



UNDERSTANDING YOUR CUSTOMERS

The Effects of Seasonality on
Energy Savings on Cape Cod
and Martha's Vineyard

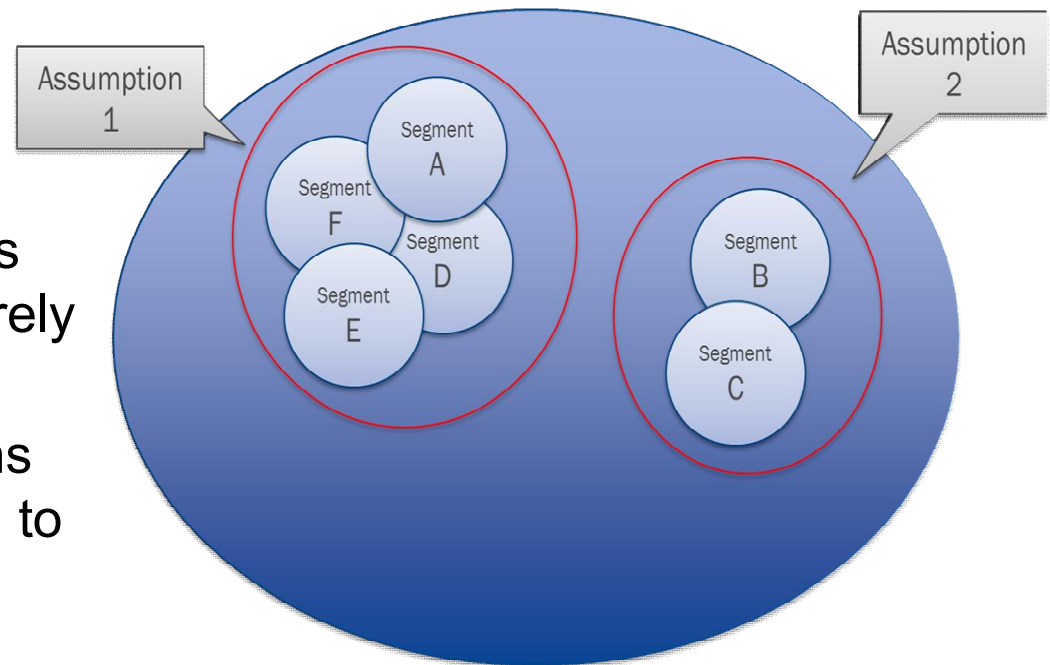
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Opinion Dynamics

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Unique Customer Characteristics Can Impact EE Potential

- Potential for energy efficiency varies by state and even within service territories
- Some differences are well understood
- Other unique characteristics are less researched and rarely quantified
- Previously held assumptions about the market may need to be updated once tested.



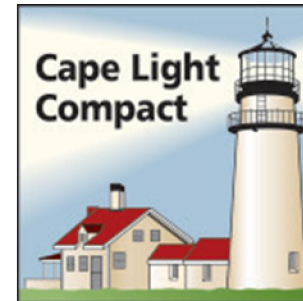
Unique Customer Characteristics Can Impact Program Results

- Programs that do not fully understand their customers' unique characteristics may miss opportunities savings or set inappropriate goals
- Seasonality provides an example of a set of assumptions that should be researched to fully understand their impact on energy efficiency



Cape Light Compact (CLC) Service Territory

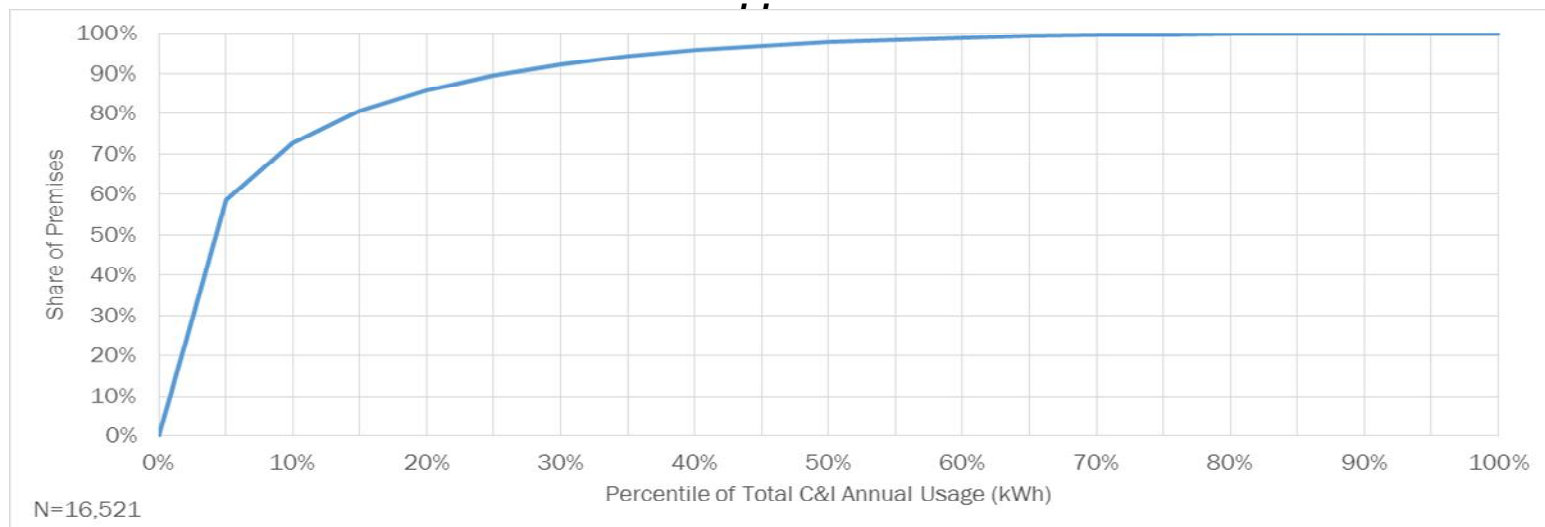
- Program administrator serving Cape Cod and Martha's Vineyard
- 200,000 customers
- Major summer tourist area in New England
- Service territory is highly seasonal
 - 30% of residential customers
 - 20% of commercial customers
- Residential sector accounts for a much larger share of MWh sales, compared to MA overall



Region's Economy is Dominated by Small Business

- Region's economy is dominated by small businesses in service-oriented segments
- Few businesses in industrial segments
- 59% of businesses account for only 5% of total usage

C&I Premises by Share of Total C&I Annual



Seasonality Can Have Significant Effect on Businesses' EE Decision Making

- Consider three identical companies with degrees of seasonality
- In this example, a highly seasonal company has:
 - 66% annual hours of use and kWh savings of year-round company
 - 50% longer payback period
- Increased payback period may deter some companies from making EE investment

Effects of Changes in Hours of Use on CFL to LED Replacement Savings

	Company A	Company B	Company C
Annual Hours of Use	4,380	3,653	2,882
Annual Savings (kWh)	30.7	25.6	20.2
Incremental Measure Cost	\$6	\$6	\$6
Electricity Rate (\$)	\$0.10	\$0.10	\$0.10
Annual Savings (\$)	\$3.07	\$2.56	\$2.02
Simple Payback (Years)	2.0	2.3	3.0

Seasonality Effect Varies by Segment

Annual Seasonal Hours of Use Adjustment Factor

C&I Segment	Seasonality Adjustment to Annual HOU
Lodging/ Hospitality	-11%
Restaurant	-9%
Other Commercial	-6%
Multi-family	-6%
Small Retail	-5%
Government or Education	-3%
Grocery, Convenience or Large Retail	-2%
Automotive, Warehouse/ Distribution or Industrial	-2%
Office	-2%
Health Services	-1%

Does Seasonality Affect Market Barriers?

- Seasonal customers may face other barriers beyond cost effectiveness
- Market barriers affect the achievable potential for programs by driving the rate of installation



Does Seasonality Affect Market Barriers?

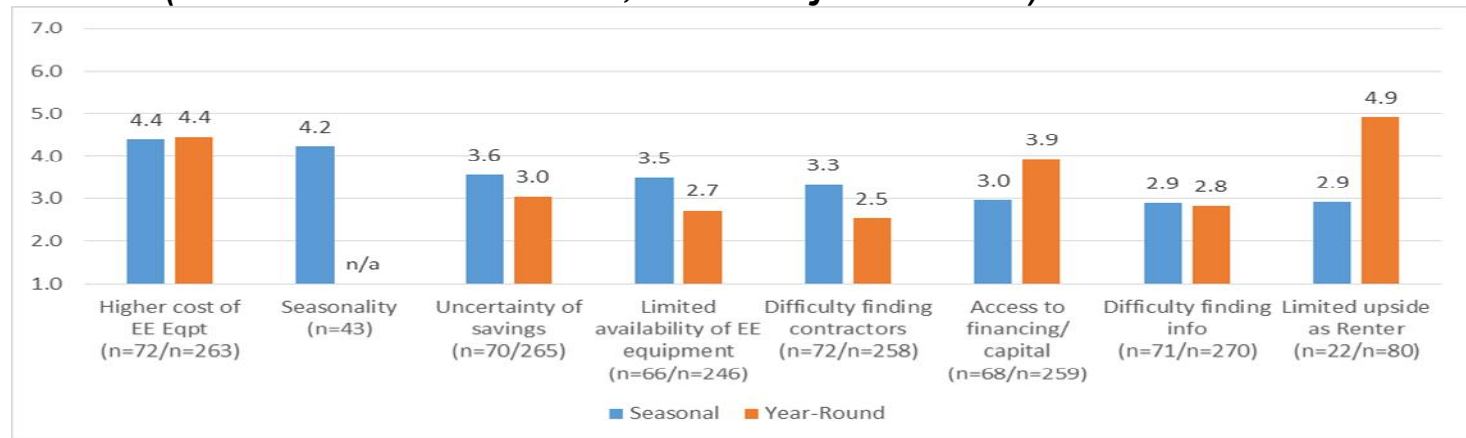
- We asked CLC customers to rate the degree to which common barriers to installing EE equipment affected them, including:
 - ☐ Cost
 - ☐ Access to financing or capital
 - ☐ Uncertainty about savings
 - ☐ Limited availability equipment
 - ☐ Difficulty finding contractors



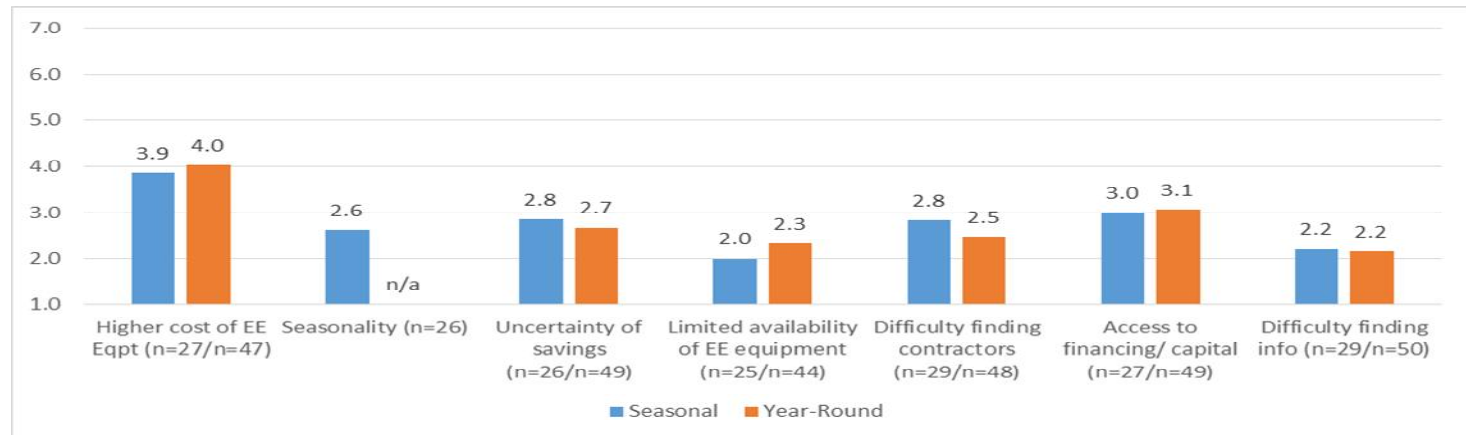
Seasonality Effect on Market Barriers is Mixed

*Mean Level of Barriers to Installing EE Equipment for CLC Customers
(1=Not a Barrier at All, 7=A Major Barrier)*

Commercial Customers



Residential Customers



Our Research Confirmed and Refuted Assumptions about Seasonality

- Seasonality affects hours of use and therefore savings and payback period for individual customers
- The overall effect on segments is less than expected because most businesses are not highly seasonal
- The differences in barriers between seasonal and year-round customers is not black and white
- Through primary research, we were able to provide CLC with results specific to the unique characteristics of their customers

Questions?

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