Low Income Forum on Energy 2018 Statewide Conference

Default Rate Design and the Impacts on Low-Income Customers

May 23, 2018

11:00 – 12:00

Agenda

- Introduction – Marco Padula – NYS Department of Public Service
- Current State – Pamela Echenique – National Grid
- Future State – William Atzl, Jr. – Con Edison
- Consumer Advocacy – Danielle Panko – Utility Intervention Unit, NYS Department of State
- Questions & Answers

INTRODUCTION

Current efforts related to mass market rate design

Stakeholder working group to examine rate design changes for customers that install distributed energy resources (DER) at their home

- As part of Reforming the Energy Vision (REV), NYS is transitioning away from net energy metering (NEM)
- DPS Staff required to develop rate design proposal by December 2018 for transitioning of mass-market projects from NEM to new rate design beginning January 2020 – Matter Number 17-01277
    - Stakeholder Engagement / Rate Design Proposals / Bill Impact Studies
    - Staff Issues Paper / SAPA / Commission Order
- Examining alternative rate designs that would be applicable to customers that install distributed resources to ensure that non-participants are not bearing an unfair portion of the delivery system costs
- Provide more accurate price signals

INTRODUCTION

Why change mass market rate design?

Policy initiatives and customer preferences are changing how and when customers use electricity

- New York's REV initiative is intended to empower customers by allowing them more choice in how they manage and consume energy, leading to more efficient use of the electric system and providing consumers new opportunities to save on their energy bills.
- Today's mass market rates, which rely mainly on volumetric charges, do not provide appropriate price signals to customers.
- Delivery costs are mainly fixed and demand-related, but a significant portion of delivery revenue is recovered through volumetric charges.
- Current mass market rate design can lead to inefficient use of the grid and cross subsidization among customers.
- Changes in mass market rate design will help the State to achieve its REV goals in a manner that benefits all customers.

CURRENT STATE

Residential customer typical charges

1. ***Delivery***
   - Customer Charge – intended to recover fixed costs that are related to number of customers
     - Services
     - Meters
     - Meter reading
     - Customer service
     - Billing
     - Minimum system, etc.
   - Volumetric (per kWh) – those costs not recovered through the customer charge and not effected directly by number of customers
     - Poles / Towers
     - Conductors
     - General plant
     - A&G, etc.

CURRENT STATE

Residential customer typical charges (cont.)

2. ***Commodity***
   - Volumetric (per kWh) – to recovery supply, ancillaries and capacity
     - Voluntary time of use rates currently available
   - Merchant Function Charge (MFC) – if customer is not with an ESCo, this recovers commodity related bad debt, credit and collection and supply

3. ***Pass Throughs*** – revenue collected for other entities
   - System Benefits Charge – clean energy activities conducted by NYSERDA
   - Revenue Taxes – taxes collected for cities, Villages, Towns

CURRENT STATE

Revenue allocation & rate design considerations

- Costs are allocated to the service classes (residential, commercial, industrial, etc.) based on cost causation

- Service classes are generally determined by end use, customer size and the voltage level (secondary, primary, sub transmission, transmission) – similarly situated customers

- Low income customers are not a separate class, but are included in the residential class
  - Cost to serve a low income residential customer is not different enough than the cost to serve a non-low income residential customer
  - Not appropriate to have rate designs for low income customers that are different from non-low income residential customers

CURRENT STATE

Energy Affordability Program

- Approved by the Commission and effective 1-1-2018
- Tiered discounts based on level of need – demonstrated by receipt of HEAP grant and receipt of any HEAP "add-on" benefits, or receipts of DSS Direct Voucher Guarantee
- Applied as a monthly credit on customer's bill
- Tiered discount example (Niagara Mohawk electric):

		Electric Residential Monthly Credit
Regular and/or Emergency HEAP	Tier 1	$11
Regular HEAP plus 1 add-on	Tier 2	$29
Regular HEAP plus 2 add-ons	Tier 3	$47
DSS Direct Voucher / Guarantee	Tier 4	$31
Non-utility HEAP Benefit	Tier 5	$11

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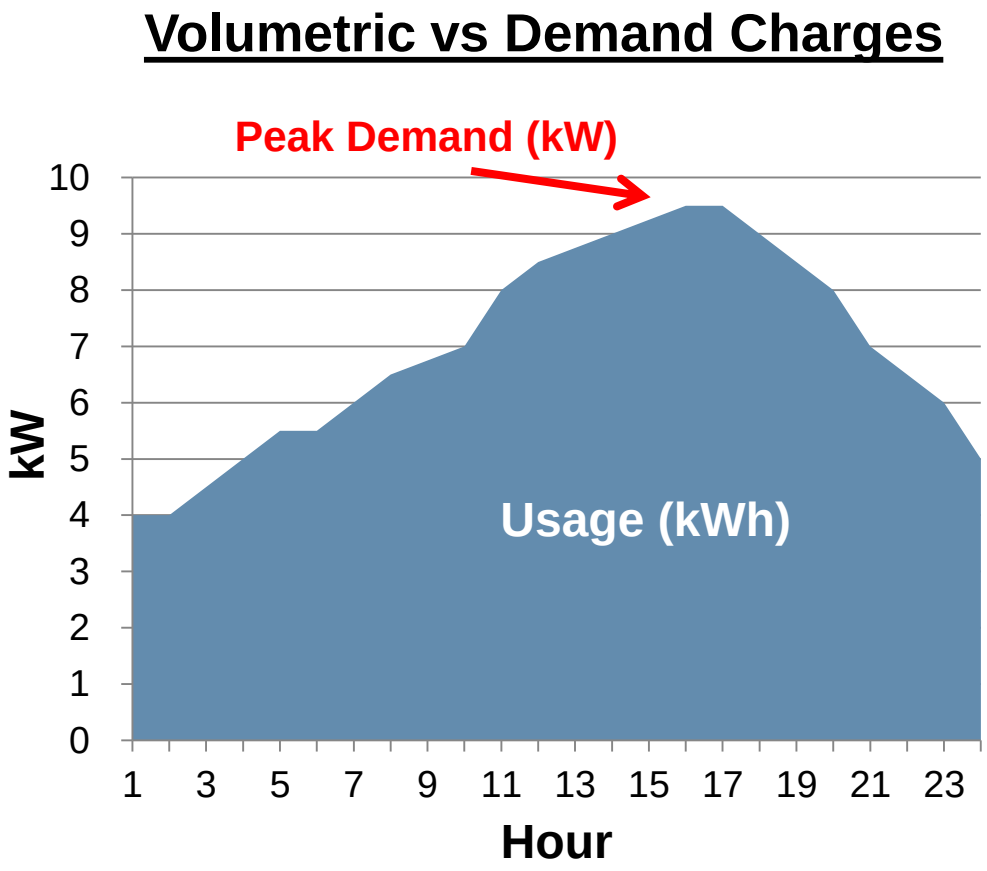
Delivery Rate Components

There are three basic methods of billing for electric delivery service. Many variations and combinations can be considered.

- Fixed charges
  ($ per month) also known as customer charges
- Volumetric charges
  ($ per kWh of energy use)
- Demand charges
  ($ per kW of peak demand)



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Delivery Rate Components (cont.)

Billing of mass market customers has historically been limited by technology and cost constraints. Rates have been assessed mainly on a volumetric (per kWh) basis.

Rate Components by Customer Class

Customer Type	Fixed	Demand	Volumetric
Residential	✓		✓
Small Business	✓		✓
Medium and Large Business	✓	✓	✓

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Technology is changing how we use energy

A future embracing renewable resources, energy management and conservation driving towards a cleaner environment for everyone.

Smart appliances

Wi-fi ready appliances that connect to smart meter or home energy system to help manage energy use

Distributed energy resources

Clean energy alternatives to meet customers electricity needs

Electric vehicles

New energy uses where vehicles will be charged in customers' homes

Software and analytics

Intelligent software for data driven decision making to manage energy usage

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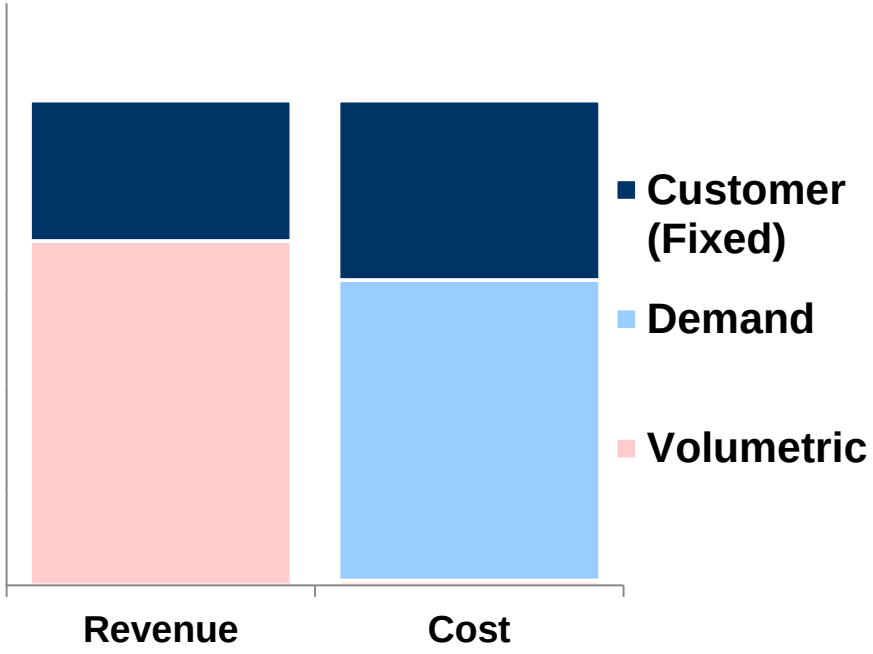
The Case for Change

Under current mass market rate structures, there is a misalignment between revenues and costs

Delivery Revenue vs. Cost (example of residential class)



- Delivery costs are mainly fixed/demand related, but a significant portion of delivery costs are recovered through volumetric charges
- Critical to shift delivery rate design to a more cost-based rate structure to drive efficient customer behavior

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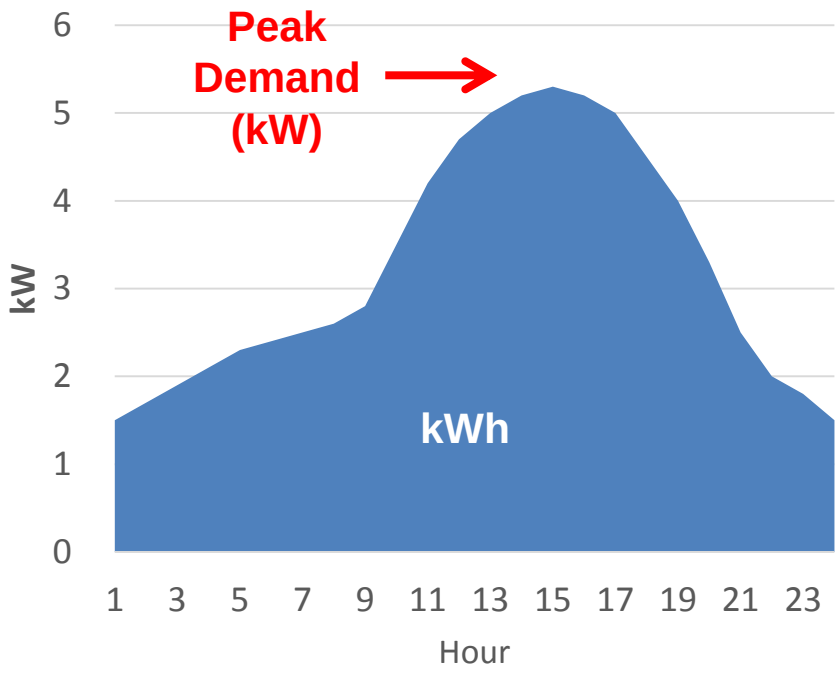
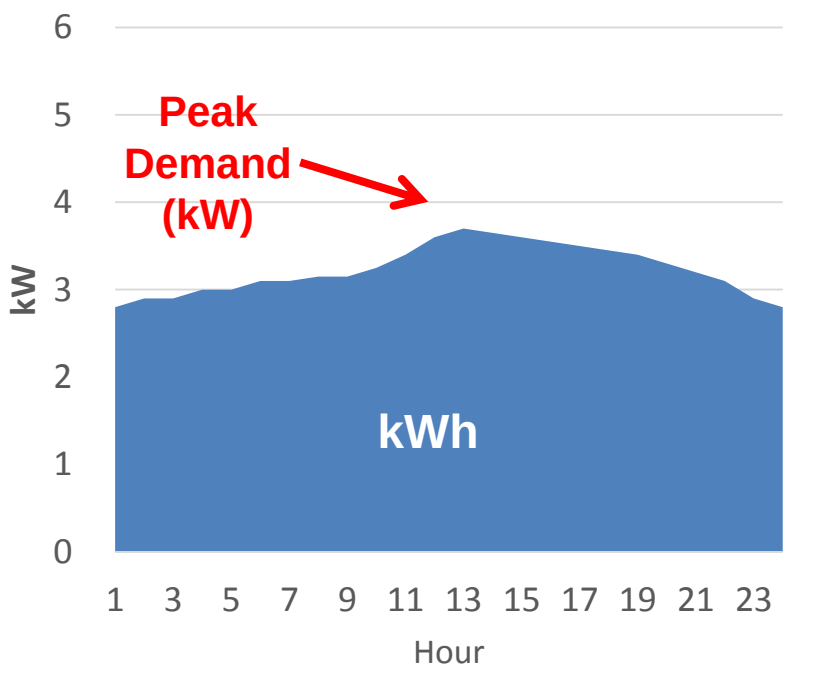
Customers' impact on the grid drives costs

Customers A and B use the same amount of energy (kWh). Should they pay the same amount for delivery service?

Customer A



Customer B



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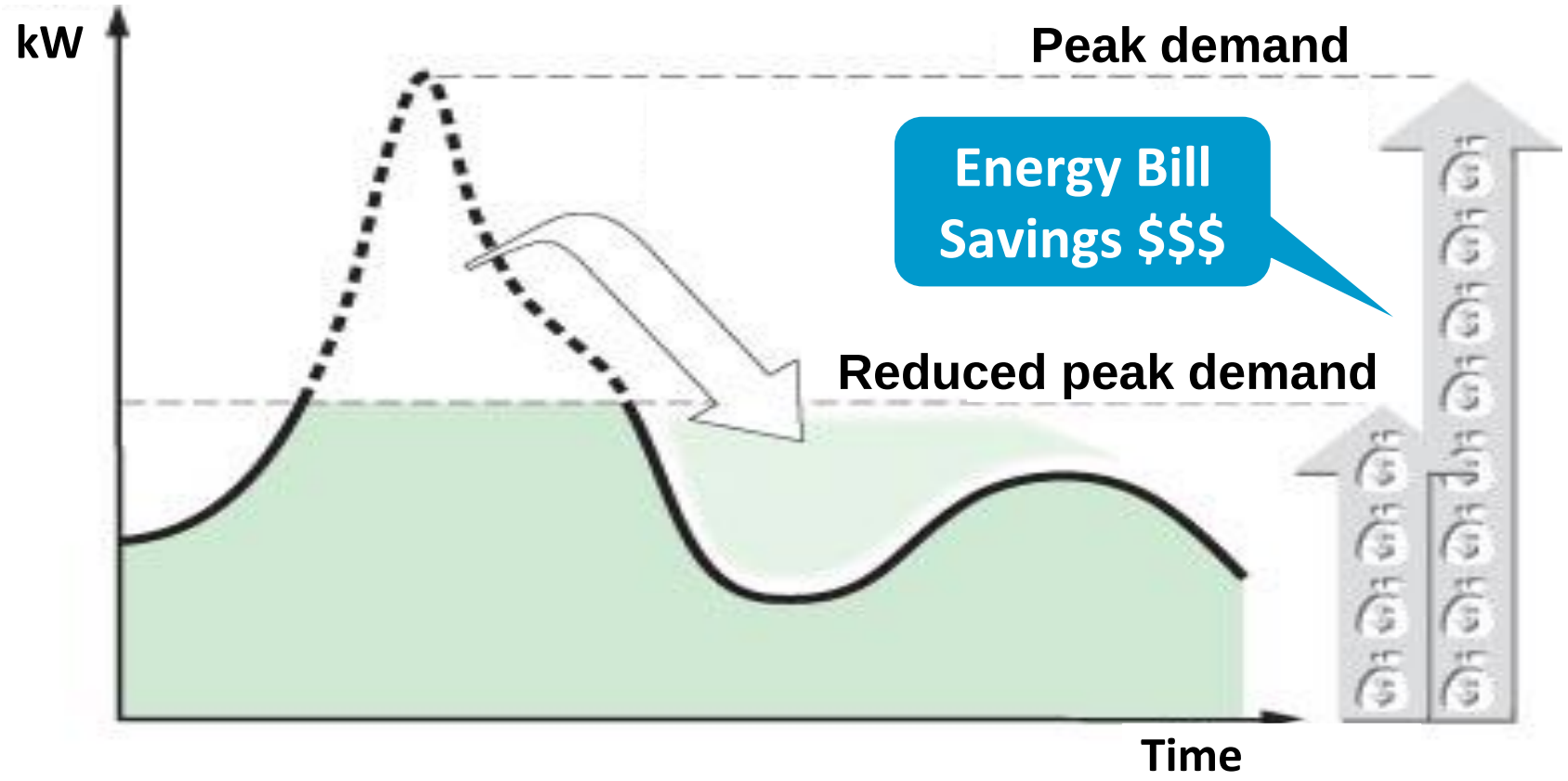
Customer rewards for using energy efficiently

Opportunities should be provided for customers to save money by shifting energy use at peak times, reducing system costs to benefit all customers.



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Modern rate structure for modern energy needs

Integrate system value, customer value and smart technologies.

Universal Energy Grid

- ❑ Energy grid is used by everyone who is connected to it
- ❑ Everyone who uses energy grid continues to share in costs to support it

Customer Benefits

- ❑ Customer rewards for using energy more efficiently
- ❑ Customer rewards drive benefits for all customers

Tools and Resources

- ❑ Customers understand how they use energy and they can save on their energy bills
- ❑ Customers have access to smart technologies to manage their energy use

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Modern rate structure alternatives

Rate options that make it easy for customers to make smart decisions about how they use energy and impact the energy grid.

Demand/ Efficiency Rates	❑ Rates reward customers for using the energy grid efficiently by spreading out their usage during peak periods or shifting usage to off-peak periods.
Peak and Off-peak Rates	❑ Rates reward customers for shifting usage to off-peak periods.
Subscription Rates	❑ Tiered subscription rates based on how efficiently a customer uses energy during peak periods.

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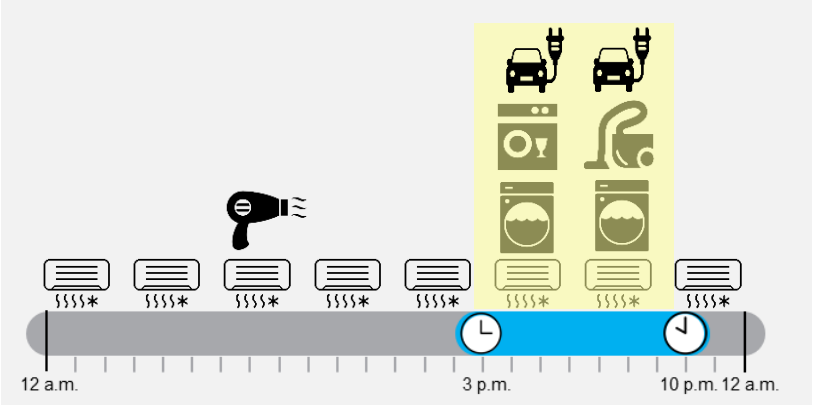
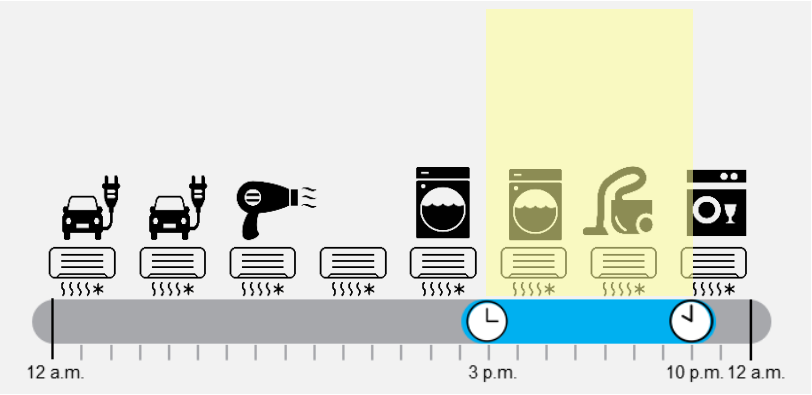
Demand/efficiency rates based on grid impact

Rates reward customers for using the energy grid efficiently by spreading out their usage during peak periods or shifting usage to off-peak periods.

Usage Pattern A



Usage Pattern B



Customers with demand/efficiency rates that are able to shift or stagger their usage during peak periods can save money.

Ways to lower your bill

- ❑ Run major appliances one after another during peak periods instead of using all at once
- ❑ Shift some of your usage of major appliances to off-peak periods

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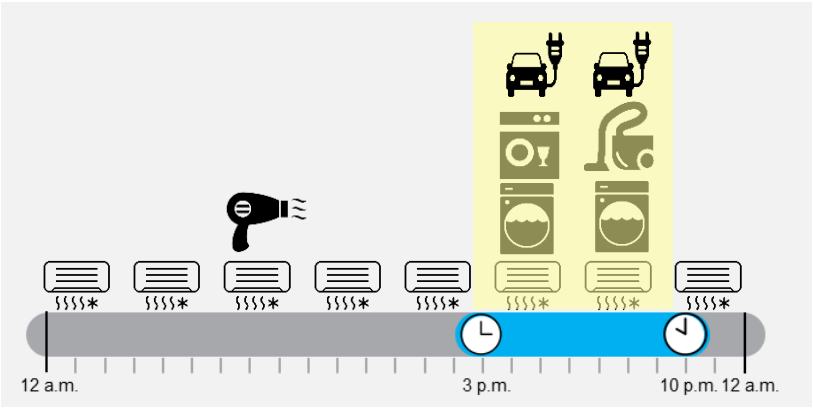
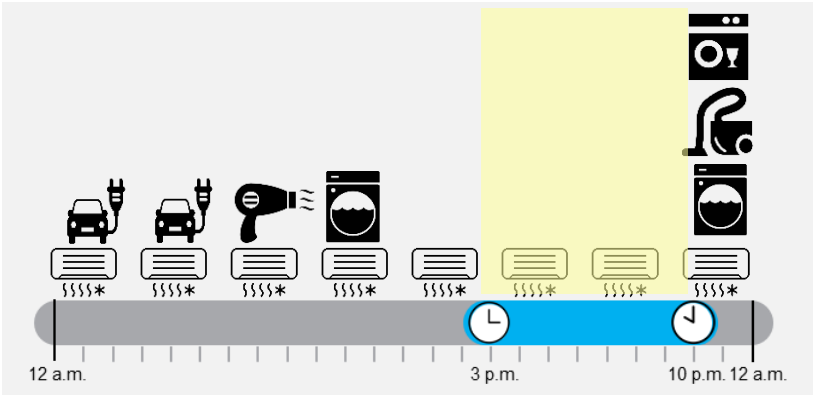
Peak/off-peak rates based on energy usage

Rates reward customers for shifting their energy usage to off-peak periods.

Usage Pattern A



Usage Pattern B



Customers have another way to save money by shifting their energy usage from peak periods to off-peak periods when demand is lower.

Ways to lower your bill

❑ Shift some of your usage of major appliances to off-peak periods

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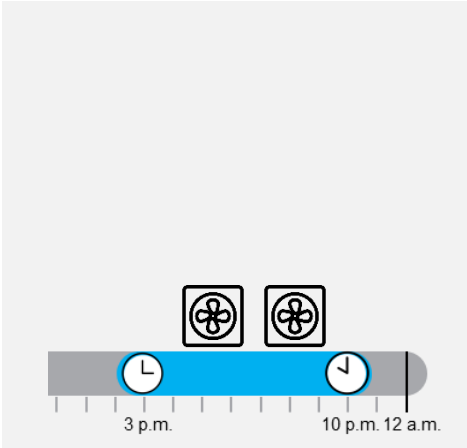
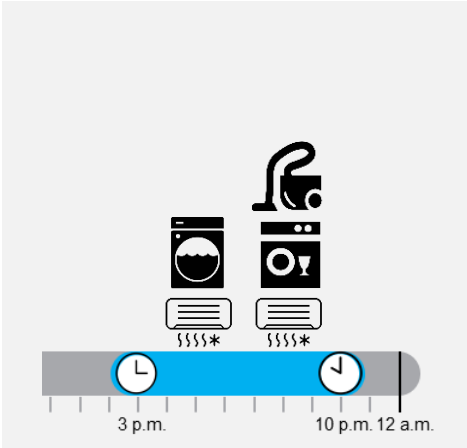
Subscription rates

Tiered subscription rates based on how efficiently you use your energy and impact the energy grid during peak periods.

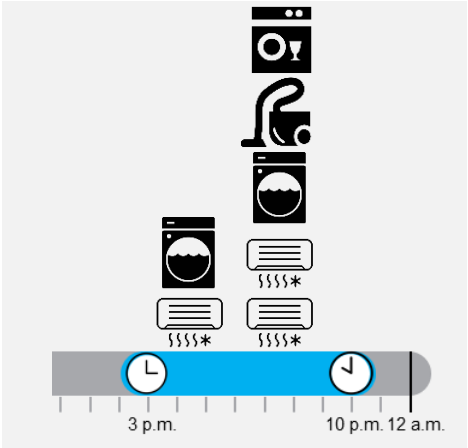
Small



Medium



Large



Customers that desire greater price stability can select a subscription level based on their energy use during peak periods.

Ways to lower your bill

- ❑ Stagger the use of major appliances instead of using all at once
- ❑ Shift some of your usage of major appliances to off-peak periods

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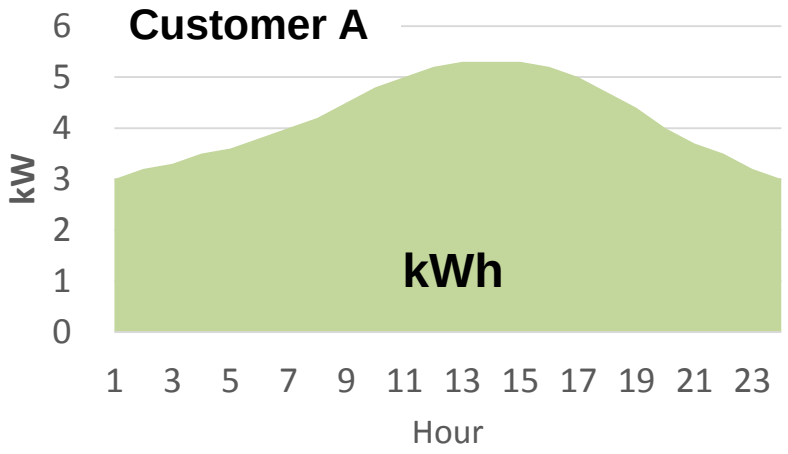
Impacts of Rate Reform

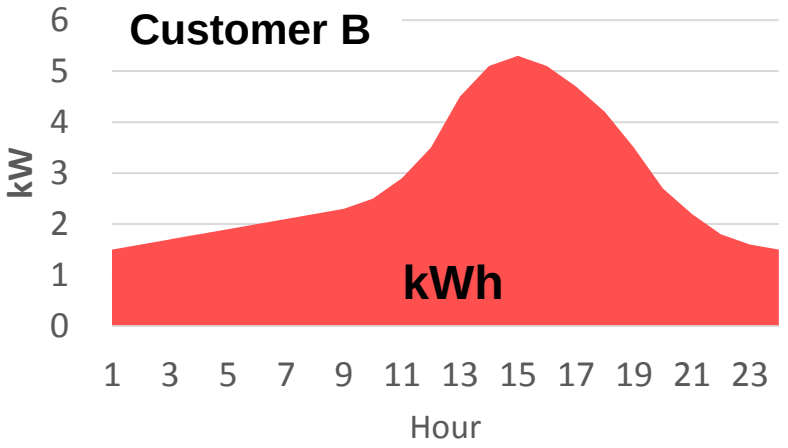
Impacts of demand-based charges are driven mainly by a customer's load factor

- Load factor is a measure of how steady a customer's usage is.
- High load factor customers, like Customer A, use electricity on a more steady basis, will generally benefit under demand-based charges.
- Customers A and B require the same delivery system infrastructure, but Customer A has been paying more for delivery service than Customer B under the current volumetric rate design.

High Load Factor



Low Load Factor



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How will changes impact low income customers?

Little evidence on impacts of alternative rates on low income customers.

- Pilot programs will provide the opportunity to test rate options and rate design decisions -- data collected from pilots will help utilities gauge customer acceptance, customer understanding and customer responsiveness to new rate plans.
- All rate design options are revenue neutral, however individual customers will see decreases or increases, based on their usage.
- The merits of a demand-billing concept apply equally to all customers regardless of whether or not they are low-income. The principle of gradualism could result in a phase-in of impacts for low-load factor customers that will be more sensitive to demand charge impacts.
- The Joint Utilities are not aware of any evidence that suggests a high correlation between low-load factor customers and low-income customers.

Questions?