

# Technology and Strategies for Energy Efficiency Programs

Tom DuBos  
APOGEE Interactive, Inc.



*Wyoming Utility Efficiency Exchange  
Casper, WY*      *March 5-6, 2009*



# APOGEE...

- Leading provider of online solutions for Energy Industry
- Founded in 1993, Headquarters in Atlanta
- Clients include more than **300** utilities:
  - Southern Co, Duke, Entergy, AEP, E.ON, Westar
  - Nashville, CPS, SMUD, SRP, Riverside, Tacoma
  - And associations: **EEI, APPA, NRECA**
- Certified as Woman Owned Business



# Executing an Online Strategy

- Attracting users to the website
- Connecting them to the applications
- Engaging them once they're there
- Connecting the dots to your programs
- Tracking results for your reporting



# How to make it Work

**Total Website Traffic**

**External Promotions**

**Total Traffic to Efficiency applications**

**Positioning, linking**

**Visitors who complete applications**

**Simple and engaging applications**

**Visitors who take the next step, taking action**

**Provide links to action items**

**Actions you can track and measure**

**Sign in, Surveys, rebates**





- ▶ Home
- ▶ Our Company
- ▶ Contact Us
- ▶ Residential Customers
- ▶ Commercial Customers
- ▶ Energy Saving Tips
- ▶ Safety
- ▶ CLFP News/Newsletters
- ▶ Investor Relations
- ▶ BHCorporation News
- ▶ Job Opportunities
- ▶ About BHCorp
- ▶ Pay My Bill
- ▶ Customer ToolBox
- ▶ Search Cheyenne

## Cheyenne Light, Fuel & Power

Welcome to Cheyenne Light, Fuel & Power Company, a subsidiary of Black Hills Corporation, is primarily engaged in the purchase, transmission, distribution and sale of electricity and natural gas. We service approximately 80,000 residents in more than 1,200 square miles of certificated territory in southeast Wyoming including the city of Cheyenne and the towns of Pine Bluff, Burns and Carpenter.

[Pay my bill - Click Here](#)

Save money and help the environment.  
Energy efficiency... It takes ALL of us.

**Cheyenne Light**  
Fuel & Power

**Customer Toolbox**

With the Customer Toolbox, You Can...

- ✓ View Your Current Balance
- ✓ Pay Your Bill Online
- ✓ Enroll in Convenient Payment Plans
- ✓ Take Customer Surveys

[Click Here](#)

Save money this winter...

**Click here to perform a free online home energy audit!**

Search



[Customer Info Book](#)

Take the ENERGY STAR  
**Change a Light**

User Information:

### Energy Assistance

Learn about two programs, LIEAP and Energy Share, that can offer you financial assistance in paying your bills.



[Customer Tool Box - Click Here](#)

[CLFP Brochure Library - Click Here](#)

**Energy Efficiency Incentives Program**  
Put money in the bank with Energy Efficiency Incentives from Cheyenne Light! [Click Here](#)



Take the ENERGY STAR



# Customer Applications

What can they do when they visit your website?



# Give them Information

HomeEnergySuite™



INTERACTIVE HOUSE CALCULATORS LIBRARY VENDORS FUN WATER

HOME ENERGY APPLIANCE LIGHTING

## Existing Home

Instructions

<a href="#">Home Type</a>	Single Story	Electric	<a href="#">Water Heat Type</a>
<a href="#">Year Home Built</a>	New Energy Efficient	Medium	<a href="#">Water Heat Setting</a>
<a href="#">SqFt Heat/Cool</a>	2000	Average	<a href="#">Air Leaks</a>
<a href="#">Occupants</a>	2	Double Pane	<a href="#">Windows (panes)</a>
<a href="#">Heat Type</a>	Propane	Electric	<a href="#">Cooking</a>
<a href="#">Heat Setting</a>	72	Electric	<a href="#">Dishwasher</a>
<a href="#">Cooling</a>	Electric	Electric	<a href="#">Clothes Washer</a>
<a href="#">Cool Setting</a>	75	Electric	<a href="#">Clothes Dryer</a>
<a href="#">Big Screen TVs</a>	0	1	<a href="#">Refrigerators</a>

Pool [Show](#)

Spa [Show](#)

[Calculate](#) [View Annual](#) [View Monthly](#) [View Report](#) [Compare Months](#)

[Your Recommended Changes](#)

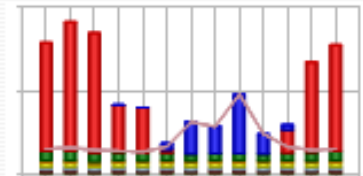
### Tips

This calculator will provide you with estimates of energy use costs based on your inputs. The **Annual** and **Monthly** results are not intended to be extremely accurate, but rather to provide a

### Your Approximate Energy Costs

#### Existing Home

	Annual	Monthly
Electricity	\$1,031	\$86
Non-Electric	\$1,316	\$110
<b>Base Total</b>	<b>\$2,347</b>	<b>\$196</b>
<b>Carbon</b>	<b>14.1 Tons</b>	<b>1.2 Tons</b>
EPA Score	0.7	



[Start Over](#)

# Make it Easy

HomeEnergySuite™



http://www.isitdoneyet.net/homesuite/calcs/rescalc...

## Energy Savings Recommendations

The following are recommended actions based on your home profile as you described it:

- **Cooling Setting:** If you raise your cooling setpoint from 75 to 78, you could save as much as \$131 a year.
- **Heating Setting:** If you lower your heating setpoint from 72 to 68, you could save as much as \$342 a year.
- **Weatherize your Home:** If you caulk around your windows and doors, make certain the weather stripping on your doors and windows is tight, weather strip your attic door, and take other actions to seal your house further, you could save up to \$113 a year.
- **Compact Fluorescent:** If you changed out 50% of the light bulbs in your house you use most often and replace them with compact fluorescent bulbs, you could save up to \$41 a year.
- **Energy Star®:** If you changed out the major appliances in your house to Energy Star®, you could save up to \$71 a year.
- **Heating System Upgrade:** If your heating system is more than 15 years old or if for some other reason you are considering replacing your heating system, you could save up to \$797 a year by upgrading to a high-efficiency heat pump.

**Customize your Recommendations:** You can go back to the calculator, make changes to your profile, and run the calculator again to directly see the benefit of making those changes compared with your existing home profile.

Print Recommendations

Close this window and return to the Calculator

VENDORS FUN WATER

Instructions

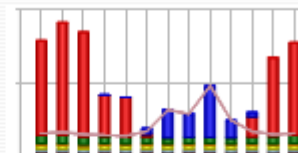
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EPA Score	0.7	



Start Over

View Report

Compare Months

Pages

...ive of the Atlanta, GA area.

Done

Internet

Apogee Interactive, Inc. Terms & Conditions

# Target Your Programs

## Base House

<a href="#">Home Type</a>	Single Story	▼	Electric	▼	<a href="#">Water Heat Type</a>
Year Home Built	1980 to 1989	▼	High	▼	<a href="#">Water Heat Setting</a>
SqFt Heat/Cool	2000		Average	▼	<a href="#">Air Leaks</a>
Occupants	2		Triple Pane	▼	<a href="#">Windows (panes)</a>
<a href="#">Heat Type</a>	Electric	▼	Electric	▼	<a href="#">Cook Stove</a>
<a href="#">Heat Setting</a>	70		Electric	▼	<a href="#">Dishwasher</a>
<a href="#">Air Conditioner</a>	Electric	▼	Electric	▼	<a href="#">Clothes Washer</a>
<a href="#">Cool Setting</a>	75		Electric	▼	<a href="#">Clothes Dryer</a>

Calculate

View Details

View Chart

E-mail Report



Calculate Savings with a GeoExchange Home

## Your Approximate Energy Costs

### Base House

	Annual	Monthly
<a href="#">Reset</a>	\$4,262	\$355

[Clear All](#)

Change the parameters and press "Calculate" again to create **Scenarios** to compare with your **Base House**.

**Tip:** Cover outside electrical outlet edges with tape or purchase gaskets. Close and seal access doors properly. Use weatherstripping if necessary. Insulate the access door if possible.

For more energy savings tips, click [here](#).



# Linking Online Tools to Other Programs: Inhome Audits



*Wyoming Utility Efficiency Exchange  
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## How do online audits fit with in-home audits?

- Provide an alternative solution, reduce the frequency of in-home visits
- Provide a feeder stream to increase the frequency of in-home visits

**Trick Question—It's both.**



**Depends on the reason for the in-home audit:**

**For High bill audits**

- **Online audits provide a low cost, immediate way to satisfy some customers.**
- **Might make it a prerequisite to in-home visit.**

**For Energy Efficiency audits**

- **Online audits provide an excellent screen or feeder channel for these.**



Energy-Saving Home Improvements

ENERGY STAR®  
New Homes

Solar Solutions  
For Your Home



# Home Energy Analyzer

CALCULATORS LIBRARY FUN

HOME ENERGY CALCULATOR APPLIANCE CALCULATOR LIGHTING CALCULATOR

## Describe Your Home

Instructions

Tips

<b>Home Type</b>	Single Story	Electric > 1yr old	<b>Water Heat Type</b>
<b>Year Home Built</b>	1990 to Present	Medium	<b>Water Heat Setting</b>
<b>SqFt Heat/Cool</b>	1800	Average	<b>Air Leaks</b>
<b>Occupants</b>	2	Single Pane	<b>Windows (panes)</b>
<b>Heat Type</b>	Electric	Electric	<b>Cook Stove</b>
<b>Heat Setting</b>	68	Electric	<b>Dishwasher</b>
<b>Air Conditioner</b>	None	Electric	<b>Clothes Washer</b>
<b>Cool Setting</b>	75	Electric	<b>Clothes Dryer</b>
<b>Big Screen TVs</b>	0	1	<b>Refrigerators</b>
<b>Lighting</b>	All Incandescent	Pre 1993	<b>Refrigerator Type</b>

Calculate Your Base House Energy Use

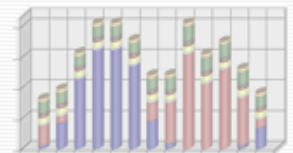
This calculator is using weather that is representative of the **Portland, OR** area.

Use this calculator to estimate your home's energy use costs and discover cost-effective, energy-efficient home improvements you can make today with Energy Trust cash incentives. See the

### Your Approximate Energy Costs

Press the "Calculate" button to establish **Your Current Estimated Costs**.

Your summary chart will be shown here.




Reset to Defaults

Take the next step and get in-home recommendations by signing up for a **FREE home energy review** online or by calling 1-866-368-7878.



## Home Energy Solutions - Existing Homes

See us in the news! 

Google™ SEARCH:

[Energy Trust Home](#) > [Home Energy Solutions](#) > [Existing Homes](#) > Evaluate Your Home

### Evaluate Your Home for Energy Savings

Energy Trust offers 3 easy ways for you to evaluate and improve your home's energy performance.

#### Online Home Energy Analyzer

- Free!
- Easy
- 5 – 10 minutes

**You receive:**

- Energy-saving tips
- A calculation of your home's carbon footprint

[Start now!](#)

#### Home Energy Review

- Free!
- In-home
- Led by Energy Advisor
- 1 hour

**You receive:**

- Customized action plan
- Energy-saving products

[Learn more](#)

[Schedule online now](#)

#### Home Performance with ENERGY STAR®

- Intensive
- Led by Building Performance Institute certified contractor
- Diagnostic equipment
- 3 – 4 hours
- Cost varies

**You receive:**

- Detailed action plan
- Cash incentive report

[Learn more - watch our video!](#)

# Inhome Audits

Name: <input type="text"/>	Work Order: <input type="text"/>	<input type="button" value="Search"/>
Address: <input type="text"/>	City: <input type="text"/>	State: <input type="text"/> Zip: <input type="text"/>
Cond SF: <input type="text"/>	Home Type: Split Level <input type="button" value="v"/>	Year Built: New Energy Efficient <input type="button" value="v"/>
Occupants: <input type="text"/>		

<b>Ceiling R:</b> R 38 <input type="button" value="v"/> Vap Barrier: <input type="checkbox"/> Comments: <input type="text"/>	<b>Wall R:</b> R 22 <input type="button" value="v"/> Vap Barrier: <input type="checkbox"/> Comments: <input type="text"/>	<b>Water Heater 1 Inputs</b> Type: Gas/LP <input type="button" value="v"/> Year: 1998 Efficiency: 84 Gals: 50 Comments: <input type="text"/> Temp: Low <input type="button" value="v"/>
<b>No. Doors:</b> 8 Door Type: Urethane Core <input type="button" value="v"/> Comments: <input type="text"/>	<b>% Glass:</b> 14 - 17% <input type="button" value="v"/> Glazing Type: Double Pane <input type="button" value="v"/> Comments: <input type="text"/>	<b>Water Heater 2 Inputs</b> Type: Electric <input type="button" value="v"/> Year: <input type="text"/> Efficiency: <input type="text"/> Gals: <input type="text"/> Comments: <input type="text"/> Temp: Low <input type="button" value="v"/>
<b>Floor Spec:</b> Crawl Space <input type="button" value="v"/> Floor R: 19 Vap Barrier: <input type="checkbox"/> Comments: <input type="text"/>	<b>Ducts:</b> Enclosed (uncond space) <input type="button" value="v"/> Insulation: R 4 <input type="button" value="v"/> Comments: <input type="text"/>	<b>Infiltration:</b> Poor <input type="button" value="v"/> Comments: <input type="text"/>

<b>Cooling System 1 Inputs</b> Type: Central AC - No HP <input type="button" value="v"/> Temp: 75 SEER: 10 Btuh: 45000 Year Install: 1998 % Cool: 100 Comments: <input type="text"/> <input checked="" type="checkbox"/> Thermostat Setback	<b>Heating System 1 Inputs</b> Type: Gas/LP <input type="button" value="v"/> Temp: 72 Efficiency: 90 Btuh: 50000 Year Install: 2004 % Heat: 100 Comments: <input type="text"/> <input checked="" type="checkbox"/> Thermostat Setback
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# Linking Online Tools to Other Programs: Specific Measures



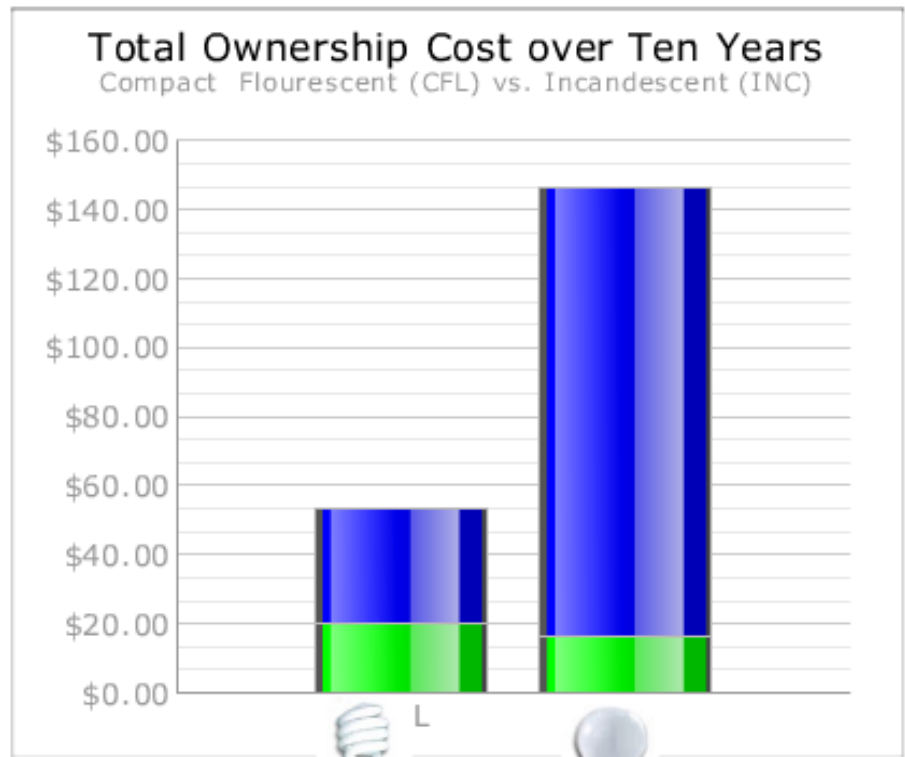
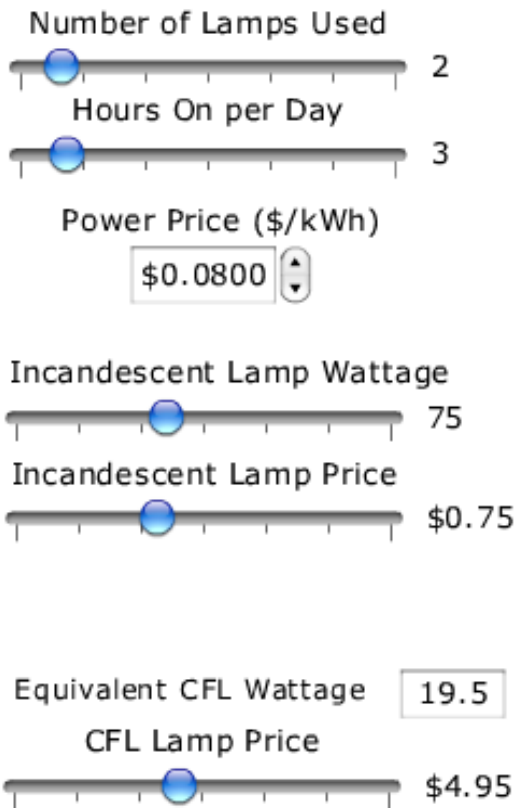
# CFL Comparison

## Compact Fluorescent Lamps (CFLs) Save Money over Incandescents!

**Total Lamp Savings!**

\$93	Your Cash
1,079	Lbs Carbon

### Indicate Your Assumptions



Energy Cost      Lamp Cost

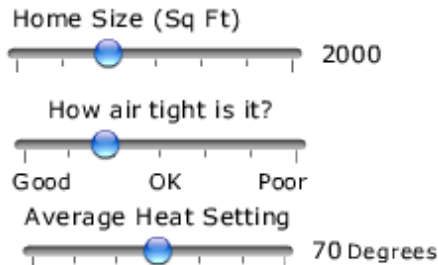
# Comparison of Heating Options

## Step 1. Describe Your Home

Select Your Home Type

Single Story

Slide the bars below to match your existing and proposed home



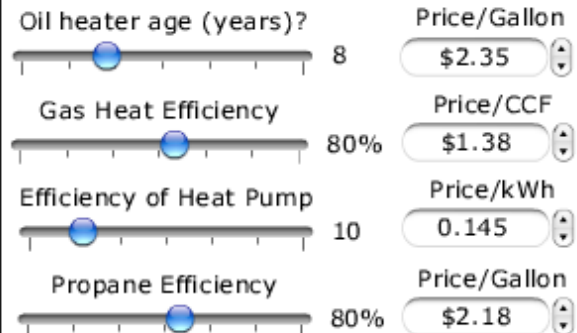
## Step 2. Current Heating Type (Highlighted on Graph)

- Heat Pump
- Natural Gas
- Oil
- Propane

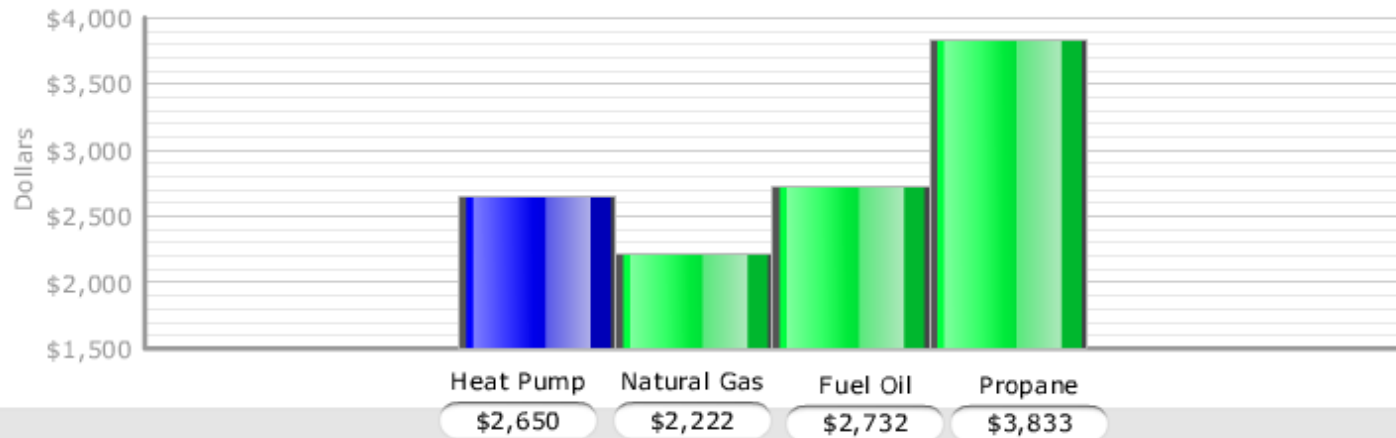


## Step 3. Description of Various Heaters

Slide the bars below to match your existing and proposed equipment (or use these defaults)



## Annual Heating Cost Comparison



Calculations are based on estimates for comparison purpose only.

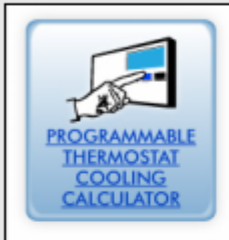
© All rights reserved 2007

**Take the Next Step!**

Convert to Natural Gas

More Ways to Save

Heat Pump Rebate Information



## How Much Can I Save Using a Programmable Thermostat?

Programmable or Setback Thermostats can help you save as much as 10% a year on your heating and cooling bills by adjusting temperature settings while you are away from home or sleeping.

**Step 1. Describe Your Home**

Select Your Home Type

Slide the bars below to match your home

Home Size (Sq Ft)

How air tight is it?  (Tight, OK, Leaky)

Setting with Standard Thermostat  (75 Degrees)

**Step 2. Adjust the Thermostat**

Adjust the times and temperatures on the programmable thermostat to the setting you would use when you are home or away, awake or asleep.

### Weekday Settings

### Weekend Settings

**Efficiency of Air Conditioning**

Older Unit  New High Efficiency Unit  **10** SEER

**Step 3. Slide the bar above to match your air conditioning efficiency number.**

**Annual Savings \$421**

Calculations are based on estimates for comparison purpose only.

**Take the Next Step!**

[Click for the perfect price plan for programmable thermostats](#)



# Time of Use Estimator

HomeEnergySuite™



**Empire Electric Association, Inc.**  
Serving Southwestern Colorado and Southeastern Utah for over 60 years  
A Touchstone Energy Cooperative

**CALCULATORS** **LIBRARY** **FUN**

HOME ENERGY CALCULATOR APPLIANCE CALCULATOR LIGHTING CALCULATOR

## Time-of-Use Savings Calculator



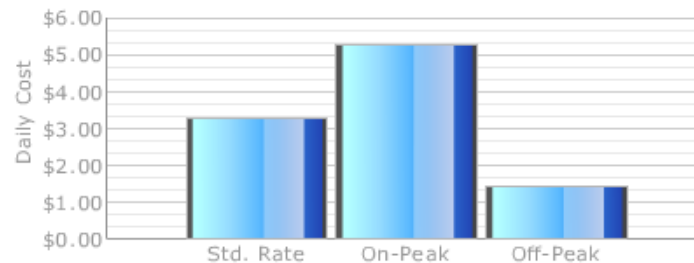
**Standard Rate**  vs. **On-Peak Rate**   
**Off-Peak Rate**

Check the items in your household to see the comparison between the standard rate, On-Peak, and Off-Peak rates.

### Appliance Selector

- Dishwasher       Heat Pump       Cooking  
 Washing Machine       Pool Pump       Water Heater  
 Clothes Dryer

### Daily Time-of-Use Rate Comparison



### Savings Potential

	Per Day	Per Month
Off-Peak Compared to Standard Rate Savings	<input type="text" value="\$1.84"/>	<input type="text" value="\$36.84"/>
Off-Peak Compared to On-Peak Savings	<input type="text" value="\$3.84"/>	<input type="text" value="\$76.75"/>

[Check out Empire Electric Association's Green Power Programs](#)



# Tracking Program Effectiveness



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INTERACTIVE HOUSE

HOME ANALYZER

LIBRARY

CALCULATORS

FUN

CUSTOMER FEEDBACK

HOME ENERGY CALCULATOR

APPLIANCE CALCULATOR

LIGHTING CALCULATOR

CFL CALCULATOR

TV CALCULATOR

SMUD is committed to providing effective tools to help our customers manage their energy use. We would like to hear your thoughts about the online energy tools website you have just visited. Please take a moment to provide your feedback. Thank you!

\* denotes a required field.

1. How did you find out about SMUD's online energy advice tools? \*

- From a SMUD representative when I called in with a question
- Through SMUD's web site www.smud.org
- Through a general online search
- From a letter or bill from SMUD
- Word of mouth (friends, family, co-workers)
- Other (please specify)

2. What were your reasons for using the SMUD's online energy advice tools? Please select all that apply. \*

- To find out how my electric bill is calculated
- To find information on how to save money
- To find information on how to save energy
- To calculate energy use for home electronics, appliances, or other home equipment
- To gain knowledge about how electricity works
- To learn about rebates SMUD offers
- To learn about SMUD programs
- To get information to teach kids about energy
- Other (please specify)

3. Did using these online energy tools resolve your inquiry? \*



# For More Information Contact:

**Tom DuBos**

208-667-8574

[tomdubos@apogee.net](mailto:tomdubos@apogee.net)

APOGEE Interactive

[www.apogee.net](http://www.apogee.net)

To see more:

Webinar April 1

**How to Drive Energy  
Efficiency Programs with  
Online Applications**



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