Planning for and Implementing Time-of-Use Rates

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About Fayetteville PWC

• Fayetteville Population: 207,300, 6th largest in NC; 4th most diverse community in U.S.
• Services: Electric, Water, Wastewater
• Electric Customers: 80,000 (total 113,000 customers)
• Home of Ft. Bragg – very transient community
• PWC customer base turns over 20% each year
• 40% Rental Properties
• 1 of 4 electric utilities in Cumberland County: Duke, 2 EMCs
The Road to TOU Rates

- Strategic Plan (2009)
- Oracle Upgrade (2010-2014)
  - AMI vendor-Sensus
  - Installation of towers, fiber, communications (2014)
    - 20 AMI Base Stations
    - 83,943 Electric
    - 99,502 Water
Why TOU Rates?

• Align Retail Rates with Wholesale Power Costs
  • Lower rate during hours when Wholesale Power Costs are lower
  • Large customers (Greater than 1,000 kW) CP rates

• Give Customers a Choice
  • Choose blend of comfort and savings
  • Choose current behavior vs. savings
  • Create opportunity for lower bills

• Lower Customer Bills

• Educate Customers
  • Impact of weather on their bills
About PWC TOU Rates

- TOU billing began May 1, 2019 (June Bills)
- Mandatory for Residential, Small Power
- On-Peak - 4 hrs Weekdays ($0.13 kwh)
- Off-Peak - 20 hrs Weekdays ($0.091 kwh)
- Weekends, PWC Holidays Off-Peak
- Small Commercial Less Than 35 kW (On-Peak ($0.135 kwh) Off-Peak ($0.096)

Winter Peak:
- November-March 6-10 am

Summer Peak:
- April-October 3-7 pm
TOU Rate Structures

• Mandatory Formula Based Coincident Peak (CP) Rates
  • All customers greater than 1,000 kW
  • CP capacity charge passed directly to the customer
  • CP capacity charge changes automatically when DEP bill determinants change
  • CP capacity charges subject to annual cost true-up
  • Energy costs set by commission action
Customer Opportunities

• 20 Hours Each Weekday and All Weekends
  • TOU Price 10% Less than previous rate
  • TOU Price 32.5% Lower than On-Peak rate

• Move Discretionary Consumption to Off-Peak hours
  • Dishwasher
  • Clothes Washer
  • Clothes Dryer

• Use or install Programmable Thermostats and/or Water Heater Timers to reduce consumption during On-Peak Hours
Communicating TOU Rates

• TOU Rates adopted March 2018
• Customer communications began with rate adoption
• Early education to correspond with future summer peak hours
• Traditional-newsletter, website, social media, events, TV show, Radio, advertising, speakers bureau, events
• Created educational material, magnets, videos, wall calendar

• Message: What was coming, how they could benefit, start changing habits now
**TIME-OF-USE RATES**

**Time-of-use Rates** - Time Is A Tool and A Save

Beginning in May 2019, PWC will implement Time-of-use Rates for residential and small commercial electricity customers. These rates will be in effect for those who elect to purchase power from Duke Energy at higher rates during peak hours, when consumer demand typically use more power.

Right now, you can start saving and gain in-practice (TOU) tips, so you can always adapt to Time-of-use Rates to lower your electric bills by conserving and shifting consumption from peak to off-peak hours. Rate for electricity used during off-peak hours will be 20% lower than during peak times.

**Summer Peak Hours**
- April – October from 5:00 PM - 7:00 PM (Mon. - Fri.)
- Winter Peak Hours
- November – March from 8:00 AM - 10:00 AM (Mon. - Fri.)

**Note** that only four hours of the day are considered peak times: 20 hours each day, and all day on weekends and holidays, are off-peak.

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**CONSERVATION TIPS**

- **Energy Conservation Tips**
- **Temp Tracker 365**
- **Energy Forecast**
- **Waste Schedule**
- **Water Wise Tips**

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**POWER TOOLS**

- **Home Efficiency Audit Program (HEAP)**
- **Incentive Programs**
- **Online Energy Use Calculator**
- **Time of Use**
- **GoPWC YouTube**

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**ONLINE USAGE CALCULATOR – CLOTHES DRYER**

**Calculate the ENERGY cost of your Clothes Dryer**

A typical load of laundry takes about 20 minutes to dry. An ENERGY STAR clothes dryer uses about 35% less energy than a standard dryer. Select the type of dryer you own, and enter the number of loads you dry per week. Calculate the costs by selecting on-peak and off-peak hours.

Cleaning your lint trap after each use and periodically cleaning your dryer vent can save you additional utility dollars!

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**Select Your Type of Clothes Dryer**

- **Top Load**
- **Front Load**

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**Costs**

- **On-peak Costs**: $0.42
- **Off-peak Costs**: $0.32

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**Example**

- **Load per week**
  - Friday (8 loads)
  - Monday (2 loads)
  - Thursday (2 loads)

- **Cost per week**
  - $0.42
  - $0.32
  - $0.32

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**Details**

- **Cost per load**
  - $0.42
  - $0.32

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**Source**

- Final report: Energy metrics and energy usage (UCB) and energy metrics other actions changes.
Time-of-Use Tool Kit
Incentive Programs, On-Line Resources

Handy Tools for Lowering Your Bills
- Smart Thermostat Incentive Program
- HVAC Incentive Program
- Insulation Replacement Incentive Program
- Ductwork Replacement Incentive Program
- ENERGY STAR® Appliance Incentive Program
- Rain Sensor Incentive Program
- LED Holiday Lighting Incentive Program
- LED Lighting Incentive Program
- Home Efficiency Audit Program (HEAP)
- On-Line Energy Use Calculators
- Mysaypwc.com Customer Web Portal

For more information on incentives check out our website.
Time-of-Use Tools - On-line Account Manager

- Introduced in Fall 2018
- Spring 2019: Peak usage historical data
- View Daily Use (billed)
- Vendor: Milestone
**Time-of-Use Tools - New Bill Design**

- **May, 2019-1 month prior to first bill with TOU usage**
- **Vendor: Utilitec**
Time-of-Use Tools - Going Forward

- Direct Mail - Magnet
- Additional On-line Data (hourly), current (to be billed)
- Mobile App (Pay, View Data & Acct info)
- Targeted communications (off-peak weekends)
- More Incentive Programs
  - Expand Peak Savings Pilot Program
  - Change of Peaks (November & April)
  - Digital Bill Boards
TOU Rates - Early Results

• Over the first two months of Time-of-Use rates, saw positive shift of usage from on-peak to off-peak period.
• 5% shift of electric usage to the less expensive off-peak period

May & June 2019: 15.6%
May & June 2017, 2018: 16.4%
TOU Rates- Early Results

• Average residential electric bill in May & June was 2% lower ($2.57)
  2018-$115.21
  2019-$112.64

• Average residential cost per kwh in May & June was .01 lower
  2018: 0.1010
  2019: 0.0990

“I don’t do laundry. I don’t run any unnecessary appliances between 3 (p.m.) to 7 (p.m.),” he said. “I like it just because of the fact that I have the power to use less energy during that time, and I know my bill will be less.”

...have been taking steps to use less power during the on-peak hours, such as not turning on the pool pump during those hours and shutting down the air for a couple of hours. “It is a matter of a lifestyle change,” he said. “If you modify your lifestyle, those (electric bills) could go down.”
Thank You

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