

Survey Design

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An important part of the social science contribution to the Customer Led Network Revolution (CLNR) project is a series of web based surveys. The surveys are intended to:

- 1. Assess the validity of BGR/BGB customer data**
- 2. Assess the basis for determining user profiles**
- 3. Identify correlations between customer profile and consumption patterns**
- 4. Identify correlations between consumption patterns and attitudes about consumption**

3 Part Survey Design

Each survey is broken up into three broad areas. The first area focuses on demographic and infrastructural aspects of respondents' households in the domestic surveys and on business type for the SME survey.

The second area focuses on attitudes and perceptions of energy consumption and will produce data which is directly comparable to previous studies (CER and EDRP).

The third area is less unified in goal and is not explicitly designed to enable comparison with previous studies. Each section serves particular purposes, but is also designed to allow testing of different hypotheses about the possible correlations of attitude, demographics, household infrastructure, business type and energy



Questions

The survey includes questions designed to build a profile of the residents of each household. They allow us to test hypotheses about possible associations between customer attributes (location, age, gender, ethnicity, number of residents and presence or absence of residents with disabilities, occupation, marital status) and household energy profile.

Questions continued

A second set of questions provide information about the type of household and the status of the household (owned outright, mortgaged, rented etc), and the properties of the household structure (insulation).

A later sub-set of questions are designed to identify presence or absence of specific energy consuming items (heating, low carbon technologies, electric vehicles).

The survey also features a series of questions which investigate the attitudes of the person completing energy consumption knowledge as well as their level of engagement with civic society.

Finally, there are questions which provide respondents with an opportunity to comment on the survey and on the goals of the project more generally together with an invitation to participate in follow up research (interviews) through the course of the research.

Analysis Plans

The survey data is primarily to be used in conjunction with smart meter data and so, much of the analysis will be driven by specific hypotheses about the relationship between the types of intervention (such as type of low carbon technology, tariff, control interventions) and patterns of consumption during the life of the project. These hypotheses are linked to the wider test cell design and are detailed in

documents DEI-CLNR-RE028 (domestic) and DEI-CLNR-RE030 (SME). The hypotheses were generated based on literature reviews conducted by members of DEI early in the project (DEI-CLNR-RE012).

The principal predictions for significant variables were used as part of the selection criteria for populating each test cell. Using the statistical software package SPSS, we are able to test for statistically significant associations between these selection criteria and consumption patterns. The null hypothesis is, in all cases, that the selection criteria have no impact on consumption patterns.

The survey responses will also be anonymously linked to customers' energy consumption data as well as qualitative data if they have been visited by the social science team.. This integration of data will enable a better insight into patterns emerging in the large consumption data sets across all interventions and control groups for both domestic and SME customers.

By conducting an integrated analysis we hope to be able to respond to the key learning objectives of the CLNR project, in particular to be able offer insight into the practices that drive electricity consumption, how they vary socio-technically and socio-demographically and the ways in which they are or may become flexible.

