

The politics of energy provisioning: sociotechnical arrangements, inclusion and inequality

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Some research context ...



Project 4.1: Energy, Need and Justice explores the various forms of linkage between energy demand and questions of need and justice, through an interplay between:

- conceptual reasoning
- analysis of outcomes of public deliberation
- analysis of media discourse
- analysis of explicit and implicit notions of need within energy policy and energy provisioning systems



Some general STS notions ...

Technical systems have political qualities – embody ideas, meanings, imaginaries, ideologies – which can serve to include & exclude, empower & disempower

Sociotechnical arrangements of network infrastructures both reflect and contribute to the reproduction of wider patterns of inequality

None of the above is fixed – there are ambivalencies, obduracies and fluidities variously at work – and we may be more or less ‘hopeful’ (Coutard and Guy 2007)



Some framing questions ...

What are the political qualities of (the dominant) infrastructural systems of energy provisioning in the UK?

Specifically how do they carry or embody notions of energy use as a basic need, right or matter of equality? In what ways, for whom, and on what terms?

- **Electricity and gas**
- **Both 'national' grid systems**
- **Liberal markets, competition and choice between providers**
- **Regulator of supply and distribution companies (Ofgem)**
- **An increasingly intense public debate about prices, energy companies, regulation and fuel poverty**



Some incomplete questions ...



What is provided in infrastructural terms?

Who is connected and unconnected?

What are the rules and terms of connection and disconnection?

At what capacity and over what temporality is supply provided?

How is resource flow through the infrastructure managed, charged and paid for?

What are the mechanisms and means of measuring and paying for end use?

How and in what terms are these differentiated spatially, socially or in other ways?

What or who is protected in the event of shortage or breakdown; who or what is a priority?

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Some incomplete answers .. **connection**

	Estimated % of households connected	Right of connection	Cost of connection	Differentiation
Electricity	100%	Duty of distribution company to connect when requested (unless not reasonable to do so)	Any reasonable expenses may be charged to person requesting	
Gas	90%	Duty of distribution company to connect if premises within 23m of main pipeline	All costs are charged to person requesting + they may lay own pipe to get within 23m	Ofgem 'assisted gas connection' scheme for vulnerable consumers

Some incomplete answers .. **disconnection**

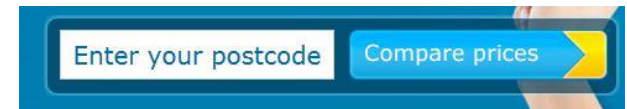
	Action 1	Action 2	Action 3
All customers (regulated)	Try and agree a payment plan the customer can afford	Offer to install a prepayment meter to enable consumer to pay debt and avoid disconnection	Send a disconnection notice 7 days before disconnection
Vulnerable Customers (regulated)	Distribution companies to hold a Priority Services Register (PSR). Listing: old people; disabled; long term ill health	Those on PSR cannot be disconnected between 1 st October and 31 st March	
Energy UK Safety Net (voluntary)	Never knowingly disconnect a vulnerable customer at any time of year	Any customer found to be vulnerable after disconnection to be reconnected	Additional restrictions on disconnection for families with young children

Some incomplete answers .. **paying and metering**

Multiplicity of suppliers and tariffs: in principle enabling choice, hunting out of lowest cost energy and switching – but in practice competencies and capacities to do so not constant.



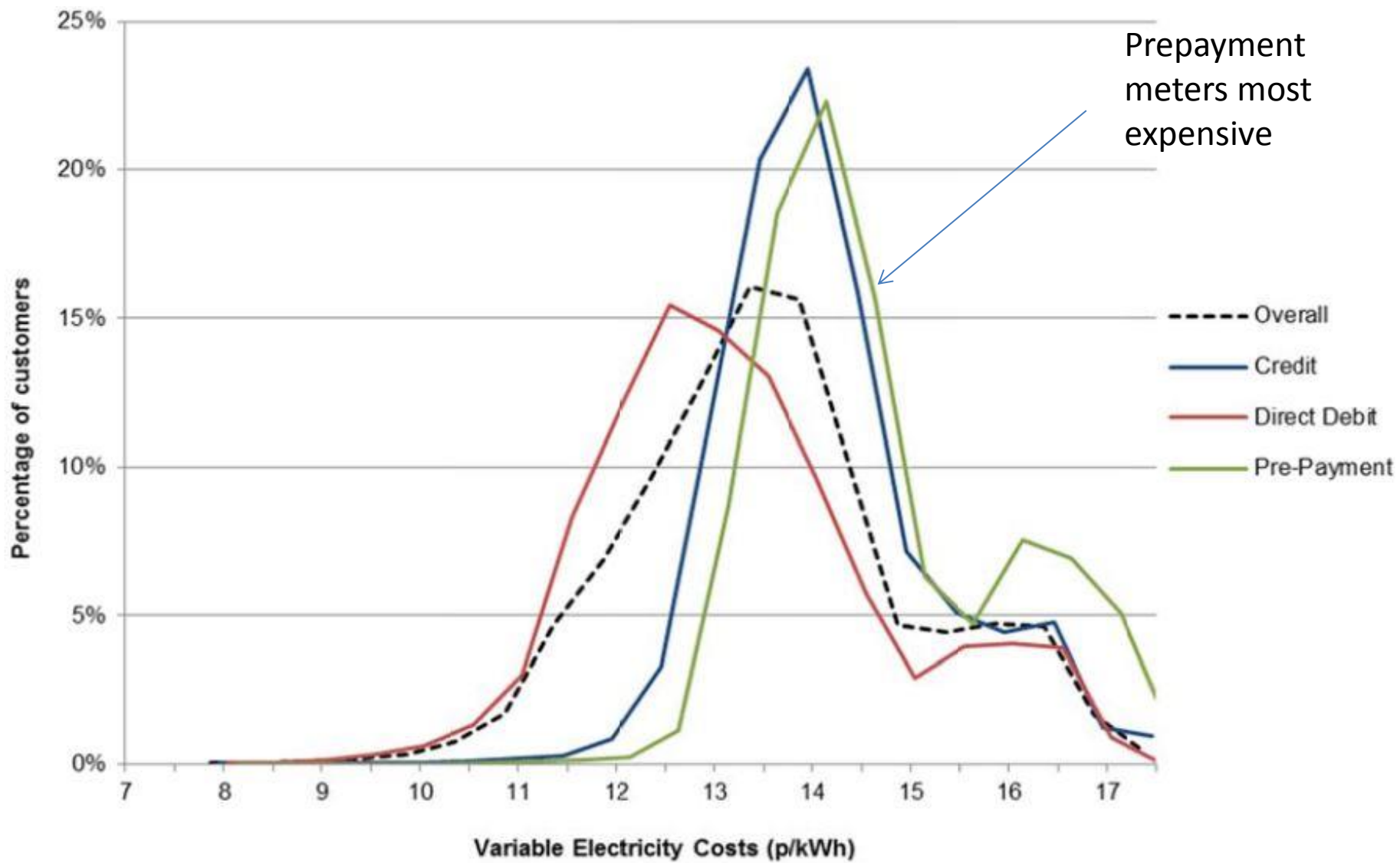
Spatial variation in costs: no requirement for spatial equality. Prices for electricity and gas vary regionally in complicated ways; historic pre-liberalisation monopoly suppliers v others.



Social tariffs: requirements for suppliers to offer discounted tariffs for vulnerable customers

Bill payment methods have uneven unit costs: *pre-payment* often most expensive ...





Prepayment meters most expensive

2013 data

Source: DECC 2014

A partial view of the political qualities of infrastructural systems of energy provisioning



There is an effective universal right of connection to the electricity grid; but not for gas. Electricity has some degree of privileging



Once connected, disconnection is circumscribed but still possible; *but* self-disconnection is enabled through prepayment meters



'Vulnerable' consumers (as imagined, ordered and categorised) are identified and supported: their need for uninterrupted and sufficient energy services is more embedded



Pricing embodies principles of choice and competition, rather than spatial or social equality



Metering and charging measures both support and penalise 'vulnerable' consumers

Some more general observations ...



There are multiple elements that assemble to constitute the political ideas & normativity of provisioning systems



Current infrastructural arrangements to some degree carry historic ideas and principles about provisioning, needs and rights; they are both materially *and* socially obdurate



New arrangements, ideas and principles are layered over older ones, reconfiguring and re-politicising, but not entirely so



Sociotechnical arrangements (therefore) can embody internal normative/political tensions and contradictions: they are not as one



Assigned meanings and implications are contingent rather than obvious and given: e.g. the prepayment meter ... and now the smart meter. Objects of normative contention.

[And ... much more could be said about other elements of provisioning; standards and norms embedded in 'end use' infrastructures etc..]