DERA: Prosumers

Devren Hobbs, Director of Product at Tendril
Tendril Snapshot

**MISSION**
We are building a smarter market for energy products & services.

**COMPANY**
DSM Platform & Data Analytics

**ENERGY PROVIDERS**
- Own the Customer
- Optimize Assets
- Grow Revenue

**TENDRIL CAPABILITIES**
- Computer Science
- Behavioral Science
- Energy Science
- Data Science

**CUSTOMERS**
- Regulated
- Competitive Retailers

Turning Data into Insights and Insights into Action
The Prosumer Landscape
Prosumer

1. Someone who both produces and consumes energy.

*Photo courtesy of Department of Energy*
Residential Solar Sees Steady Growth

![Arizona Annual PV Forecast Chart](chart_url)

- Residential
- Non-Residential
- Utility

Courtesy of SEIA
Solar in Arizona

- Solar Installed (MW): 3,399.47
- Arizona Homes Powered by Solar: 505,705
- Percentage of State’s Electricity from Solar: 6.04%
- National Ranking: 3rd (7th in 2017)
2017 Was the Year of Transition in Residential Battery Storage

Courtesy of GTM
Arizona’s heavy air conditioner usage is unique…but creates a lot of opportunity for flexibility
Arizona’s unique energy consumption means a unique rate design structure.
Consumers prefer positive reinforcement … but hesitate to give up control.

**Consumer interest in participation in peak avoidance programs**

- Direct load control: 29%
- Critical peak pricing: 44%
- Critical peak rebate: 59%

*Source: Smart Energy Consumer Collaborative, Consumer Pulse Survey – Wave 6 (2017)*
Customer Personas
What are personas?

- Design personas are an internal tool to help your team empathize with their users / customers.
- They focus on identifying current behavioral patterns and understanding the ‘how’, ‘why’ and ‘what’ of their interactions with your products.
- They emphasize the key tasks the user is trying to accomplish and scenarios they find themselves in.

Use for:
- Defining product vision
- Identifying real use cases
- Defining how the product should work
- Product refinement
Consumers Are Ready to Engage with the Smart Grid

Selectively Engaged (40%)
- **Savings Seekers**
  - “How can smart energy programs help us save money?”
- **Technology Cautious**
  - “We want to use energy wisely, but we don’t see how technologies can help.”
- **Movers & Shakers**
  - “Impress us with smart energy technology and maybe we will start to like the utility more.”

Always Engaged (44%)
- **Green Champions**
  - “Smart technologies fit our environmentally aware, high-tech lifestyles.”

Rarely Engaged (16%)
- **Status Quo**
  - “We’re okay; you can leave us alone.”

Courtesy of Smart Energy Consumer Collaborative
Adam

The Gadget Geek

• Works in technology, and is a first adopter when it comes to gadgets, believes strongly in the Connected Home

• Was the first on the block to own a home battery, likes the concept of resiliency

• **Dislikes**
  Gets easily frustrated by what he considers to be unnecessary regulations
USER EXPERIENCE

Lindsey
First-time, Thrifty Homeowner

- Is interested in dynamic pricing but is worried it may cause her unplanned expenses
- Will forsake comfort to cut costs, but would prefer not to have to make that choice.
- Is frequently checking online to see what her potential bill might be
Angela

*Time and Cash Conscious*

- More likely to accept responsibility for increases, attributing to kids
- Prefers fear appeals (“if you don’t take action, your next bill is estimated to be $30 higher”) — resonates well with budget-conscious people
- Frequently chooses to turn off the air conditioner rather than face a higher bill
Tom

*The Pragmatic Homeowner*

- Chose solar because it made the most financial sense for his family
- Worried about net metering and how that will impact his investment, happy to be grandfathered in
One thing to keep in mind…

- What people say, what people do and what people say they do are very different things
Nearly everyone said that saving money was the most important thing to them.

But at the end of the day, nearly all of them also said they adjust their thermostat on days they are too hot/too cold.
The Challenges of Prosumers
Balancing the needs of the grid and the consumer
Evolving rate design
Empowering customers
Using the smart home to connect with customers
Thank You