

The Role of Behavioral Engagement in Rate Design

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Oracle Utilities



Asset Operations	Network Operations	Meter Operations	Customer Operations	Customer Experience
Work and Asset Management	Outage Management	Advanced Meter Solution	Customer Cloud Service	Digital Self Service
Field Service	Distributed Energy Resource Management	Meter Data Management	Customer to Meter	Demand Side Management
Analytics				

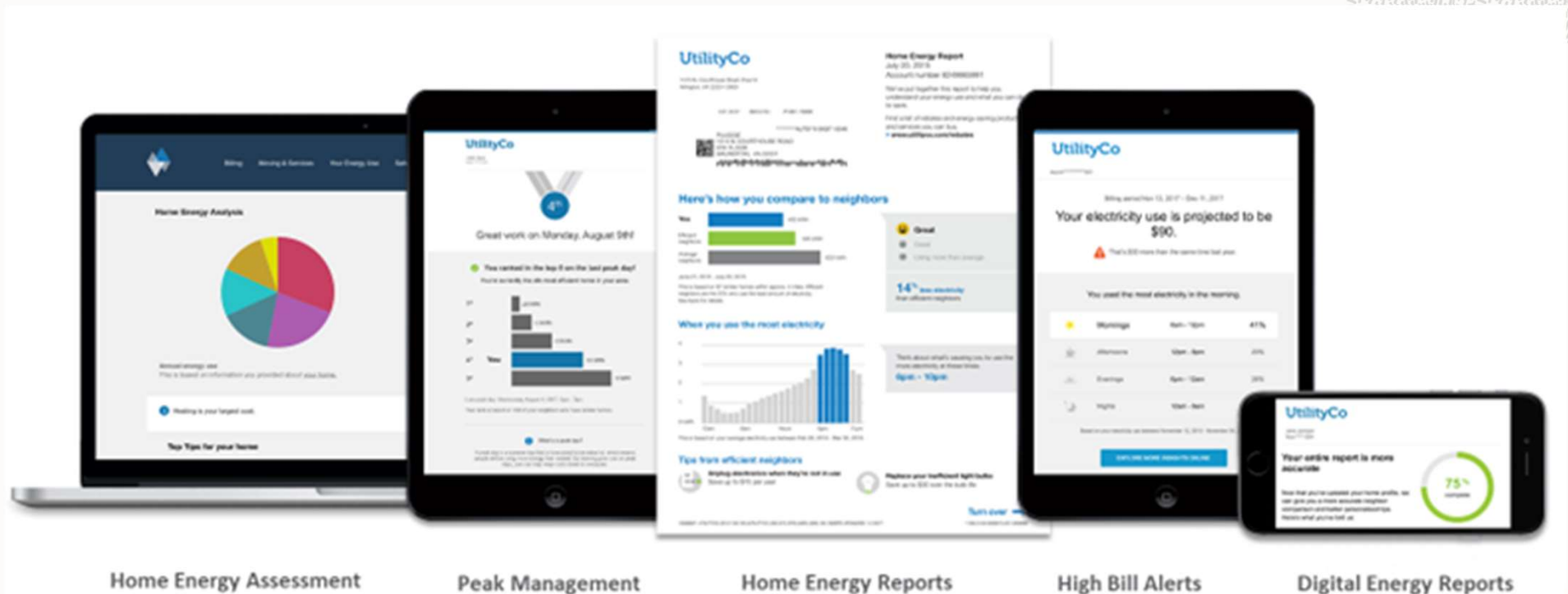
What Really are Demand Side Resources? Mostly Human Actions!



It's getting humans to make decisions and take actions that impact energy use.

Even automating an energy consuming device in the home requires consent - and ongoing education to sustain benefit.

Reaching customers through the right tool, time, channel and message



We know there's value in variable pricing – so why isn't there greater adoption?

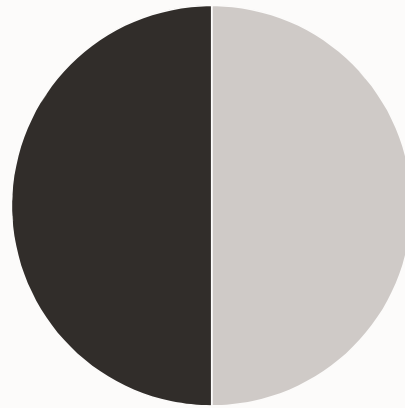
- ✓ Utilities have been and continue to offer residential TOU rates (~50% of all IOUs offer residential TOU)
- ✓ We have the infrastructure (AMI, data analytics, billing systems, etc.)
- ✓ Stakeholders (policymakers, environmental advocates, and others) are interested
- ✓ *But 1.7% of all residential customers are enrolled on a TOU rate*



Utility customers don't understand variable rates and fear bill increases

69%

Many think it's unfair to change prices with demand



Half the customers in a CA peak rebate program didn't know they were enrolled

2X

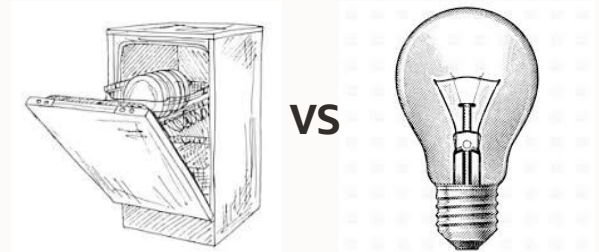
Twice as many customers think bills will increase vs. decrease

Behavioral Considerations:

1. Convince a customer to opt-in

2. Get them to choose the best rate

3. Actually change usage behavior in response to new rate



Financial Signals:

1. Rate guarantees

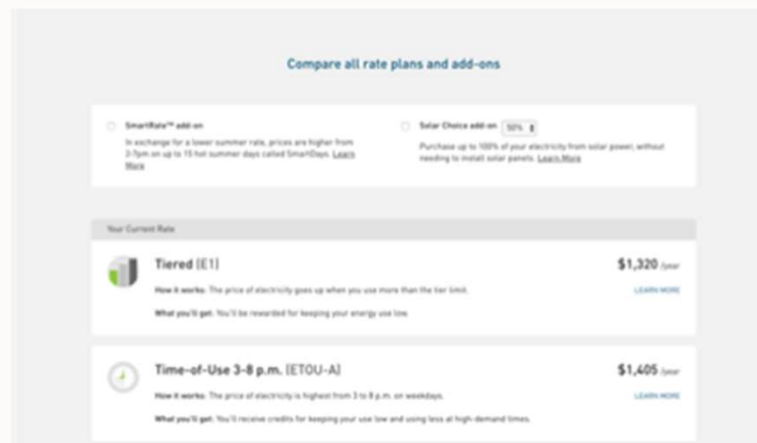
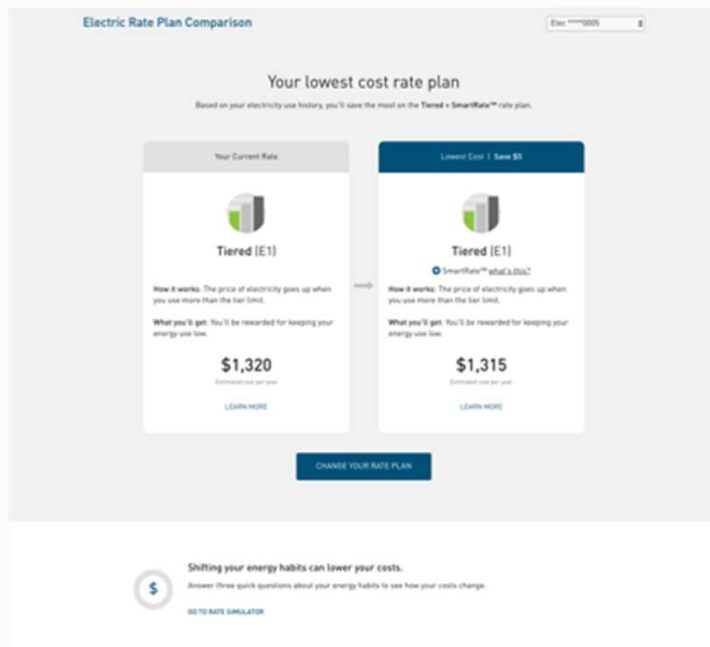
2. Maximize peak to off-peak price signal

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Oracle Utilities Behavioral Load Shaping



Electric Rate Plan Comparison



1. Show consumers their lowest cost rate plan option above the fold. If they are not currently on this rate plan, it also shows them their potential annual savings.

2. Show consumers 3-12 months of cost estimates based on a combination of their data and the average data of residential customers.

Electric Rate Plan Comparison – Rate Simulator

Allow customers to see how their costs on different rate plans may change if they install solar panels or purchase an electric vehicle.

Show customers how their costs on different rate plans may change if they change certain behaviors (e.g. time at which they use large appliances like dishwasher, washer/dryer, etc.)

Planning to buy an Electric Vehicle (EV)? How many miles per week do you anticipate driving your EV?

This analysis assumes charging starts at 11 p.m. from a Level 2 (6.6kW) charger. Find out more [here](#).

OK

[Skip this question](#)

To save on a Time-of-Use rate plan, cut down on the big stuff.
Decrease your use of these major appliances at Peak times.



Air conditioner



Dishwasher



Washer/Dryer



Pool Pump

Don't worry as much about lower electricity use products.
Examples: TV, lights, microwave, phone charger

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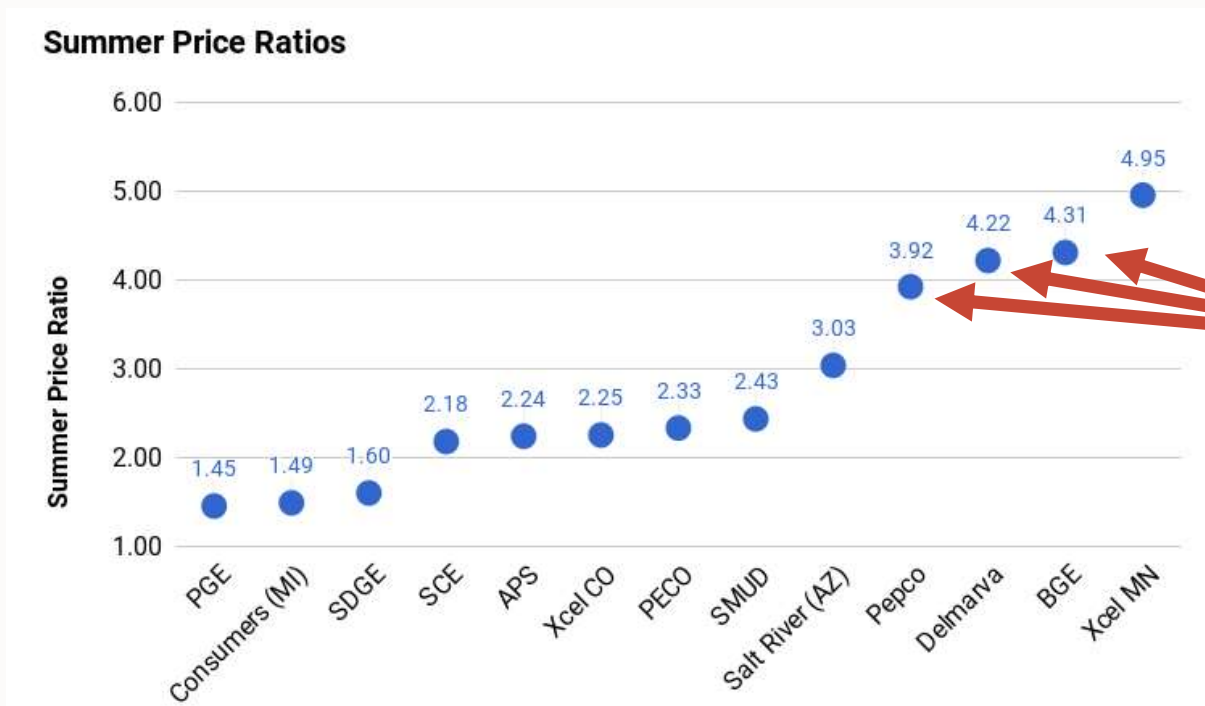
Considering solar? What percentage of your household electricity use do you want to offset with solar panels?

Offsetting 80% of your annual electricity use often provides the most value for your solar system. [Learn more](#)

OK

[Skip this question](#)

The higher the peak-to-off-peak ratio, the higher the risk (and reward) to customers



= Risk to customers