ENERGY AND WATER USE TRACKING

This document will help you determine your household **baseline natural gas, electricity, and water use**. These metrics will help you understand your home energy use and how your energy use changes over the course of the year. To complete this section you will need your monthly SDG&E and water **bill data for the last three months** (either hard copy or your online account using the Green Button Feature) and the **Do-It-Yourself Sustainability Toolkit – How to Calculate Your Energy Usage (pg. 9).** For the most accurate picture of your home energy use, you can look at 12 months of energy data.

Step 1: Calculate your natural gas usage

Natural Gas Usage	Bill Start Date	Bill End Date	Natural Gas Usage (therms)	Total Natural Gas Charges ($)
Bill 1				
Bill 2				
Bill 3				
Average = $\frac{(\text{Bill 1} + \text{Bill 2} + \text{Bill 3})}{3}$				

Divide your **Total Natural Gas Charges** by your **Natural Gas Usage** to calculate the **Cost Per Therm**. Tracking this month to month will help you track seasonal changes in energy costs.

$_____ ÷ _____ therms = $_____/therms

Step 2: Calculate your electricity consumption

Electricity Usage	Bill Start Date	Bill End Date	Electricity Usage (kilowatt hours)	Total Electricity Charges ($)
Bill 1				
Bill 2				
Bill 3				
Average = $\frac{(\text{Bill 1} + \text{Bill 2} + \text{Bill 3})}{3}$				

Divide **Total Electricity Charges** by your **Electricity Usage** to calculate the **cost per kilowatt hour**. Tracking this month to month will help you understand seasonal changes in energy costs. You can use the **cost per kilowatt hour** on the **Do-It-Yourself Sustainability Toolkit Calculator** sheet to calculate how much your electronic devices cost each year and potential lighting savings.

$_____÷_____kWh = $_____/kWh (cost per kilowatt hour)

ENERGY AND WATER USE

TRACKING

Step 3: Calculate your water consumption

Water Usage	Bill Start Date	Bill End Date	Water Usage (Units)	Total Water Charges ($)
Bill 1				
Bill 2				
Bill 3				
Average = $\frac{(\text{Bill 1} + \text{Bill 2} + \text{Bill 3})}{3}$				

Divide **Total Water Charges** by your **Water Usage** to calculate the **Cost Per Units**. Tracking this month to month will help you understand seasonal changes in energy use.

$_____÷_____Units = $_____/Units

DO-IT-YOURSELF SUSTAINABILITY TOOLKIT

CALCULATIONS

Follow the instructions in the **Do-It-Yourself Sustainability Toolkit** to use each tool. Use this sheet to track your current usage and potential savings.

Toolkit Device: Kill-A-Watt® Electricity Meter

Use the Kill-A-Watt® Electricity Meter tool to measure how many watts of electricity these common home devices use.
For step-by-step direction on how to use the Kill-A-Watt® tool, see page 13 of the Do-It-Yourself Sustainability Toolkit User Guide.

Electronic Device	Electricity Used (Watts)	Hours Used Per Day (hrs./day)	Days	Usage (Watt hrs./year)		Annual Electronic Device Usage Kilowatt hrs./year (kWh/yr)
Example - Computer	Standby: 65	x 20	x365 =	474,500	÷1000 =	474.5
	On: 200	x 4	x365 =	292,000	÷1000 =	292
Refrigerator	Standby:	x	x365 =		÷1000 =	
	On:	x	x365 =		÷1000 =	
Microwave	Standby:	x	x365 =		÷1000 =	
	On:	x	x365 =		÷1000 =	
Coffee Maker	Standby:	x	x365 =		÷1000 =	
	On:	x	x365 =		÷1000 =	
Television	Standby:	x	x365 =		÷1000 =	
	On:	x	x365 =		÷1000 =	
Computer/Laptop	Standby:	x	x365 =		÷1000 =	
	On:	x	x365 =		÷1000 =	
Cable Box/DVR	Standby:	x	x365 =		÷1000 =	
	On:	x	x365 =		÷1000 =	
Other:	Standby:	x	x365 =		÷1000 =	
	On:	x	x365 =		÷1000 =	
					Total Electronic Device Usage:	

Total Electronic Device Usage Electricity Cost Per kWh Annual Electronic Device Cost

_____kWh x $_____/kWh = $_____

Toolkit Device: Thermometer and Infrared Laser Thermometer

Did you install the weatherstripping and use the refrigerator thermometer included in the kit? Complete the calculations below to check your savings! **For more information on how to use this tool, refer to pages 14-15 in the Do-It-Yourself Sustainability Toolkit User Guide.**

Refrigerator Temperature Before _____° F After _____° F Install Weatherstripping - Doors Yes ____ No ____

Freezer Temperature Before _____° F After _____° F Install Weatherstripping - Windows Yes ____ No ____

DO-IT-YOURSELF SUSTAINABILITY TOOLKIT

CALCULATIONS

Toolkit Device: LED Light Bulb

Did you install the new LED bulbs included in the kit? Complete the calculations below to check your savings!

	Wattage of Old Bulb (Watts)	Wattage of New Bulb (Watts)	Watts Saved		Time Used (hours per day)	Days	Annual Savings (kilowatt hours per year)
Fixture 1			x	x		*x 365 =*	
Fixture 2			x	x		*x 365 =*	
Fixture 3			x	x		*x 365 =*	
Fixture 4			x	x		*x 365 =*	

Total Estimated Annual Electricity Savings =

= Annual Savings of Fixture 1 + Annual Savings of Fixture 2 + Annual Savings of Fixture 3 + Annual Savings of Fixture 4

Total Estimated Annual Cost Savings =

= Annual electricity savings x $/kWh (calculated in Step 2 of Tracking Energy and Water Savings Worksheet) x Total Estimated Annual Electricity Savings

Toolkit Device: Faucet Aerators

Did you install the new faucet Aerators included in the kit? Use the flow rate bag and the calculations below to check your savings!
Reference the Do-It-Yourself Sustainability Toolkit User Guide (pg. 22, 23)

	Flow Rate Before Install (gallons per minute)		Flow Rate After Install (gallons per minute)		Saved		Daily Use (minutes)	Days	Annual Savings (gallons per year)
Showerhead		-	1.5	=		x		*x 365 =*	
Faucet Aerator									
Kitchen		-	1.5	=		x		*x 365 =*	
Bathroom 1		-	0.5	=		x		*x 365 =*	
Bathroom 2		-	0.5	=		x		*x 365 =*	

Total Estimated Annual Water Savings =

= Annual Savings of Showerhead + Annual Savings of Kitchen Aerator + Annual Savings of Bathroom 1 Aerator + Annual Savings of Bathroom 2 Aerator

Total Estimated Annual Cost Savings =

= Annual Water Savings x $/unit (calculated in Step 3 of Tracking Energy and Water Savings Worksheet) x Total Annual Water Savings