



Energy, Demand and Dollars

One Year of Time of Day Pricing for all Residential Customers

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- Background on Time of Day (TOD) pricing in Fort Collins
- Year one results
 - Financial, energy, demand
- Communications summary
- Conclusions for beneficial electrification
- Q&A





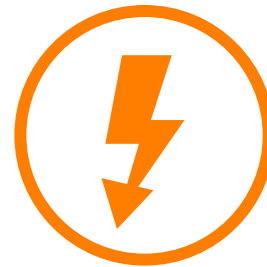
FAIR &
EQUITABLE
STRUCTURE



MORE
CUSTOMER
CONTROL



LOWER PEAK
DEMANDS &
COSTS



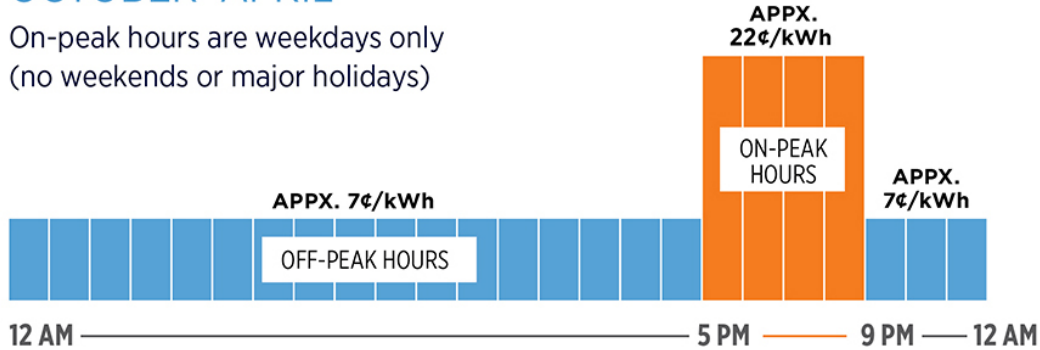
ENERGY &
CARBON
SAVINGS



ELECTRIC
VEHICLE
FRIENDLY

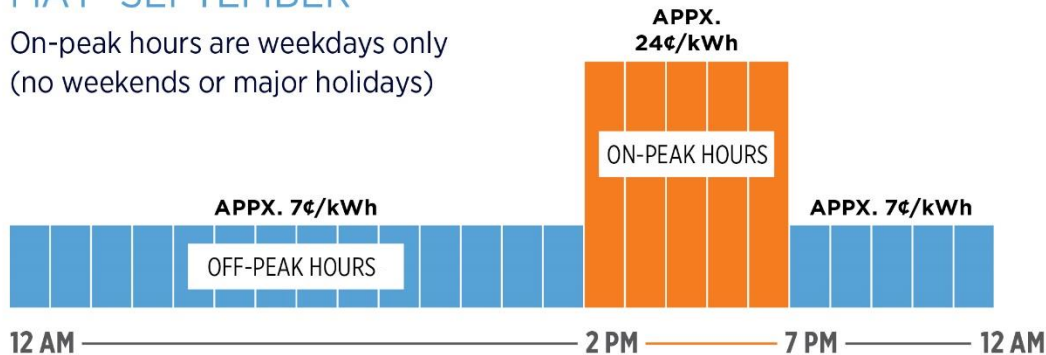
NON-SUMMER OCTOBER-APRIL

On-peak hours are weekdays only
(no weekends or major holidays)



SUMMER MAY-SEPTEMBER

On-peak hours are weekdays only
(no weekends or major holidays)

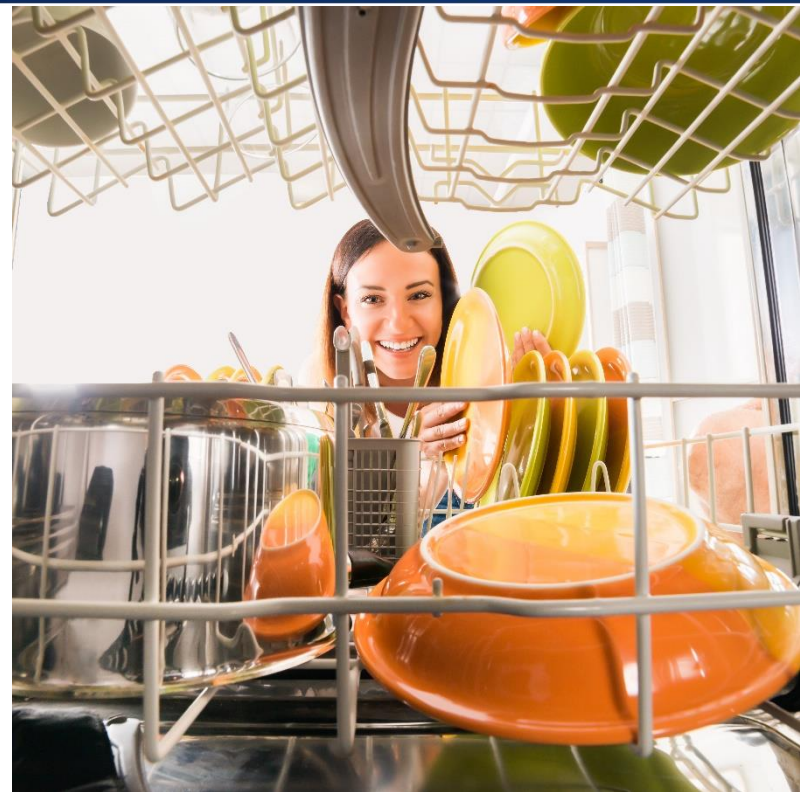


TOD Pricing Structure

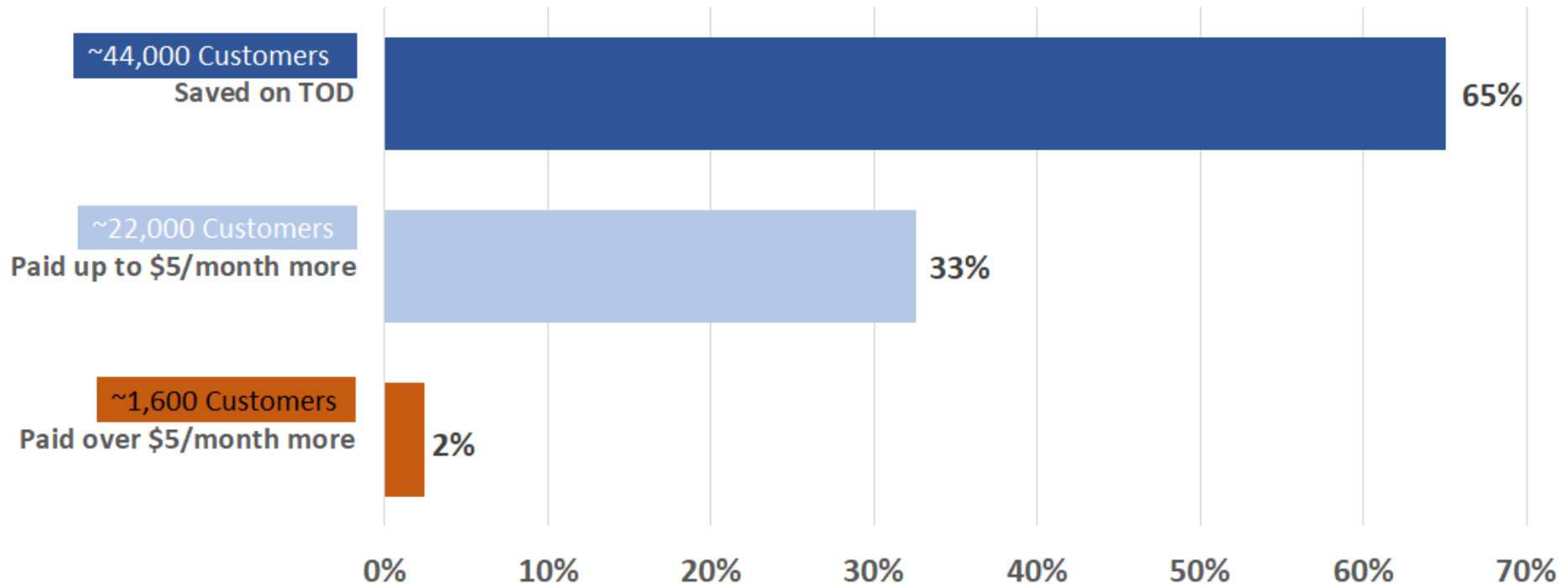
- **On-peak hours:** Monday-Friday
- **Off-peak hours:** Weekends and major holidays



- **2.3%** customer bill savings
- **\$1.54** monthly savings on average
- **~2.7%** reduction in wholesale costs
- **~3.5%** energy savings

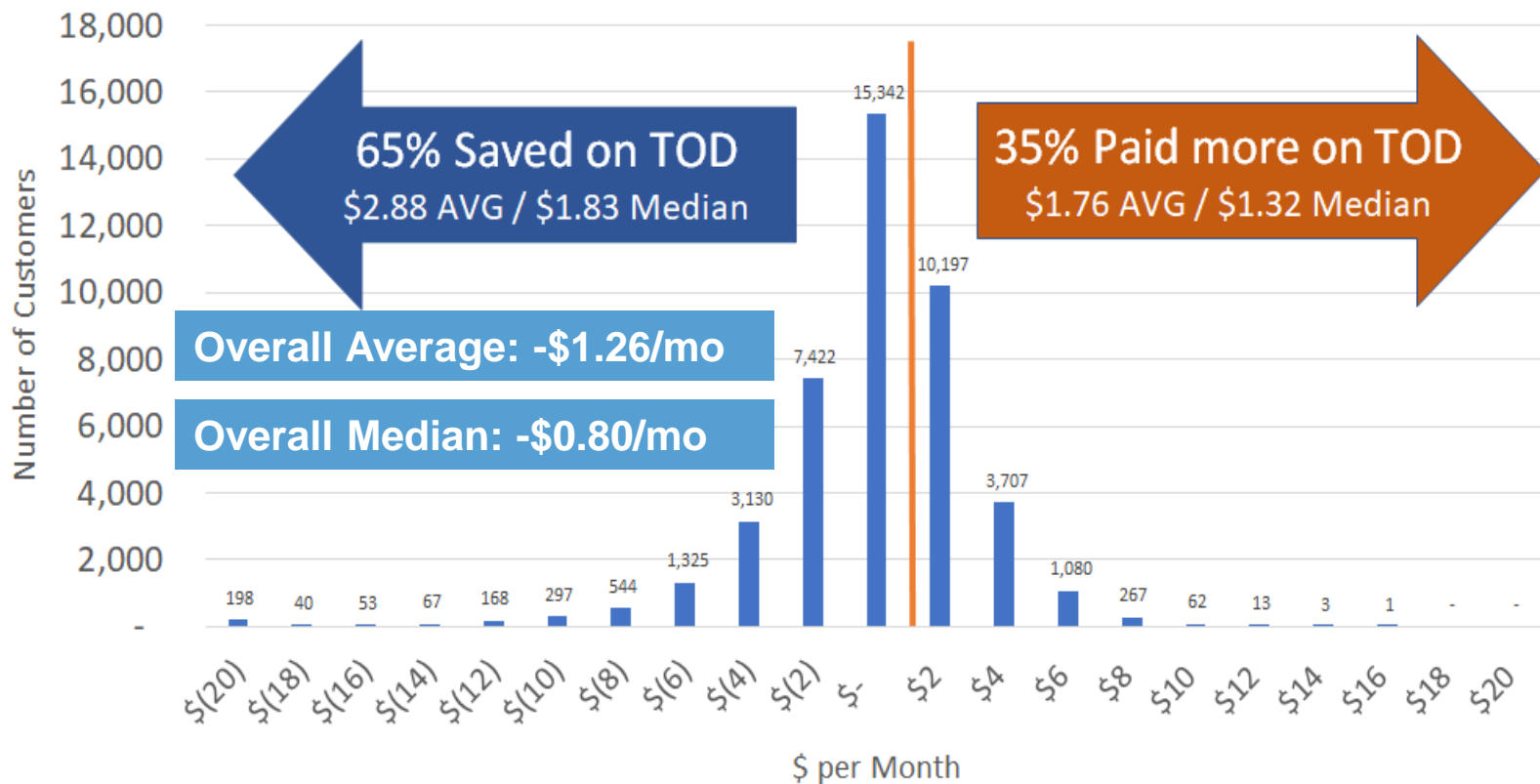


Distribution of Average Monthly Bills



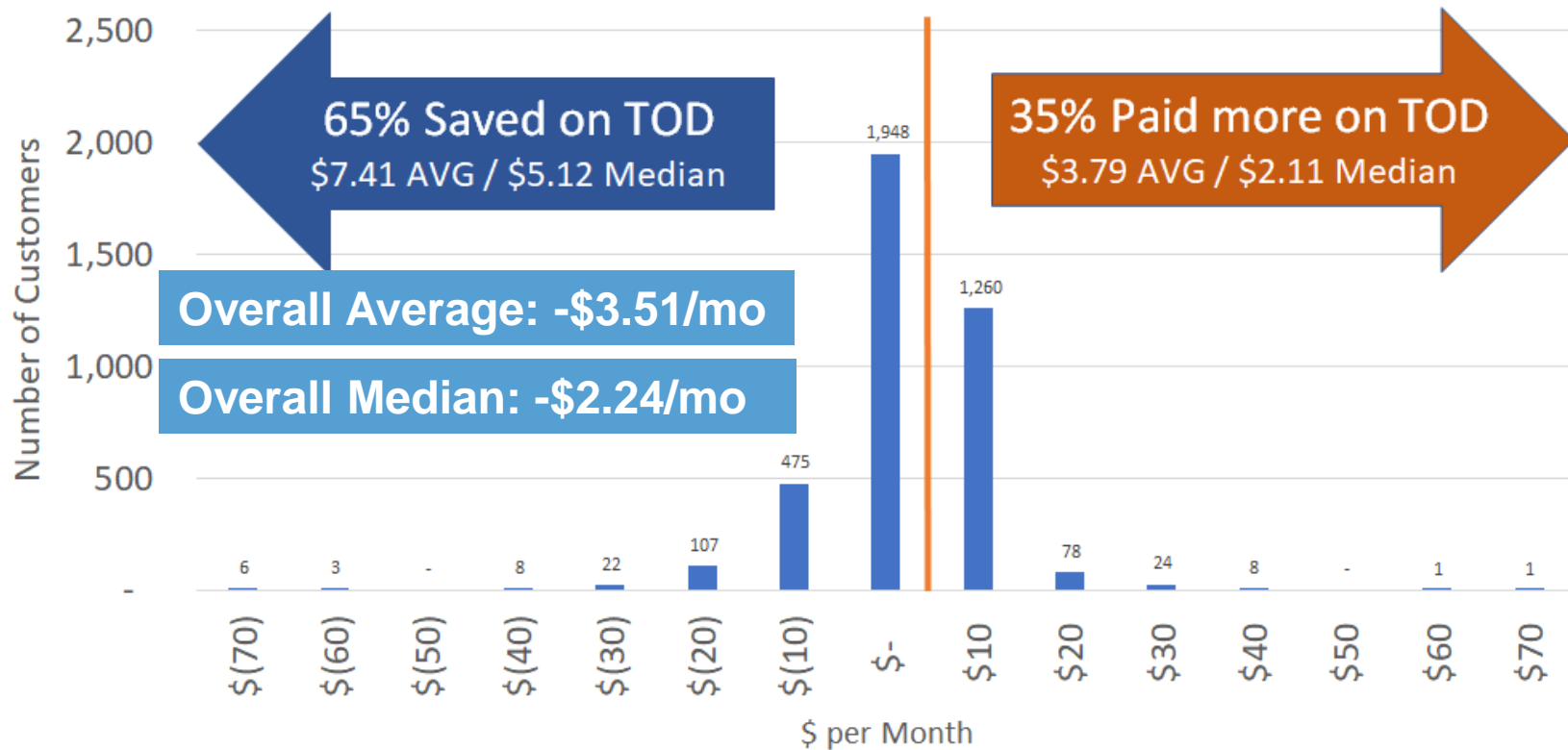
Year One Results – Gas Heated

Gas-Heated Homes



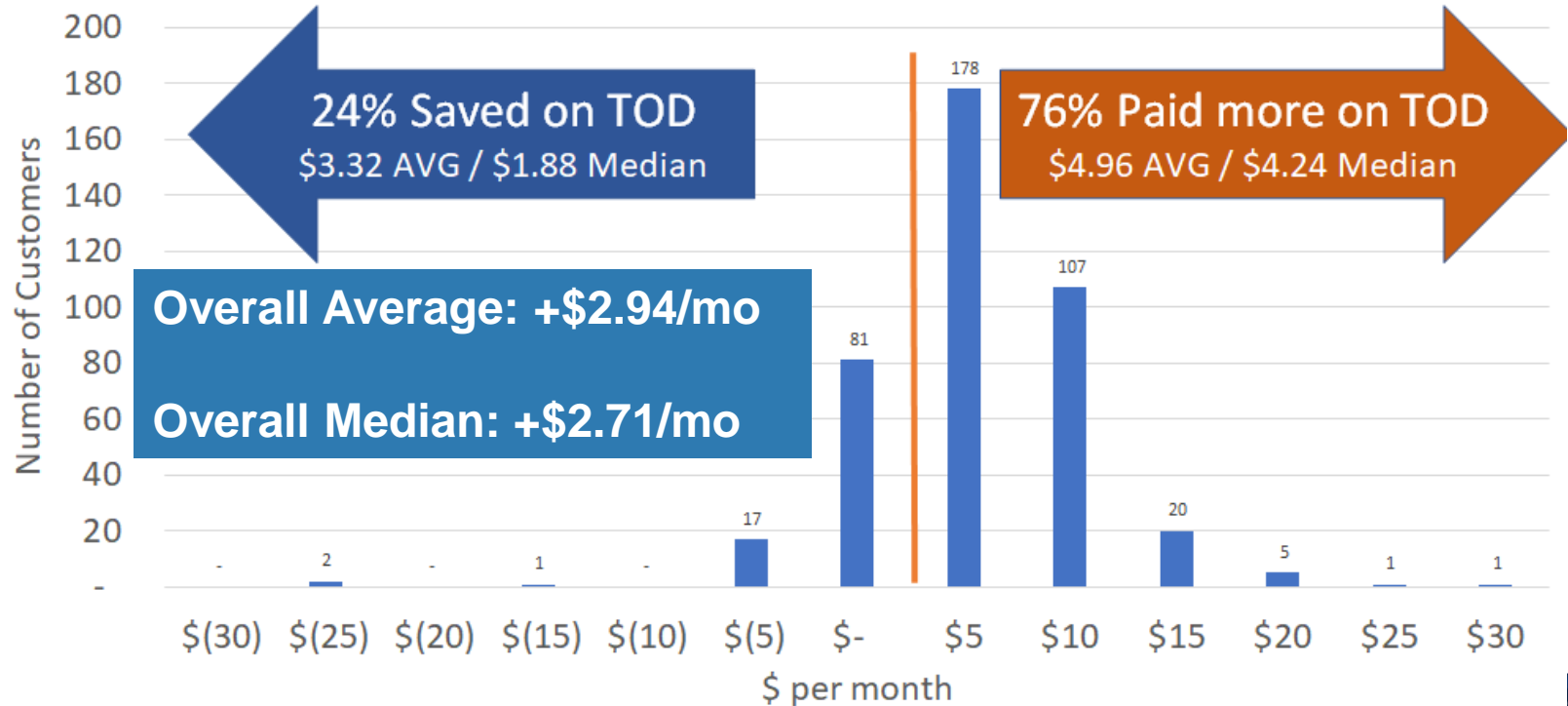
Year One Results – All Electric

All-Electric Homes



Year One Results – Solar Homes

Solar Customers (Gas-Heat)



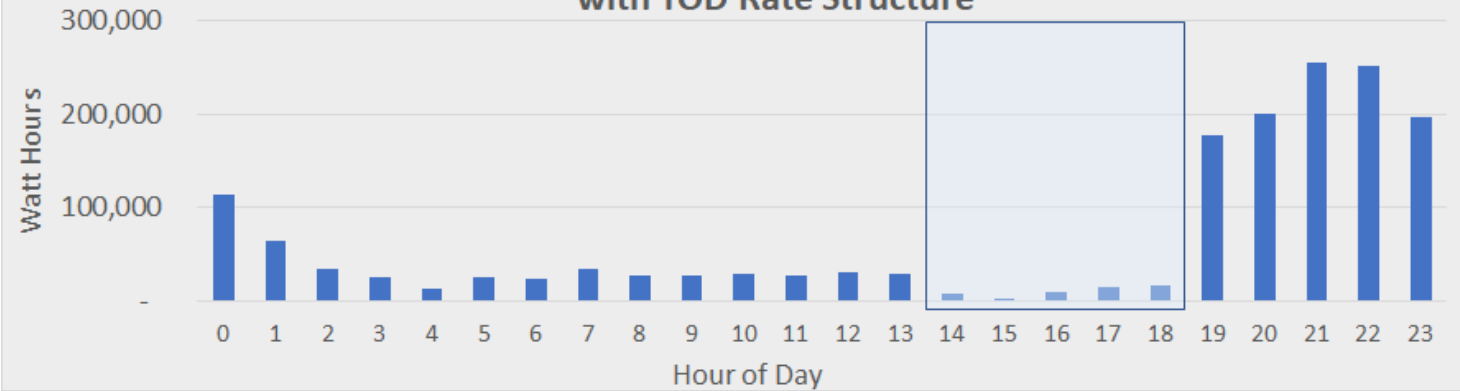
- 3.5% residential electricity savings
- 7.5% peak demand reductions
- 15,800 metric tons CO₂ avoided
 - 0.8% of community inventory
- Triple win
 - Reduced community electric bill
 - Reduced wholesale power costs
 - Significant savings for energy and carbon
- AND...



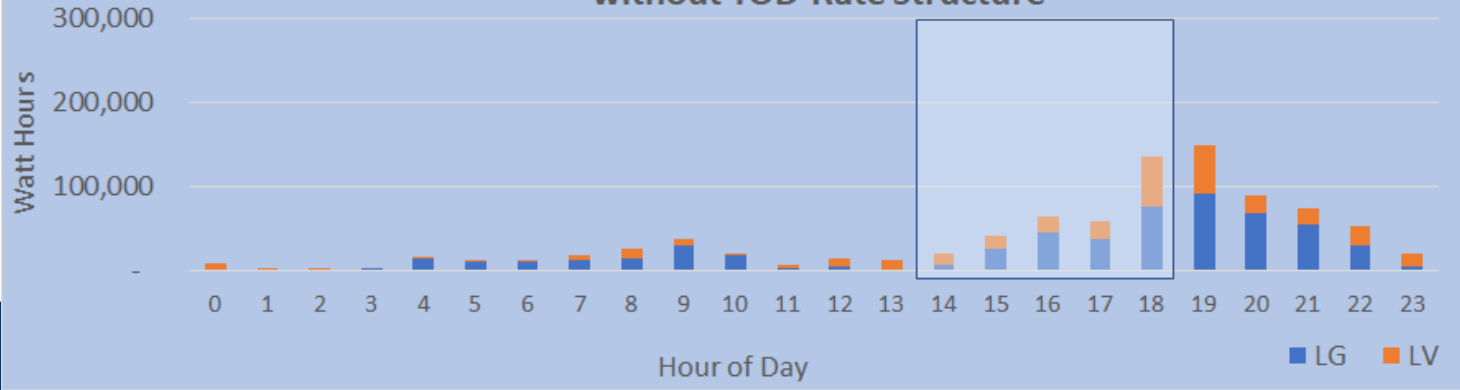
- Establishing the understanding that the price and value of electricity varies by:
 - Hour of day
 - Day of week
 - Season of year
- Examples
 - Solar
 - Air-conditioning
 - Electric vehicles
 - Electric water heating



Sample of Fort Collins EV Charging by Hour (Summer Month) with TOD Rate Structure



Sample of Loveland & Longmont EV Charging by Hour (Summer Month) without TOD Rate Structure

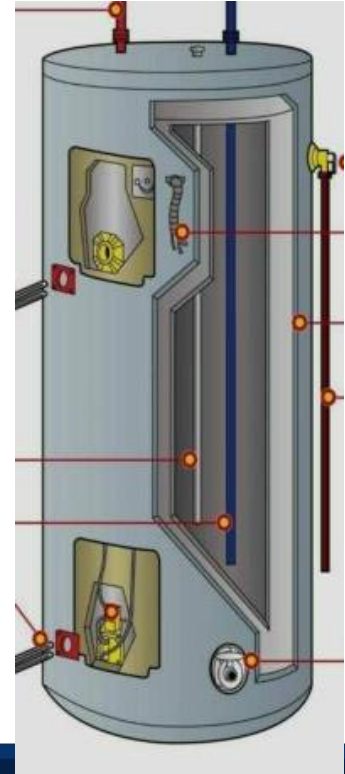


Electric water heater control

- Control box installed free
- Avoids on-peak hours
- Customers options

Results

- 1,936 customers enrolled
- \$48 average annual savings
- 400 MWh shifted



80%

Throughout the year, most customers use approximately **80%** of their electricity during the **lower-priced, off-peak** hours.

Reduce on-peak use and save on your bill.

SHIFT
your laundry.

City of
Fort Collins



- Time of Day rate change resulted in significant impact on residential electricity consumption
 - Year over year reduction of 3.5%, peak demand shift of 7.5%
 - Two-thirds of customers saved on annual bills
- Pricing can be effective tool which supports:
 - Energy and peak savings
 - Fairness in cost of service
 - Customer understanding of time-based value of electricity
 - **Load shaping and flexibility for beneficial electrification**

Thank You

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ENERGY
INSTITUTE
COLORADO STATE UNIVERSITY

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- Jerry Duggan