

# Electric Rate Design

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- Customer Charges – flat monthly rate
- Energy Rate – flat rate vs. tiered rate
- Time of Use
- Residential Demand
- Net Billing vs. Net Metering
- Power Cost Adjustments

# Rate Goals

- Stable, able to provide adequate revenues to meet financial and operating requirements
- Fair and Reasonable
- Easy to understand, easy to administer and explainable to the customer

# Customer Charge

- Usually used to recover fixed costs of meter reading, billing, customer service, and a portion of maintenance and operations of the distribution system
- DPU only covers fixed cost of meter reading, billing and customer service

# Customer Charge

APPA recommends increasing customer charges while lowering kWh rate

- Helps stabilize revenues
- Utility surveys found that low-income customers tend to be higher energy consumption users.
- Reduces subsidy between year-round and seasonal customers
- Reduces subsidy between customers with and without solar installations

# Residential Demand Charge

- Demand charge per kW – recovers transmission and distribution costs
- Accounts for subsidies between customers
- Demand charges can also be tied to season (June-Sep) (Oct-May) based on highest hour of usage during the billing period
- Shifts the charge from how much electricity a household consumes over an entire month to the maximum electricity the household needs at a single point during the month.

# Residential Demand Explanation

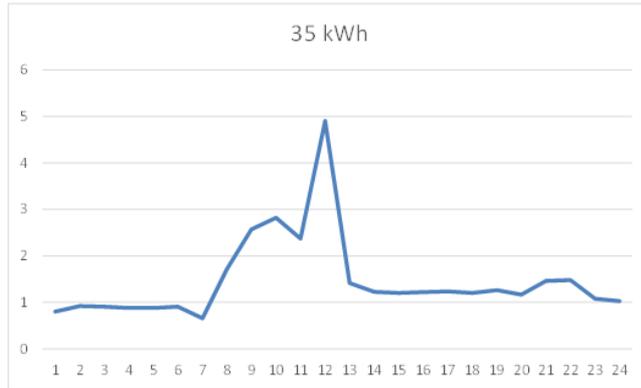
Demand charge is a variable charge that's measured in kilowatts (kW), and it's based on the intensity at which electricity is used at a given time.

Meaning, if your AC unit is running at the same time as your dishwasher, oven, dryer, or any other large electrical appliance, your electrical demand will be higher than if you were to spread out the use of those appliances throughout the day.

# Residential Demand

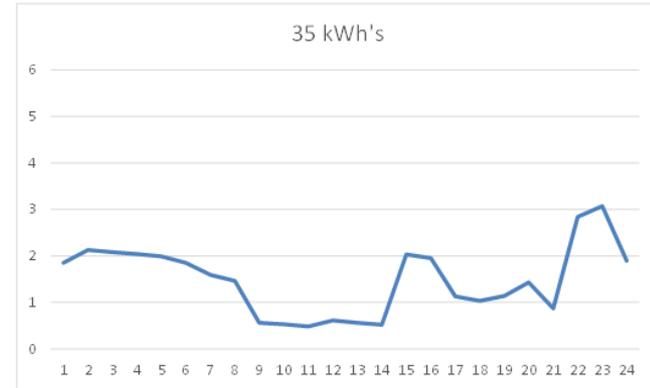
## Typical Daily Load Pattern Residential

### Customer One



Without demand charges  
both customers are charged  
the same cost

### Customer Two



Customer one is creating more  
demand and greater costs on the  
distribution system

Panel size for  
customer one and two  
could be the same or  
different

# Pricing Example for Residential Demand

## Customer One

Service Charge = \$12.50

**Demand of 5 kW x \$2/kW = \$10.00**

35 kWh x \$0.1413 = \$4.95

Total = \$27.45

## Customer Two

Service Charge = \$12.50

**Demand of 3 kW x \$2/kW = \$6.00**

35 kWh x \$0.1413 = \$4.95

Total = \$23.45

## Customer One & Two

Service Charge = \$12.50

35 kWh x \$0.16 = \$5.60

Total = \$18.10

# Time of Use - Trends

**Definition:** Time variable pricing strategy that varies electricity prices based on the time of day and season, allowing customers to pay different rates for electricity consumption during peak and off-peak periods.

**Objective:** The primary objective of TOU rates is to incentivize customers to shift their energy usage away from peak periods, resulting in more efficient and sustainable electricity consumption.

**Benefits:** improved load balancing, enhanced grid stability, impact on infrastructure and possibly lower costs for customers

**Drawback:** Disproportionally affect low-income customers who may have limited flexibility to shift their energy usage or access energy-saving technologies.

# Time of Use – Impact in Los Alamos

Los Alamos - shifting usage away from peak periods due to residential Time of Use rates will primarily have financial impacts on the Electric Distribution System maintenance, sizing and stability not on the overall cost of power.

Example: Foxtail Flats day ~\$38/MWH solar & night ~\$120/MWH battery

LANL, Sandia & Kirtland AFB have a much higher impact on hourly power purchases needs than Los Alamos County power usage.

Los Alamos County has the benefit from economies of scale for power purchase agreements, access to hydro power, etc. due to involvement in the Energy Coordination Agreement.

# Opt Out

Separate rate for those who opt out of AMI because data not available for time of use

Typically, it is a higher rate than highest time of use rate

# Power Cost Adjustment (PCA)

- Also known as Energy Cost Adjustment or Fuel Cost Adjustment
- Applied monthly, annually, quarterly or on a rolling average
- Changes in power supply and transmission costs recovered from customers without rate adjustment approval
- Allows revenues to match power costs
- Lowers utility need for cash reserves
- Electric Distribution cost of power is a monthly PCA based on DPU share of Power Pool Energy Coordination Agreement
- DPU has 12-Month rolling average for credit to solar customer for energy supplied to the Utility based on the Power Pool Energy Coordination Agreement

# Net Billing for Solar Customers

- APPA said Utilities across the country are switching to this the net billing method for solar customers
- Customer maintains the ability to utilize energy from the grid, their own generation as well as sell excess capacity to the utility.
- Utilities are encouraging battery storage capability to dampen the nighttime impact on energy supply
- Customer charged for all energy taken from local utility at retail rate
- Customer is credited for generated energy provided to the Utility at avoided cost (wholesale or cost of power)

## RECOMMENDATION BASED ON TRAINING & RESEARCH

- Residential Demand
- Increase monthly customer charge and reduce energy rate
  - (this addresses income equity issues)
- Time of Use (seasonal and 2 time blocks) after Foxtail Flats is online because currently buying majority of our power at fixed costs around the clock
- Maintain Net Billing for Solar Customers

## NEXT STEPS

- Identify a vendor for billing system
- Develop rate structure that works with billing system and accomplishes energy and electrification goals
- Proposed timeline

Electric Rate increase to Board and Council in March 2025  
(9% increase with current rate design in 10-Year Projected Budget)  
effective July 1, 2025

New Time of use and Demand Charge rates in place March 1, 2026

# Questions?

