



Energy Efficiency Incentive Programs and Opportunities

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During our short time together we will . . .

- Review utility incentives:
 - Looking beyond just the lighting fixture for incentives
 - Custom programs
 - How you can maximize your incentive
- Overview of LED technology
- Review cost effectiveness
- How easy it is to apply for incentives



ASK QUESTIONS ANYTIME



Why invest in energy efficiency?

An interesting angle to think of energy efficiency:
How much more product/service do you need to sell to make up for the energy you could save?

Example (cost savings/% margin)

- Lighting upgrade yields \$1,000 annual utility cost savings
- Company has a 5% profit margin
- How much product sales volume is required to create \$1,000 “profit”?
- **Answer:** $\$1,000 / 0.05 = \$20,000$

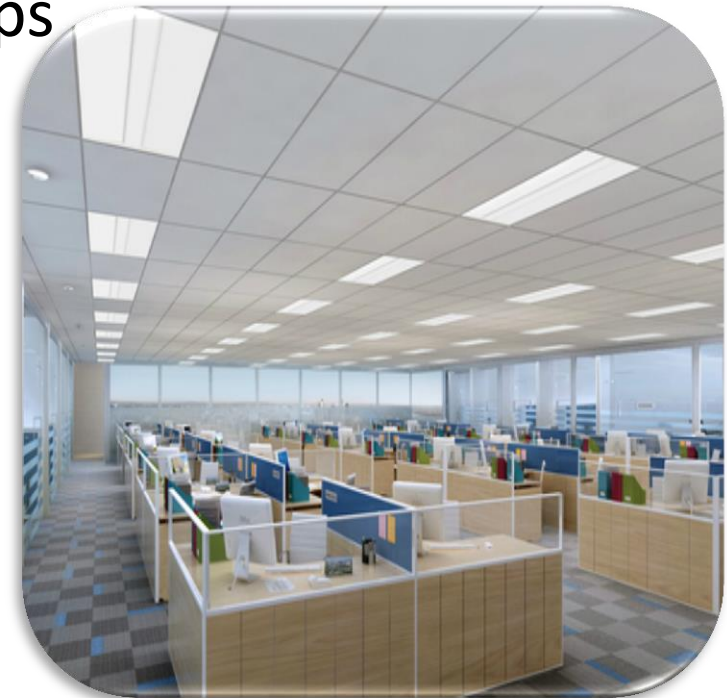




Changes are coming quickly

- Dept. of Energy: T12 phase out
- Codes: Becoming stricter
- Use of controls: Increasing
- Technology improvements: Moving rapidly
- More options: Lighting, ballast and lamps

Utility Incentives follow these changes





**“But, we already have efficient T8’s
in our facility?”**

Type of T8	Wattage	Lumens “horse power”	Burn hours	
First Generation	32	2,800	20,000	
Second Generation	32	3,100	60,000	
The next Generation	28	2,800	80,000	
The “now” Generation 😊	25	2,400	80,000	

Incremental efficiencies available



What to look for . . .

- High hours of operation
- High intensity discharge (HID), T12 's
- First generation T8's, Incandescent
- Activity levels
- Where is the light going now?
- Where should it be going?
- Light levels vs. code
- Can you take advantage of natural light?
- Don't forget your exterior lighting

Ask utility for help to identify





Which technology is best to use?

The push and pull between LED and Incumbent technologies

Which one do I choose
and what about utility
incentives?



Electronic High Intensity Discharge

- Electronic HID runs cooler
- Hours of operation: ~ 36,000 hours
- Dimmable to 50% for bi-level operation with occupancy sensors
- Not good for complete on/off cycles: restrike
- Lower upfront cost
- Higher maintenance
- Higher wattage load
- Steep *lumen* (horse power) depreciation!



Incentive amounts are reducing from utility for retrofit

Linear Fluorescent T8 or T5

- Longer lamp life lamps: 60,000 hours +
- Dimmer friendly
- On/off cycle friendly: Unless cold environment with sealed units.
- Dual lamp operation for bi-level
- Good quality of light
- Upfront cost are competitive
- Fixture mount occupancy sensors



Good incentives available!

LED

- Longer life: 50,000 to 100,000 hours
- Dimmer friendly
- Great for on/off cycles
- Great for cold environments
- Runs cooler than most other sources
- Full brightness
- Dimming or fade
- Up front costs are still a bit higher



Incentive options are increasing

Lighting Controls

If you turn it off, you're saving energy

Look for ways to turn fixtures off

Automatic Controls:

- Occupancy sensors
- Relay panels with astronomical clock
- Daylight sensors
- Wireless controls
- Energy management systems



Added utility incentives for controls



Green Lights Program

Partner with County Green Biz Certification program

Program Basics:

- It is voluntary
- \$1.50 per 100 kWh “block”
- Supports REC in Pacific NW
- Contract with Bonneville
- Environmental Foundation
- Funds the Solar 4R Schools program locally

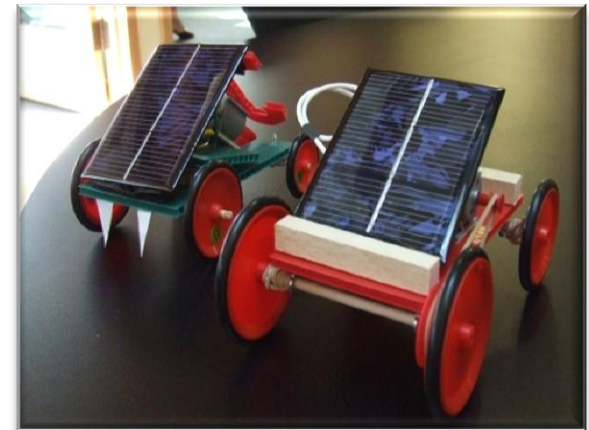




Solar 4R Schools Program

What does the program offer?

- Partner - Bonneville Environmental Foundation
- Schools apply for grant
- Photovoltaic installation
- Real-time data
- Classroom curriculum
- School website
- Teacher training
- Science kits
- Engaged students



Solar 4R Schools – Installations



Heritage High School's Solar Student Club cut the ceremonial ribbon for the solar PV installation.



Hayes Freedom High School



Hela High School

- Projects coming soon:
 - Crestline Elementary
 - Hudson's Bay High School

Custom Projects and Commercial Lighting Incentive Program (CLIP)

- Easy to participate
- Incentive: Up to 50% of project costs
- Utility support throughout
- Contractor partnership
- Independent verification
- Direct incentive to you
- Audit assistance



Participation process

1. **Identify the energy savings opportunity!**
2. Submit the project details
3. If lighting: Schedule a lighting audit with a licensed contractor. Pre-installation audit determines potential energy savings.
4. Following project approval from the utility, complete install of lighting or other equipment.
5. After installation, an itemized invoice sent to the utility.
6. A post-installation walk through completed by utility
7. Your incentive check is processed for you
Well, maybe not that many zeros . . .





Take away snippets

- Incentive programs are a **partnerships** in energy efficiency
- Utilize your support at Clark Public Utilities!
- Quality control : Make sure it's been tested and approved for incentive
- Use LED where **applicable**, not just because it's LED
- Go beyond just simple payback. Include non-energy benefits in analysis:
 - Reduced maintenance costs
 - Employee and product benefits

Consider: What is it costing you to wait?





Thank you
Any questions?

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