy of greater than 80 Lumens per watt.

(l) **Very High Output Retrofit with T5 Lamps and Ballasts**

- (1) Very High Output Fluorescent Lamps (T12) equipment shall be retrofitted with T5 Lamps and Ballasts. This Measure does not require a new Fixture. The Lamps and the Ballasts shall be new. This Measure is to be installed only for applications where the Lumen output must be equivalent to the Lumen output of the existing equipment.
- (2) The input watts of the existing Fixture shall be greater than 400 watts.
- (3) The Lamps shall have:

- (f) All Ballasts shall be capable of starting the Lamps at the appropriate ambient (surrounding) temperatures. Examples of such ambient temperatures include indoor heated, indoor non-heated, normal outdoor, and cold climate outdoor.

6. REQUIREMENTS FOR LIGHTING MEASURES IN NEW FACILITIES

The owner shall follow the procedures and requirements below to receive reimbursement from the District.

- (a) **High Performance T8 Fluorescent Lamps and Electronic Ballasts**
This Measure shall include a High Performance 48" T8 Lamp and ballast system listed on the Consortium for Energy Efficiency (CEE) qualifying products list. The specifications for this Measure are those stated in section 2(a).
- (b) **High Bay T8 or T5 Fluorescent Fixture**
This Measure shall include T5 Fixtures with 3 or more Lamps or T8 Fixtures that have 4 Lamps or more. These Fixtures shall be installed in a high bay area with a minimum ceiling height of 15 feet. The specifications for this Measure are those stated in section 2(h).
- (c) **Sensor or Timer Control of Fluorescent**
Sensors required by code are not eligible for reimbursement. Sensors or Times shall control a minimum of 120 Watt connected load. The specifications for this Measure are those stated in section 2(j).
- (d) **Stairwell Fluorescent Fixture**
Fixtures shall be specifically designed for stairwell lighting. Fixtures shall be Bi-level with occupancy sensor control.
- (e) **Ceramic Metal Halide (Hard-Wired)**
Hard-wired Fixtures shall be reimbursed per Lamp. The specifications for this Measure are those stated in section 2(d).

7. ENERGY SAVINGS VERIFICATION

- (a) The owner shall allow the District and Bonneville Power Administration to inspect all installed Measures to ensure that they are installed correctly and that the Measures meet the program requirements.
- (b) The owner shall submit Cut Sheets for any equipment installed under this Conservation Implementation Agreement.
- (c) The owner shall submit an invoice for labor and lighting equipment installed.

8. MEASURE LIFE

- (a) The Measure life for all Measures under this project is 10.

Exhibit E
PROGRAM REQUIREMENTS FOR MEASURES IN NEW FACILITIES

(a) High Performance T8 Fluorescent Lamps and Electronic Ballasts

This Measure shall include a High Performance 48" T8 Lamp and ballast system listed on the Consortium for Energy Efficiency (CEE) qualifying products list. The specifications for this Measure are those stated in section 5(a).

(b) High Bay T8 or T5 Fluorescent Fixture

This Measure shall include T5 Fixtures with 3 or more Lamps or T8 Fixtures that have 4 Lamps or more. These Fixtures shall be installed in a high bay area with a minimum ceiling height of 15 feet. The specifications for this Measure are those stated in section 5(h).

(c) Sensor or Timer Control of Fluorescent

Sensors required by code are not eligible for reimbursement. Sensors or Times shall control a minimum of 120 Watt connected load. The specifications for this Measure are those stated in section 5(j).

(d) Stairwell Fluorescent Fixture

Fixtures shall be specifically designed for stairwell lighting. Fixtures shall be Bi-level with occupancy sensor control.

(e) Ceramic Metal Halide (Hard-Wired)

Hard-wired Fixtures shall be reimbursed per Lamp. The specifications for this Measure are those stated in section 5(d).

Exhibit F

DEFINITIONS

- (a) **Ballast** is an electrical device used with Fluorescent or High Intensity Discharge Lamps to supply sufficient voltage to start and operate the Lamp(s) as well as to regulate the current to the Lamp(s) during operation.
- (b) **Bi-level Control** is the ability to switch from low light level to full light level via a manual switch or sensor control.
- (c) **Cold Cathode** is an electric-discharge Lamp whose mode of operation is that of a glow discharge. Neon lights are an example of a Cold Cathode Lamp.
- (d) **Color Rendering Index or CRI** is a measurement of a Lamp's ability to render colors accurately. The scale ranges from 0 to 100. A Lamp with a CRI of 80 and above is considered to be a high quality light source.
- (e) **Compact Fluorescent Lamp or CFL** is a smaller version of a Fluorescent Lamp. A CFL can screw into a regular light bulb socket or can plug into a small lighting Fixture.
- (f) **Cut Sheet** refers to the manufacturer's written technical descriptions of specific lighting equipment (Lamp, Ballast, reflector, etc.). The Cut Sheet is also referred to as a "tech sheet."
- (g) **De-Lamp or De-Lamping** refers to the removal of one or more Lamps from a Fixture or a Luminaire as part of a Retrofit.
- (h) **Efficacy** is a measure of a light source's efficiency and is described in terms of Lumens per watt.
- (i) **Fixture** refers to lighting equipment that is permanently attached or securely fixed in place. A Fixture consists of the housing but may include the Lamps and Ballasts as well. Fixtures screwed together (adjacent to each other) can be considered as separate Fixtures.
- (j) **Fluorescent** is a lighting technology that produces light by exciting organic phosphor material on the inner wall of a glass tube or bulb.
- (k) **Hard-wired Fixtures** are new Fixtures that have Plug-In Lamp sockets instead of screw-in Lamp sockets making it impossible to screw in an incandescent bulb.
- (l) **High Intensity Discharge or HID** is a light source that produces light by creating an arc of electricity across two electrodes. Types of HIDs include Mercury Vapor, High-Pressure Sodium, and Metal Halide Lamps.

- (z) **Plug-In Lamp or PL** designates a snap or plug-in Fluorescent Lamp as opposed to a screw-in type Lamp.
- (aa) **Probe-Start** refers to the typical method for starting a Metal Halide bulb. Probe-Start is less efficient than the pulse-start method.
- (bb) **Retrofit** means the installation of new Lamps and Ballasts in existing Fixtures. In some cases, reflectors may be added and old lenses may be replaced.
- (cc) **T5s, T8s, and T12s** are Fluorescent tubes that are 5/8 inch in diameter, 1 inch in diameter, and 1-1/2 inches in diameter, respectively.
- (dd) **Total Harmonic Distortion or THD** is a measure of how close the wave form of an electronic device is to a perfect sine curve. THD is expressed as a percentage. The higher the percentage of THD, the higher the distortion level. A THD percentage of 20 percent or less is considered a low distortion level. A device that creates a high distortion can reduce the expected life of such equipment, and in some instances reduce the expected life of surrounding equipment.
- (ee) **Very High Output Fluorescent Lamps** are Fluorescent Lamps that are designed to have significantly higher Lumen output than standard Lamps. The Ballasts overdrive these Lamps to the point where they are inefficient and have short lives. These Lamps are targeted for Retrofit or in some cases the entire Fixture replaced.
- (ff) **Underwriters Laboratory or UL** is an independent laboratory that evaluates products primarily for safety. A UL label or rating indicates a measure of safety.