



Nevada County Energy Action Plan Public Review Draft

Board of Supervisors – February 12th, 2019

Presented By: Sierra Business Council

Supported By: Pacific Gas And Electric Company



Why Prepare an Energy Action Plan?

A roadmap for the County to reduce energy:

- Weather/Energy Nexus
- Energy Needs Flexibility
- Energy Savings (kWh/\$) and Improve Local Economy
- California Regulatory Context
- Access to Funding
- Consistency with General Plan

NEVADA COUNTY
ENERGY ACTION PLAN



FEBRUARY, 2019



PREPARED BY SIERRA BUSINESS COUNCIL

SUPPORTED BY PACIFIC GAS AND ELECTRIC COMPANY (PG&E)

IN COLLABORATION WITH NEVADA COUNTY AND COMMUNITY MEMBERS

User's Guide to the Report

EAP Content and Organization

EXECUTIVE SUMMARY

Provides brief overview of the EAP

CHAPTER 1: INTRODUCTION

Discusses rationale for the EAP, climate basics, regulatory context, public outreach, and how the EAP was developed. Also describes the Nevada County community and energy efficiency efforts to date.

CHAPTER 2: COMMUNITY ENERGY USE AND FORECAST

Describes the methodology and results of the community-wide and municipal-operations energy consumption inventory for base year 2005, re-inventory year 2017, and a community-wide forecast to 2035.

CHAPTER 3: GOALS AND STRATEGIES

The 'heart' of the document that guides and informs decisions about energy by setting goals and outlining strategies that support the goals.

CHAPTER 4: IMPLEMENTATION ACTIONS

Lays out a plan for implementing the actions that will help fulfill energy goals.

APPENDICES

Contains detailed data, sources, calculation methodologies, existing programs, funding sources, and a summary of public input.

Energy Action Focus Areas

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graph LR; A[1. Energy Efficiency
2. Renewable Energy
3. Water Efficiency] --- B[Overarching Goals]; A --- C[Strategies]; A --- D[Actions];
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1. Energy Efficiency
  2. Renewable Energy
  3. Water Efficiency

Overarching Goals

Strategies

Actions

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# Public Input Summary

## Online Survey

- 83% from unincorporated Nevada County residents
- 93% homeowners, 43% over age of 65
- 70% familiar with EE practices, 15% have participated in EE measures in their home, 38% interested in a home energy audit.
- 43% have renewable energy on their property, solar ranked 1<sup>st</sup>
- 22% aware of water efficiency and water conservation programs, 57% interested in water use assessment.

## Comments from Study Session

- Residents want to save money and increase energy efficiency with outreach and financing.
  - Residents interested in renewable energy and renewable energy storage.
  - Residents interested in increasing water use efficiency through outreach and education from NID and the County for well users.
  - Focus of implementation actions should be education and outreach.
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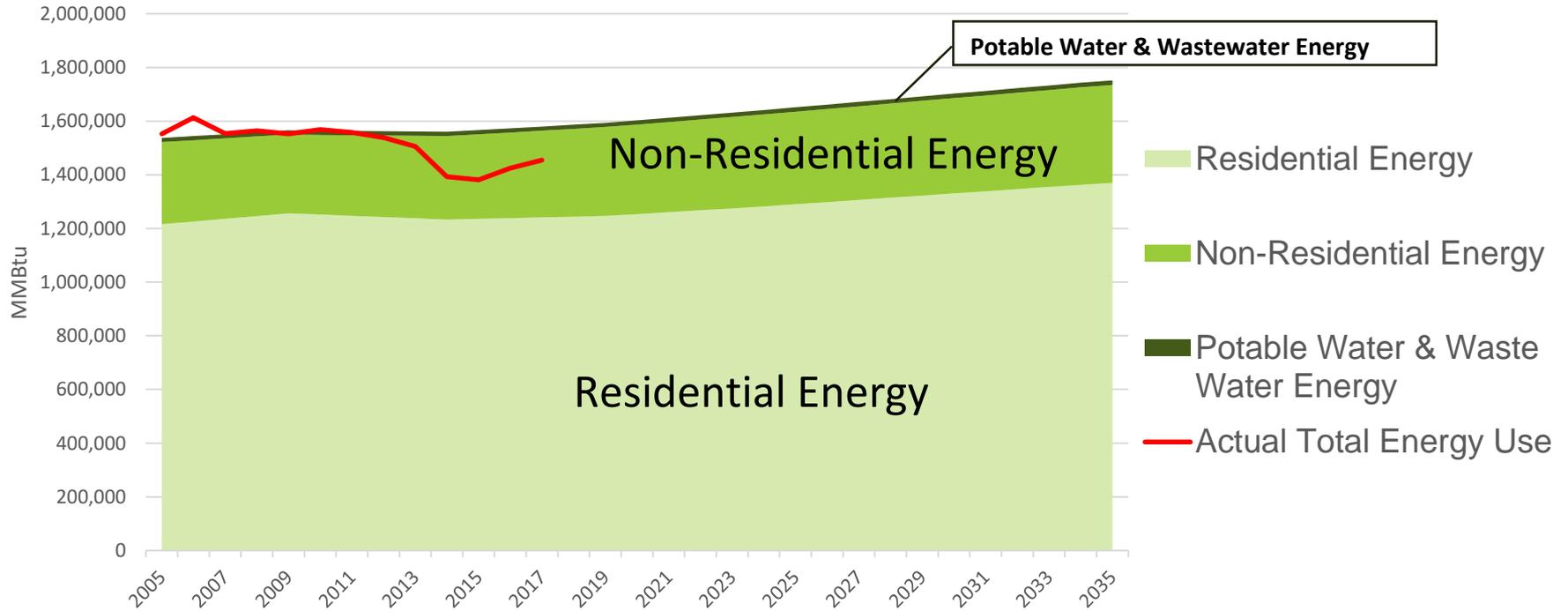
# Goal: 51% Reduction in Electricity, 30% reduction in Natural Gas from 2035 BAU Forecast

| Energy Use  | 2005 Baseline    | 2035 BAU Forecast | 2035 Potential Energy Savings | 2035 Potential Cost Savings | Percent Difference          |
|-------------|------------------|-------------------|-------------------------------|-----------------------------|-----------------------------|
| Electricity | 349,789,663 kWh  | 398,323,245 kWh   | 202,936,611 kWh               | \$45,948,490                | 51% reduction from 2035 BAU |
| Natural Gas | 3,433,874 therms | 3,924,430 therms  | 1,169,531 therms              | \$1,579,651                 | 30% reduction from 2035 BAU |

# Potential Savings by Strategy Area

| Strategy Area     |                     | 2035 Energy Savings |           | 2035 Cost Savings |             |
|-------------------|---------------------|---------------------|-----------|-------------------|-------------|
|                   |                     | kWh                 | Therms    | Electricity       | Natural Gas |
| Energy Efficiency | Existing Structures | 53,640,176          | 584,142   | \$12,145,098      | \$788,983   |
|                   | New Construction    | 10,455,542          | 69,146    | \$2,367,322       | \$93,394    |
| Renewable Energy  | Existing Structures | 112,461,968         | 262,274   | \$25,463,407      | \$354,246   |
|                   | New Construction    | 23,969,016          | 253,968   | \$5,427,015       | \$343,028   |
| Water Energy      | Existing Structures | 2,409,909           | -         | \$545,647         | -           |
| Total             |                     | 202,936,611         | 1,169,531 | \$45,948,490      | \$1,579,651 |

# Community Wide Energy Use Forecasted Out to 2035 under BAU Scenario by Sector



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## Case Study in Energy Efficiency: Foothill Mercantile *gift shop*



121 East Main Street  
Grass Valley, CA 95945  
(530) 273-8304

- Foothill Mercantile upgraded their lighting in December 2017.
  - Partnered with American Wholesale Lighting and Sierra Business Council to participate in PG&E's Direct Install Energy Efficiency Program.
  - Retrofit of 159 fixtures with T8 LED lamps, replacing fluorescent bulbs and ballasts.
  - Potential annual savings of 11,745 in annual kWhs and roughly \$2,800 on energy bills
  - Process was quick and smooth, and did not disrupt business. Noticeable difference in the store with new LED lighting.
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# Implementation

- 3 year Timeline
  - The Working Group
  - County and Working Group Responsibilities
  - Funding Opportunities and Free Resources
  - Online Interface for Information and Resources
  - Water-Energy Nexus
  - SBC and CivicSpark
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# Plan Benefits

- **Annual savings:** over 202 million kWh of electricity and 1.1 million therms of natural gas. Anticipated total dollars saved by 2035 will be over \$47 million.
  - **Options:** Meeting Energy Needs and Grid Reliability
  - **Opportunity:** Strengthen Local Economy and Spur New Business
  - **Funding Potential:** Energy Efficiency and Renewables Projects Financing
  - **Plan and Implementation Cost:** Minimize County Staff Hours and Dollars, Focus on Working Group and AmeriCorps fellowship contributions
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# Thank you!

Questions and Comments

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