

Understanding customer behavior



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Motivating households to flexibility

- Savings in electricity costs are the main motive to change consumption
- Pilots/programs with time variable tariffs (RTP, CPP, PTR, TOU) or power based pricing have led to changes in electricity consumption
- But will consumers choose these tariffs?
 - Risk aversion, with RTP savings cannot be guaranteed
 - Opt out approach typically leads to higher enrollment rates
 - Will politicians allow opt out/mandatory DR tariffs?
 - Are the expected savings too high?
 - E.g. SYKE: 153€/year for choosing RTP over a fixed price contract





Other incentives

- Lower emissions from power generation
 - Environmental attitudes often weak predictor of environmentally sustainable behavior
 - Better predictor when behavior is made easy
- Utilizing own generation
- Access to new technologies
- Multiple motives may lead to stronger response
 - E.g. tariff + environmental attitude





What do consumers do in response to price signals?

- Shifting use of dishwasher, washing machine, tumble dryer
 - Limitations: noise, no willingness to run appliances when residents are not home
- Cooking and entertainment are usually considered unshiftable activities
- In some cases, reduction with no shifting of consumption





Control of consumer appliances

- Has explained large part of the response in previous pricing pilots
- Acceptance of control
 - Relatively high for appliances not directly linked to household routines (heating and air conditioning)
 - Lower for other appliances (or at least higher savings required)
- Concerns
 - Can unauthorized parties access the control system?
 - How do I know retailer does not control consumption to high price periods?
 - Does the control system always function as agreed?
 - Will the system adapt to changes in my own needs?
- Could help make environmental behavior easy

