

Table 1: Available consumer attributes in the Ireland dataset

Attribute category	Attributes, possible values and encoding
Inhabitants	Respondent age, number of adults, and number of children.
Building	Build year, home age, total floor area, number of bedrooms, and home type (apartment, bungalow, detached, semi-detached, terraced, or unknown).
Energy source	Heating type (central electrical, plugin electrical, gas, oil, solid fuel, renewable, or other), water heating type (central electrical, electric immersion, electric instance, gas, oil, solid fuel, renewable, or other), and cooking energy source (electric, gas, oil, or solid fuel).
Consumption	Yearly consumption (in kWh).

Table 2: Available consumer attributes in the London dataset

Attribute category	Attributes, possible values and encoding
Inhabitants	Number of inhabitants, number of males, number of females, mean inhabitant age, min inhabitant age, max inhabitant age, work from home (never, occasionally, about half the time, or most/all weekdays; ordinal encoding), home ownership (owner, rent, free rent, shared ownership, other or missing; one-hot encoding).
Building	Building type (mobile, flat, house-terraced, house-semi-detached, or house-detached; ordinal encoding), number of rooms, number of bedrooms.
Insulation	Double glazing, roof insulation, wall insulation, floor insulation, and warm water tank insulation. For all insulation attributes the possible values are yes, no, don't know, or missing with an ordinal encoding.
Heating	Heating type (gas, electric, solid fuel, oil, other), heating control (manual boiler, manual valves, automatic temperature, automatic timed), and water heating (electric with storage, missing, gas, or gas with storage; ordinal encoding).
Appliances	Information on whether the inhabitants own various appliances such as fridges, freezers, cooking equipment, laundry machines, computers, screens, etc...
Consumption	Yearly consumption (in kWh).