



An Institiúid um Thaighde Eacnamaíochta agus Sóisialta
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**Consultation on the Draft Version of the Smart Meter Data Access Code,
Miguel Tovar and Niall Farrell, Economic and Social Research Institute**

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There is research on estimating the distributional impacts of various energy tariff structures using smart meter data for the USA and the UK (e.g. [1,7]). Having access to this data would allow similar work in relation to time of use tariffs to be carried out, informing efficient time-of-use tariff specifications in Ireland, while also facilitating a better understanding of how to target vulnerable households experiencing energy poverty. These are key priorities for Irish energy policy [3,4].

Regarding question 1 of the Smart Meter Data Access Code on the most suitable way to access the data, it is central to have access to household-level microdata with a high-frequency. This will allow quantifying energy demand responses and distributional effects of time of use tariffs, providing an evidence base to better inform the design of energy and environmental policies. For this type of analysis, having access to data on past events rather than real-time data is sufficient. In addition, research shows that Irish energy demand responds to time-of-use pricing [2]. For this reason, it would also be important to include both energy consumption and prices of the collected smart meter data.

The value of the smart meter data can be greatly enhanced by linking it with other data sources. For instance, recently the UK made similar data sets available for research purposes. The provided smart meter data and linked contextual data comprise the following variables [8]:

- Number of occupants
- Net electricity used for central heating
- Electric vehicles and photo voltaic panel ownership
- Tenure
- Index of multiple deprivation¹
- External temperature
- Floor area
- Dwelling type
- Year of building construction
- Energy efficiency ratings

We are aware that many of the variables listed above are likely not readily available in the smart meter data, and linking data sets is not central in this consultation. However, linking the smart meter data with other data sources would enable important research that can inform energy policy priorities. For instance, regarding variables related to dwelling characteristics, the Irish Climate Action Plan aims to install 600,000 heat pumps in residential buildings by 2030 [5], and this will increase electricity demand for heating purposes. Consequently, understanding the relationship between dwelling characteristics and electricity demand becomes very relevant for the design of energy and environmental policies. To include this information in an Irish context will require matching the smart meter data with other data sources such as the dwelling Building Energy Rating Certificate (BER) or EU Survey of Income and Living Conditions (SILC) microdata. This match might need to be done at Eircode or the Meter Point Reference Number (MPRN) level. For this reason, it would be important to consider the potential role that the Central Statistical Office (CSO) could play by employing its expertise in matching data sets and providing anonymised data for research purposes.

¹ The UK data set included an index of multiple deprivations [6] to measure the socioeconomic position of the household.



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