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Residential Demand Response Pricing Pilot

October 11, 2007

Background
21st CEP

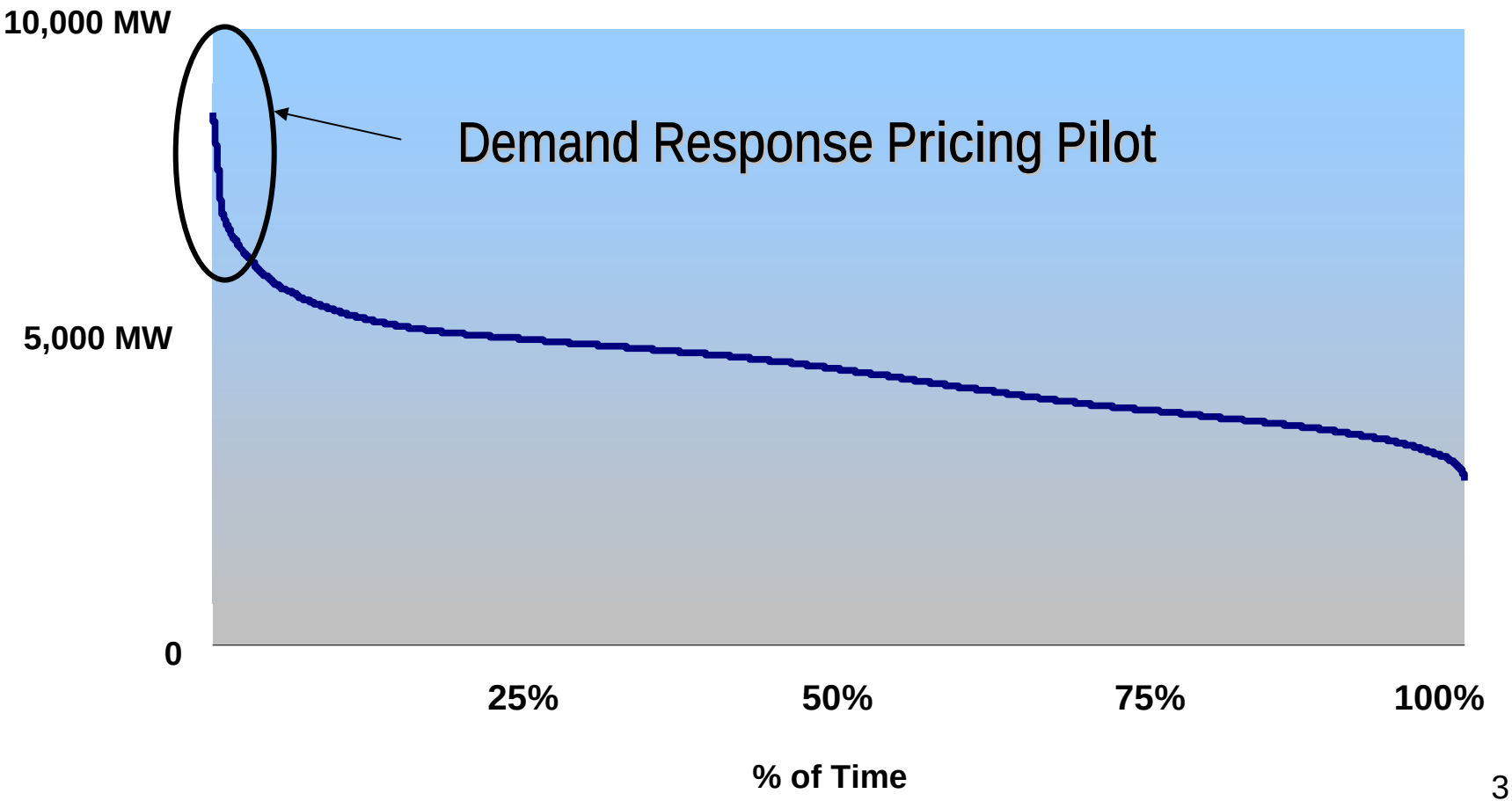
21ST Century Energy Plan

- Demand response (DR) refers to customer efforts to reduce consumption (demand) in response to price signals, incentives, or directions from grid operators.

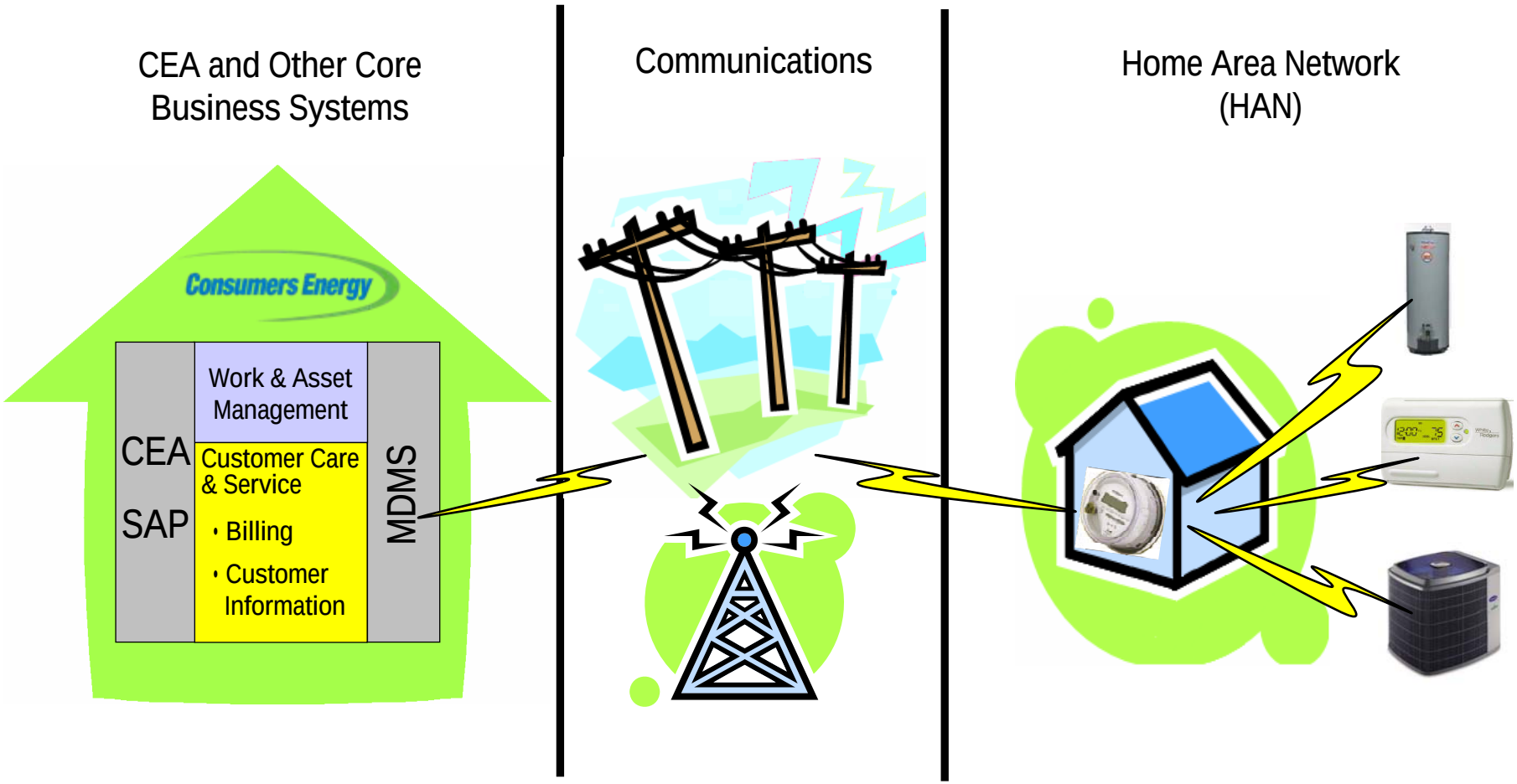
- Barriers to Adoption of DR Programs Include:
  - Ineffective customer incentives;
  - Absence of demand response and ancillary services markets;
  - Lack of wide-scale deployment of advanced metering & communications technologies; and
  - Lack of experience combining advanced technologies with effective time-based electric rate structures.

Background

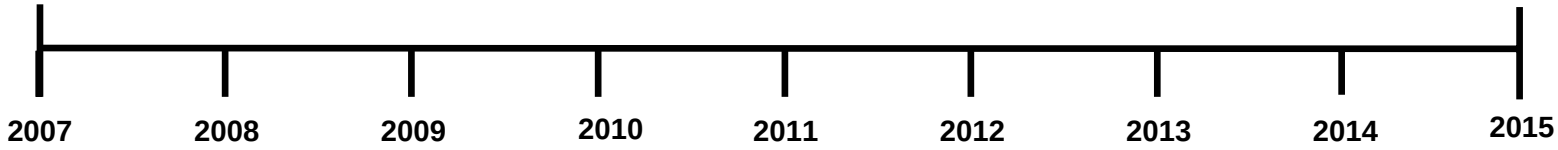
2006 System Load Duration Curve



Background
AMI Process



Background
Planned AMI Timeline



AMI Testing Deployment

Software Integration Design/Development/Testing

Field Equipment Selection/Testing

Meter Deployment

5,000 Residential Electric Meters Installed

- Combination Service Territory
- 30 mile radius of Jackson
- Topographical diversity
- Representation of central air conditioning

Residential DR Pricing Pilot

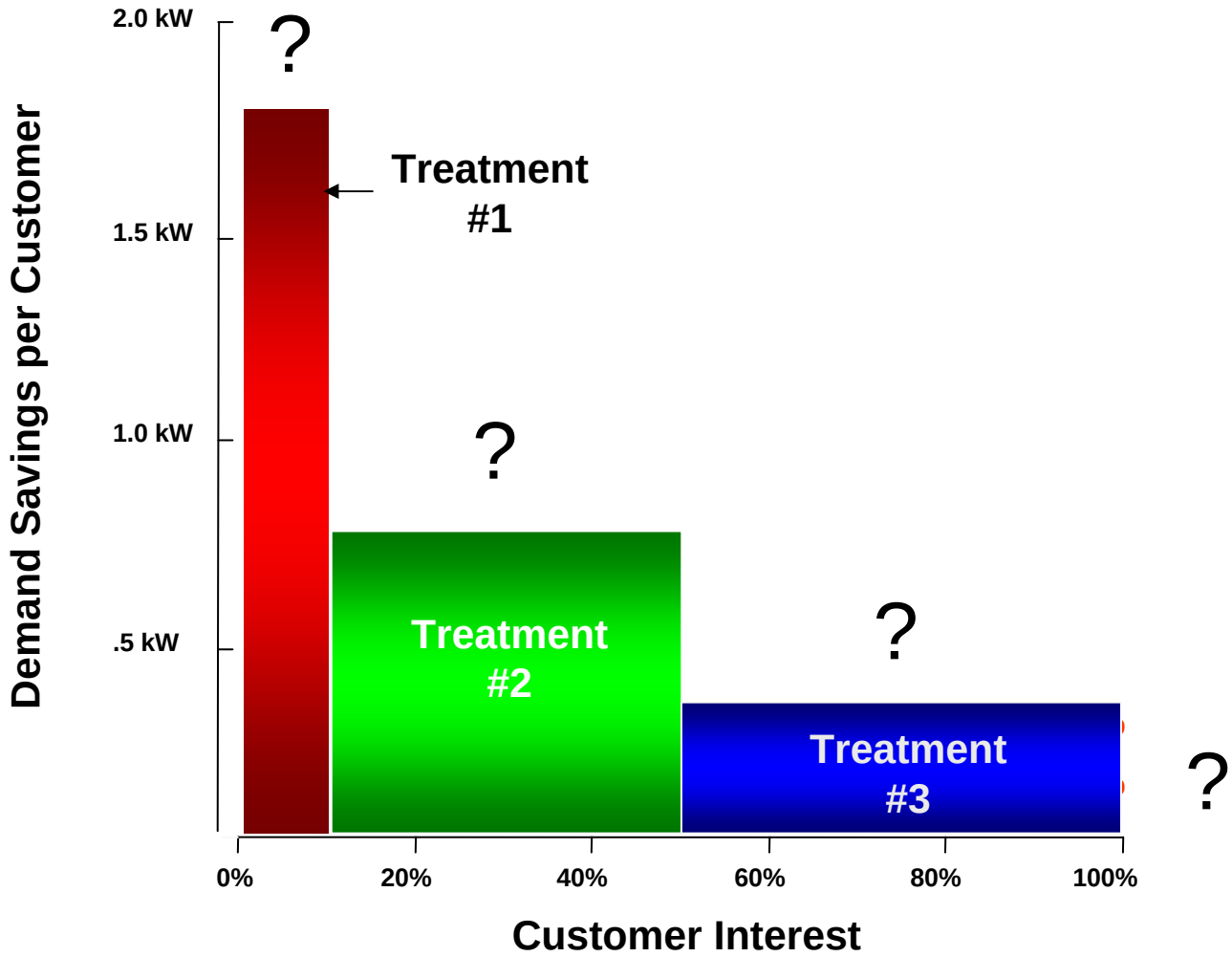
Objectives

Determine the demand response approach with the greatest demand savings potential.

- Test customer reaction to DR pricing structures;
- Determine demand (kW) and energy impacts (kWh);
- Assess the impact of enabling technologies;
- Segment the marketplace based on participation likelihood;

Residential DR Pricing Pilot

Information to Make the Best Choice



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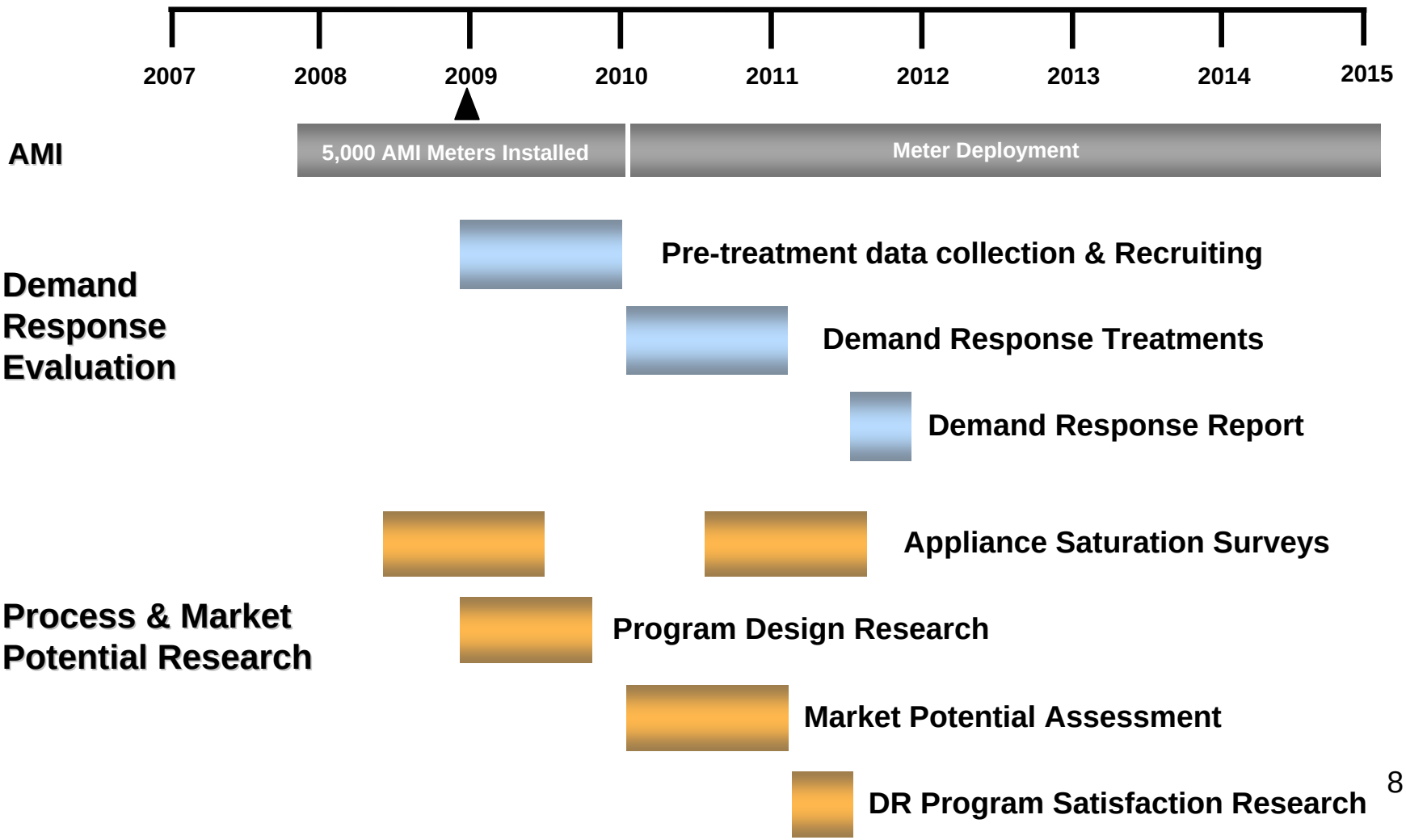
Timeline



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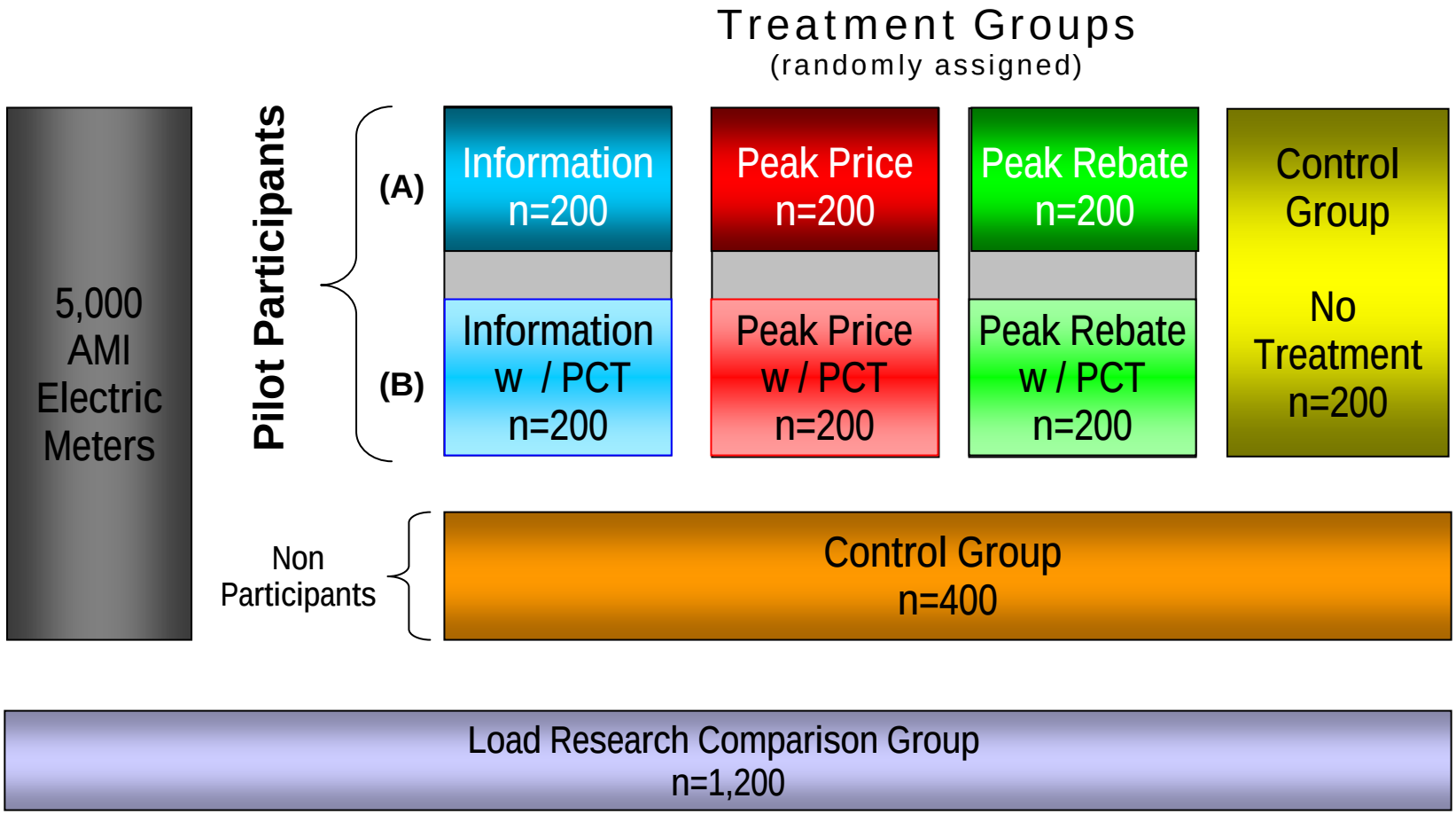
Experimental Design



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Information Treatment Groups

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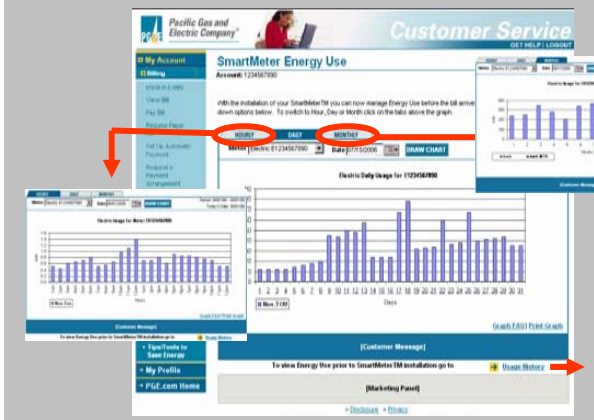
(A)

Hourly, Daily, Monthly



- Energy Usage Information
- Notification

(B)

Hourly, Daily, Monthly

\+ Enabling Technology

Residential DR Pricing Pilot

Critical Peak Price Treatment Groups

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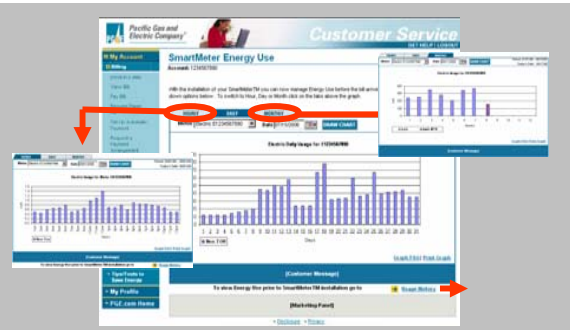
(A)

- Energy Usage Information
- Notification
- 3 tier TOU Rate w Peak Price

(B)



+ Enabling Technology

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Peak Rebate Treatment Groups

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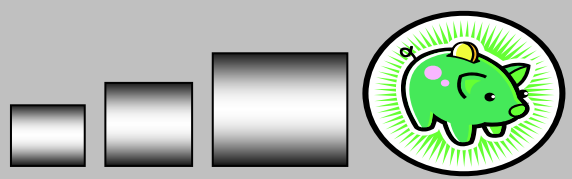
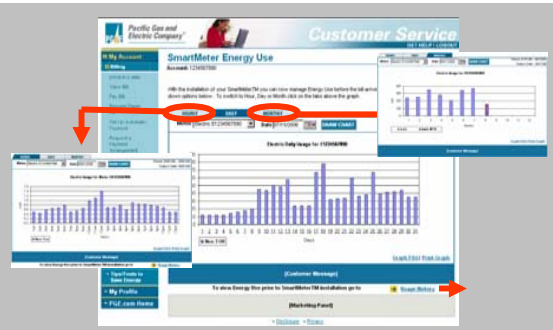
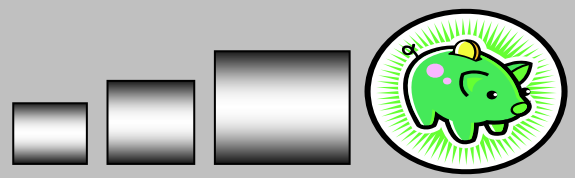
(A)



- Energy Usage Information
- Notification
- 3 tier TOU Rate w Peak Rebate

(B)





+ Enabling Technology

Residential DR Pricing Pilot

Enabling Technology Options

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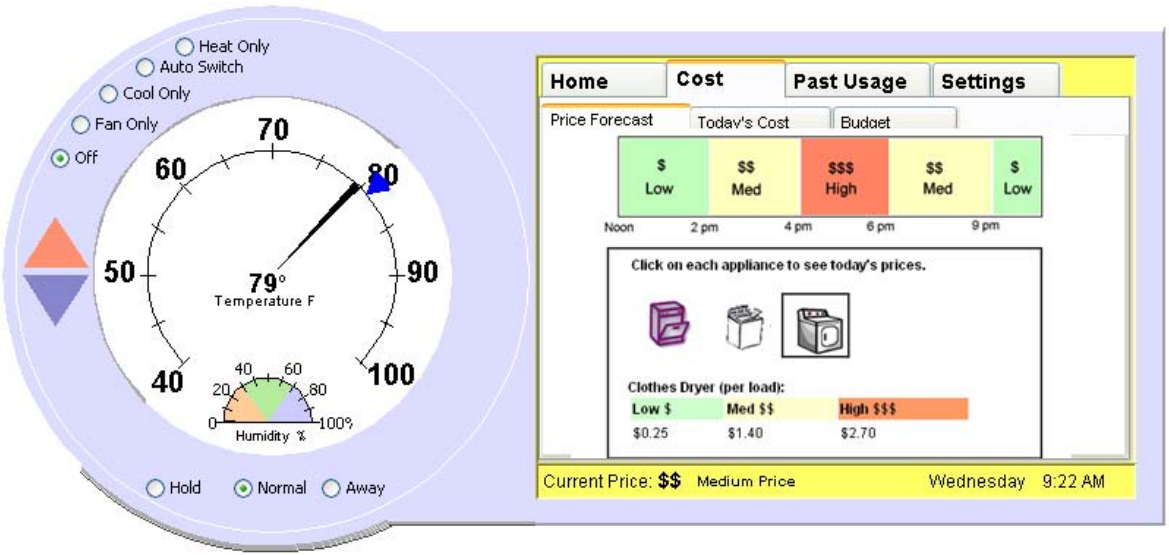
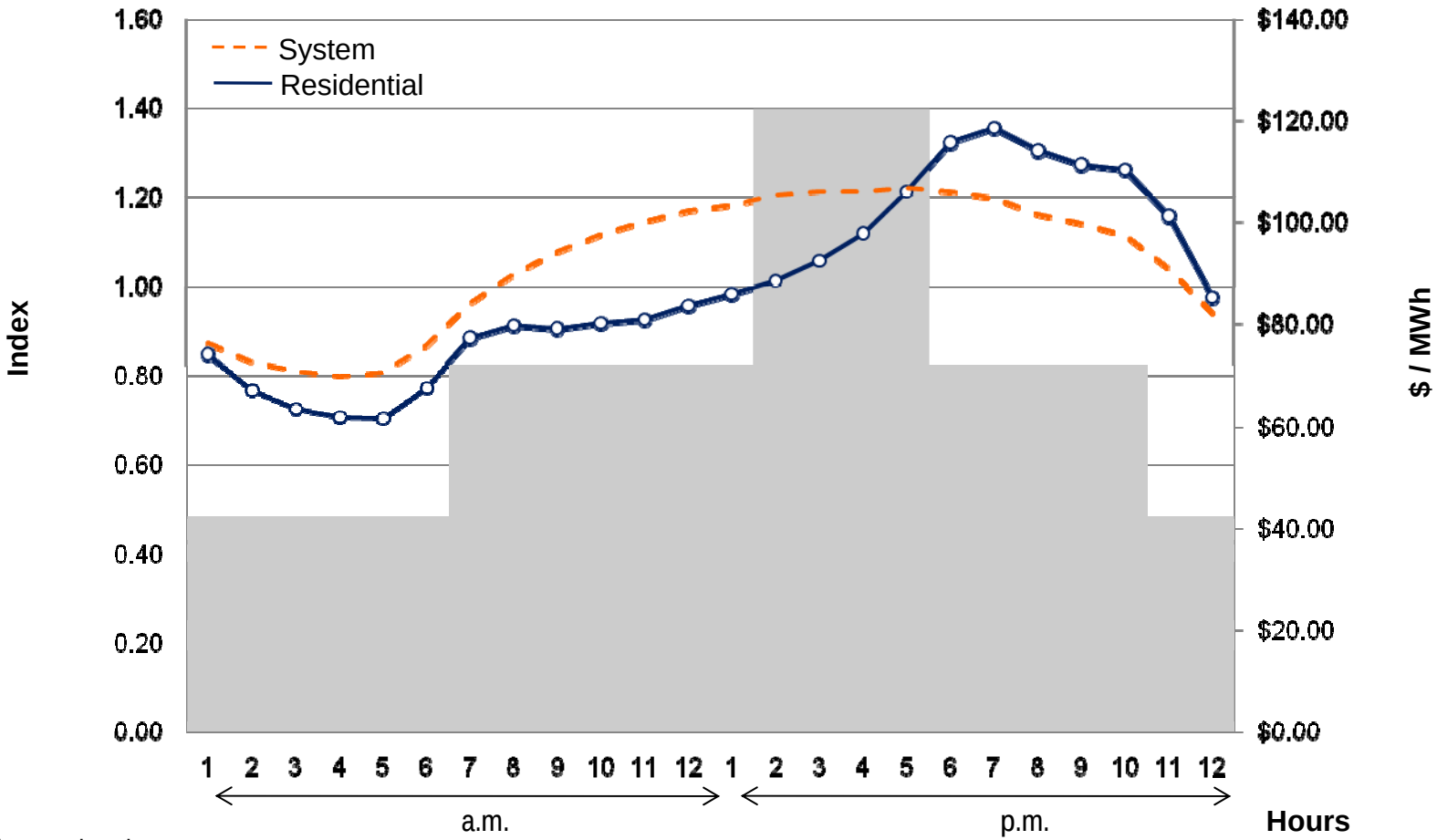


Residential Critical Peak Price

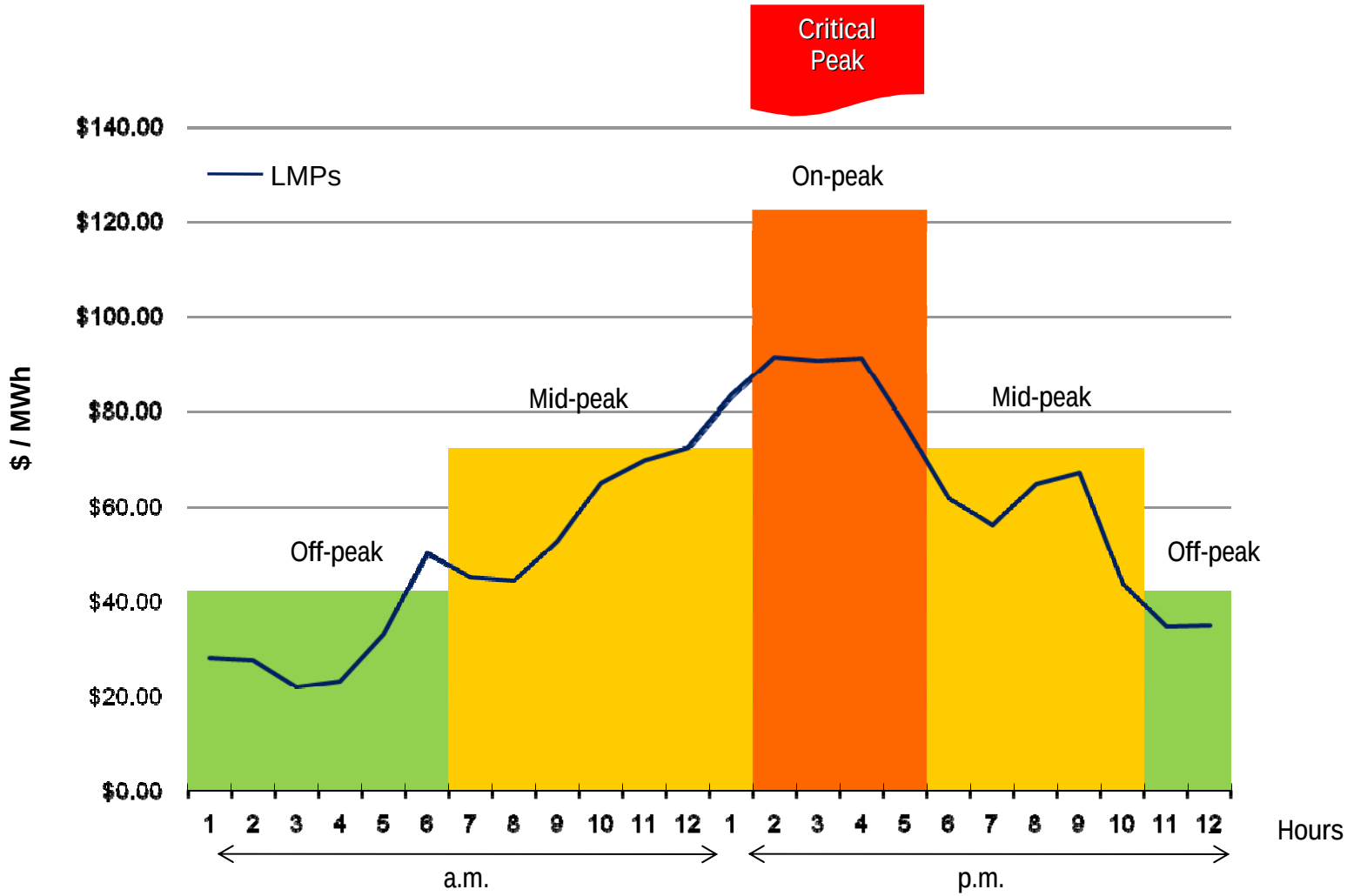
Summer Load Shape Compared Against Hourly LMPs*



* Excludes weekends

Residential Critical Peak Price

Average Summer Hourly LMPs, Sept'05 – Aug'06



Residential Critical Peak Pricing, RCPP

Proposed Pilot Electric Rate Structure*

- Up to 5 critical peak events can be executed during the summer months (June – September)
- Critical peak events will be restricted to the 4 on-peak hours

Power Supply Rates**		
Summer:		
Off-peak Energy	4.2221	¢ / kilowatt-hour
Mid-peak Energy	7.2221	¢ / kilowatt-hour
On-peak Energy	12.2221	¢ / kilowatt-hour
Critical-peak Energy	33.0000	¢ / kilowatt-hour
Winter:		
All Energy	4.9443	¢ / kilowatt-hour

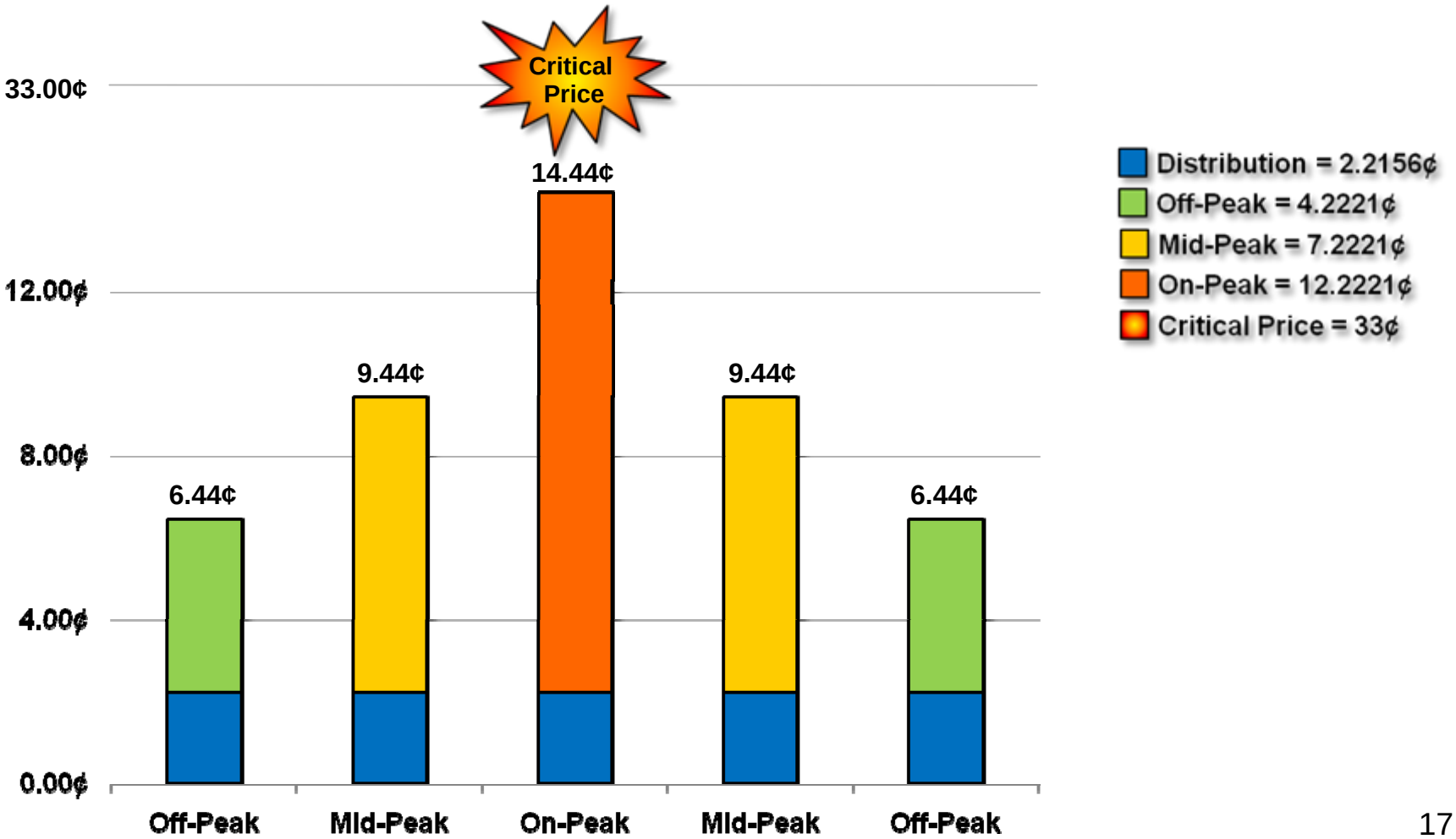
Delivery Rates		
Distribution	2.2156	¢ / kilowatt-hour
System Access	6.62	$ / month

Provisions		
Senior Citizen	(4.00)	$ / month
Income Assistance	(6.00)	$ / month
Small Farm	(6.00)	$ / month

* Rates shown for illustrative purposes
** Excludes the Company's PSCR factor

Residential Critical Peak Price

Summer Energy Rates*



* Excludes the Company's PSCR factor

Residential Peak Rebate, RPR

Proposed Pilot Electric Rate Structure*

- Up to 5 critical peak events can be executed during the summer months (June – September)
- Critical peak events will be restricted to the 4 on-peak hours
- Base load established using the average demand from the 5 previous non-treatment days for each of the corresponding on-peak hours

Power Supply Rates**		
Summer:		
Off-peak Energy	4.2850	¢ / kilowatt-hour
Mid-peak Energy	7.2850	¢ / kilowatt-hour
On-peak Energy	12.2850	¢ / kilowatt-hour
Critical-peak Energy	(33.0000)	¢ / kilowatt-hour
Winter:		
All Energy	4.9443	¢ / kilowatt-hour

Delivery Rates		
Distribution	2.2156	¢ / kilowatt-hour
System Access	6.62	$ / month

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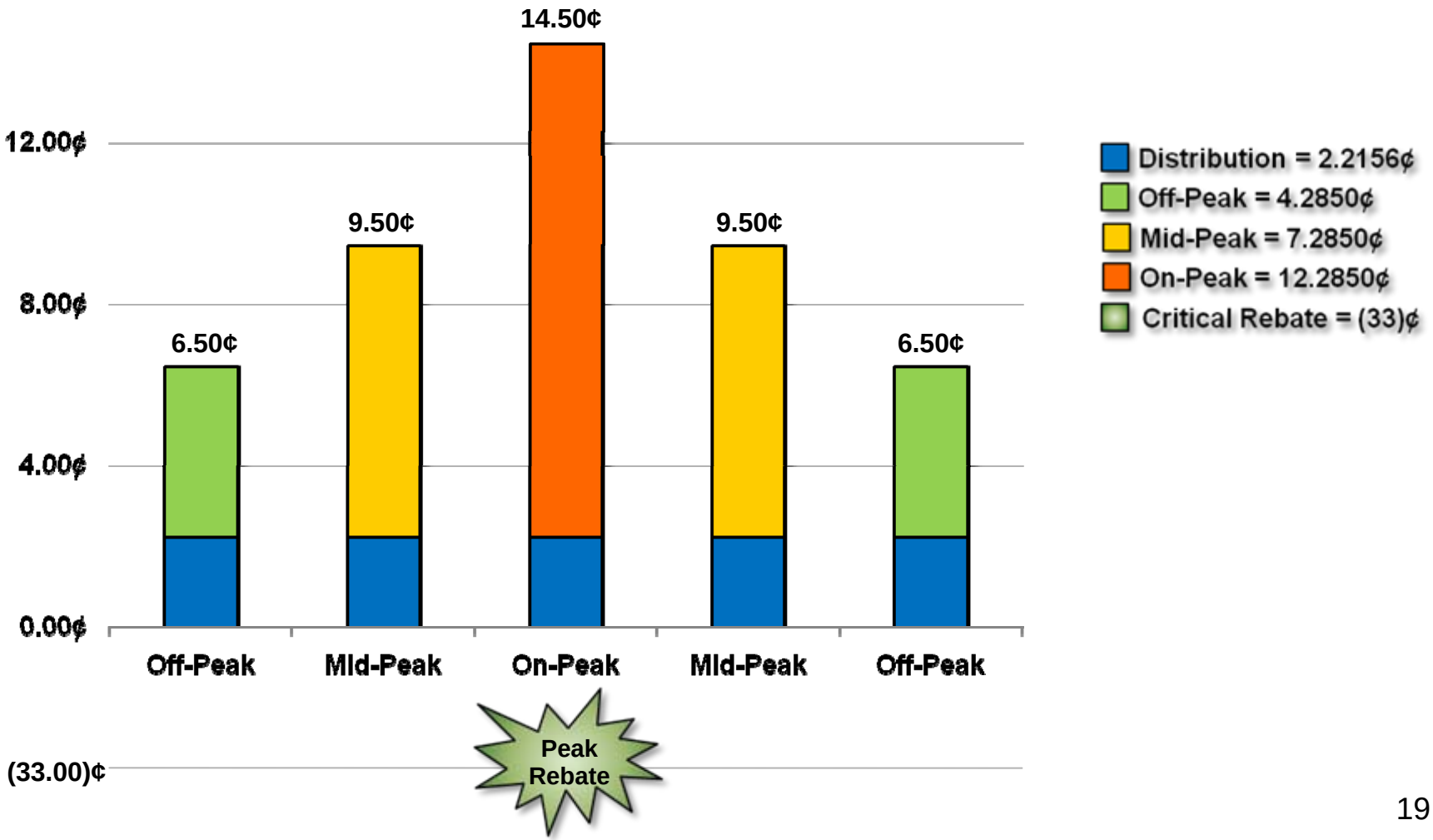
Residential Peak Rebate

Summer Energy Rates*



* Excludes the Company's PSCR factor

Residential DR Pricing Pilot

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Questions?