

From: Afeez Ajagbe

Energy should not be used for social schemes or green investing experiments. Energy supply mix and network should be efficient and affordable. Also renewables should be cheaper.

Renewables are a scam at the moment thanks to ofgem and the government.

From: Alexander Wardrop

Summary

- National Grid and the distribution grid operators will need to be able to shift electricity demand away from peak periods.
- They are likely to do this through smart meters and pricing.
- But at many times, pricing incentives will be insufficient and consumers will be compelled to switch off.
- Smart meters allow this to happen.
- Regular energy rationing is likely in the near future, but will be inadequate to deal with long lulls in the wind, with potentially disastrous consequences.

I hope this helps

Alexander Wardrop

From: Andy Jones

Future of Domestic Price Protection Response

Dear Ofgem,

It is good that price protection arrangements are being reviewed to consider how they can support an evolving market and support domestic consumers to engage in flexibility to lower their costs, benefitting themselves and other consumers. It's an interesting topic, particularly the role of the tariff as the interface between the consumer and the electricity system, how it guides that interaction and use and if flexibility can be made simple so more consumers can benefit.

The following are my personal thoughts on the topic, having worked in flexibility previously and considered how some of the issues might be approached.

Evaluating the cap today

Q1. Do you have any reflections on our list of the cap's successes and challenges?

Focusing on demand-side flexibility and tariffs which support customers to use energy flexibly, one of the successes of the price cap was that it protected customers with electric storage heating who are supplied on 'legacy' time of use tariffs (TOUs); Economy 10, the various Radio Teleswitch and earlier heating tariffs, ensuring they could financially benefit from their flexibility and reduce their electricity bills.

Previously this group of customers, despite their participation in implicit demand-side flexibility through the off-peak charging of their storage heating, had not always benefited due to the uncompetitive pricing on niche tariffs, facing barriers from scarce information on pricing, little competition and choice and difficulties with metering equipment, making switching to equivalent TOU tariffs difficult if not impossible.

The Competition and Markets Authority investigation of the GB Energy Market in 2016 paid particular focus on this group of 'restricted meter' customers and the detriment they faced, making an order specific for this group, the 'The Energy Market Investigation (Restricted Meters) Order 2016'. But the CMA order did not fully address the problem, it ordered that customers on these tariffs should have access to single rate tariffs allowing them to benefit from the larger market size, greater competition and lower prices for single rate tariffs, but that comes at the cost of the customer losing the benefit from their demand flexibility; from their lower cost to serve due to their consumption being heavily weighted to low-cost, off-peak periods.

The CMA order did not address the root cause of the detriment, which was competition issues in the market for TOU tariffs. The price cap, though also not addressing the root cause, does a somewhat better job, ensuring that these tariffs are now at least more cost-reflectively priced so customers on these legacy TOUs can benefit from their flexibility. This is particularly important for customers reliant on electric storage heating given their greater consumption of electricity and relatively higher heating costs as compared to customers with gas heating.

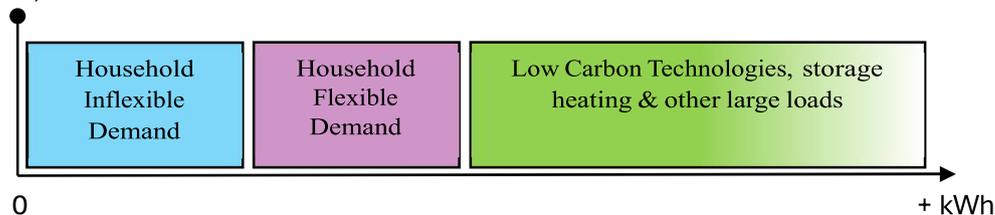
The market failures for restricted meter legacy TOU heating tariffs highlight some important features which are very relevant to this Call for Input and its consideration of how price protection should support flexibility in future:

1. Customers on TOUs and engaging in demand-side flexibility cannot be assumed to always benefit from their participation; the customer is only likely to benefit when there is a competitive market for suitable TOUs, or suitable price protection to ensure the savings are being passed through via competitive TOU unit rates.
2. The market for domestic electricity supply tariffs is fragmented into a number of smaller market segments, divided along the lines of types of use and unique tariff structures and the intensity of competition in these different market segments varies considerably, but broadly the smaller the market segment, the fewer suppliers, the fewer tariffs, the less competitive the pricing:
 - a. In the 2016 CMA investigation, the domestic market had 20.6 Million unrestricted/single-rate accounts, 3.7 Million Economy 7 meters, but only 100,000 Economy 10 meters and 600,000 other restricted meters spread across various other small, niche TOUs. Single-rate and E7 tariffs being a competitive market, the other tariffs suffering competition issues.
 - b. It raises a question of what is the minimum desirable size of market for a particular tariff structure? Is it in consumer's interest to have a TOU market that fragments into lots of small, unique tariff structures each with an insufficient number of consumers to support robust competition, where the lack of standardisation makes comparison difficult and limits substitutability, requiring the customer to switch between different tariff structures.
3. The customer faces a trade-off; a tariff which is more generic, benefitting from a larger market segment with greater competition and more competitive pricing, or a more specialised TOU from a smaller, less competitive market segment.
4. Where customers face barriers to accessing a competitive market and find themselves stuck on a particular TOU, in the absence of price protection, the uncompetitive prices on niche TOUs may outweigh the benefits from flexibility thereby undermining the case for demand-side flexibility.

Evaluating the current cap for the future

Q2. Do you believe that the growing diversity of electricity consumption patterns will make it challenging to retain a flat, universal and stringent price cap? How quickly do you think this will materialise and with what impacts? What evidence can you provide to support your view?

I am going to approach this question from a different angle, framing the problem slightly differently, considering the component parts of a consumer's electricity consumption, dividing it into the following categories, or blocks.



Household Inflexible Demand: lighting, cooking, refrigeration, home electronics and entertainment, instantaneous water heating (electric showers, point of use water heaters), miscellaneous household small appliances.

All of these having characteristics of being broadly common to all households, usage being driven by customer's routines, lifestyle and immediate needs, with a high value to the customer and where changes to the timing or quantity of consumption would result in significant inconvenience, detriment or cost to the customer. The total consumption levels are reasonably stable over time, possibly falling slightly with improving appliance efficiency standards.

Household Flexible Demand: wet appliances such as washing machines, tumble dryers, dishwashers, some instantaneous top-up space heating, other non-essential or non-immediate loads.

Sharing characteristics of being reasonably common to most households, having greater flexibility on when these appliances are operated, allowing time shifting within the waking day to avoid peak periods, shifting to off-peak periods such as afternoons, or at weekends. Where noise and fire-safety risk is acceptable, running them over-night. Total consumption levels are reasonably stable.

LCTs, storage heating and other large loads: Electric vehicles, heat-pumps, air-conditioning, storage space heating, storage water heating, flow-boilers, home battery energy storage systems (BESS).

Sharing characteristics of consuming substantial quantities of electricity, addition of these loads to a household significantly increasing a household's electricity consumption, high potential for demand flexibility and the extent and optimisation of that flexibility having a major impact on consumer bills and, in aggregate, the electricity system as a whole.

Turning to price protection, we currently apply a flat, universal and stringent cap to all consumption, which for most households is the first two blocks only, their household inflexible demand and household flexible demand.

A flat cap applied to household inflexible demand is logical because by its nature, there's very little benefit to charging anything other than a flat rate on this consumption because it has little or no scope to flex without inconvenience or hardship. These volumes are not growing, there doesn't appear to be any data or evidence pointing to this component of consumption posing any significant problems to consumers, suppliers or the electricity system that would warrant a change from a flat rate.

For household flexible demand, again there doesn't appear to be a major problem with a flat cap currently but arguably it would be desirable for both consumers and the electricity system if there were some price signals reaching flexible household demand, to incentivise shifting consumption away from peak times and reward consumption during off-peak, lower cost, low carbon intensity periods within the day and week.

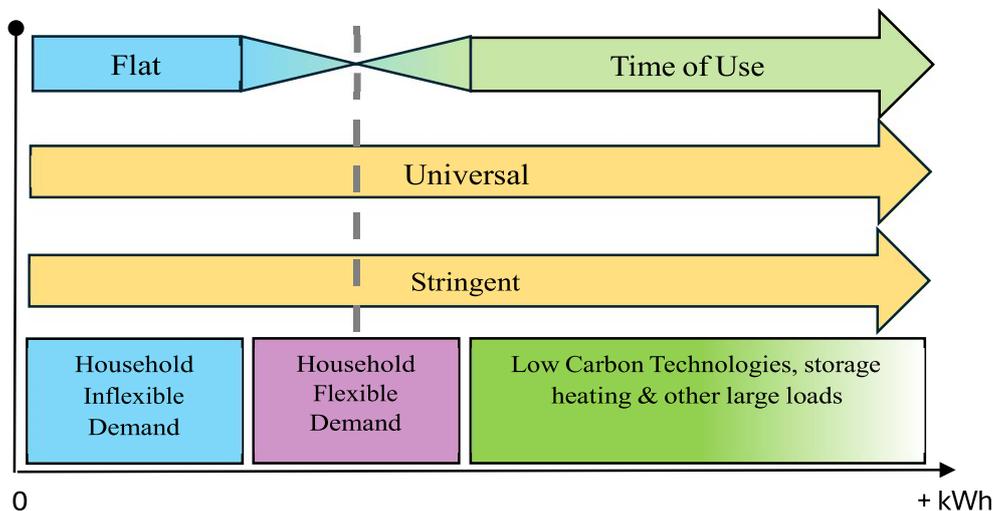
Clearly the problem lies with application of the flat cap to consumption by LCTs and other large loads, adoption of these technologies results in a substantial increase in household electricity consumption, evident from numerous studies and basic desktop modelling, such that if customers operate these loads at peak times or other sub-optimal times, they result in significant costs to the electricity system generally (from expansion of network and generating capacity) and more directly to suppliers, from the wholesale, DUOS red-band and CM Levy costs they will face under MHHS. These costs would then get recovered from consumers and all consumers on flat rate tariffs subject to the cap would then face contributing to the crosssubsidy of consumers using these loads inefficiently.

Fortunately, all of these loads have a reasonable degree of flexibility, but that flexibility needs to be incentivized and rewarded through the tariff, making flat rate tariffs inappropriate for these loads. The loads need to be exposed to time of use price signals, with the consumer supported to use the flexibility available to minimise their bills and use the electricity system efficiently, to protect other electricity consumers and the system from the costs they could potentially impose.

For the universality principle, the wider policy context combined with falling equipment costs is driving the adoption of LCTs, expanding to a broader range of owners, moving away from these being limited to wealthier, tech-savvy, engaged consumers who might arguably be in less need of price protection, towards the goal of ultimately all consumer groups owning these technologies.

Social housing is being built and retrofitted with heat pumps. EVs are being offered through Mobility vehicle scheme providers. For many decades there have been residents of social housing reliant on storage heating. Any simplistic approaches of restricting price protection only to those consumers without these technologies, or exempting TOU tariffs would thereby exclude those less engaged and vulnerable consumers who are likely to need more support and protection as they adopt these new technologies.

Putting it together and thinking about the components of a customer's electricity demand, the ideal price protection mechanism is one like that shown below:



Q3. What plans do suppliers have to launch ToU tariffs and to incentivise customers to shift their electricity consumption once MHHS is implemented?

Looking at British electricity supplier's TOU tariff offerings to date, a few key points stand out:

- A very narrow focus on type of use tariffs for new technologies. Most are launching TOU tariffs designed to provide off-peak periods for particular types of use, electric vehicle tariffs and to a lesser extent, heat-pumps tariffs.

- A lack of standardisation in tariff structures between suppliers, tariffs are not directly comparable so evaluating and comparing the costs of different supplier's tariffs is not easy for consumers.
- Restrictions on consumer access and barriers to competition. Many suppliers are imposing restrictions and hurdles to limit access to even simple static TOU type of use tariffs so that only consumers who have EVs or heat-pumps are allowed access, and in the case of some suppliers, requiring consumers to demonstrate this with documentary evidence.
 - This is a rather concerning emerging feature because it means that consumers with other technologies or loads who might still benefit from these competitively priced TOU tariffs are excluded, they do not benefit from greater competition in the TOU tariff market.
 - In a well-functioning market, you would expect that a growing number of TOU tariff offerings and the greater competition would be a rising tide that lifts all boats, so that all consumers with flexibility could benefit, including those with storage heating, flow boilers, non-conventional heat-pump systems such as airconditioning systems in flats and apartments. That isn't the direction at present in the British market, being generous this might be justified for a period of time as these tariffs are new, being trialled and still primarily launched for R&D purposes, but if these practices continue in the long term it will be damaging for competition and consumers.

Comparing the British market to other countries, what really stands out is the divergence in practice on general purpose TOU tariffs. Looking at some of the countries or regions which are ahead of Britain on TOU adoption; Californian utilities, Ontario, parts of Spain, Portugal, all have general purpose static TOU tariffs designed to reflect the price signals and characteristics of an electricity system:

- They use 3 tier tariff structures, On-Peak, Mid-Peak, Off-Peak
- On-Peak bands spanning the system peak periods, to reflect marginal network and generation capacity costs, provide a price signal to recover those costs and encourage usage at other times.
- Off-Peak bands to encourage 'valley filling' and efficient utilisation of capacity.
- Mid-Peak bands covering the rest of the day.

Stepping back and thinking about the design of a TOU tariff, considering the costs and price signals within an electricity system, logically this is the kind of simple TOU tariff you would expect to see. These tariffs are not specific to certain types of use like the 2-rate type of use tariffs used in Britain, instead they're general purpose, broadly suitable for all uses because they reflect system costs. EVs can charge off-peak. Electric heating and air-conditioning is encouraged to engage in peak-time avoidance. Flexibility from household wet appliances is incentivised.

In other countries this type of 3-rate static TOU tariff is one of the main designs, compared to Britain where only a single small supplier currently offers this to British domestic consumers.

Q4. How quickly and at what scale do you expect customers, especially those with large flexible loads such as EV and solar / battery users, to take up ToU tariffs once MHHS is implemented?

It is surprising that there are no published datasets which track the uptake of TOU tariffs because this is a key performance indicator for the state of the market for domestic consumer's engagement with demand flexibility and on which to base estimates and extrapolations of future consumer uptake.

DESNZ collect and publish smart meter installation statistics on a quarterly basis. One of the justifications for the smart metering programme was the benefits it would provide by enabling flexibility, it would seem logical that this outcome should be tracked as part of these statistics, even a simple high level table of total consumer uptake of the common TOU tariff structures as would help in tracking performance.

Q5. In addition to the factors set out in this chapter, are there any other important changes that might affect the ability of the current default tariff cap to achieve its objectives?

No comment.

Options for evolving price protection for the future

Q6. Do you agree that we need to retain some form of price protection in the retail market?

Yes some form of price protection is still necessary, recent market developments have seen a significant reduction in the number of suppliers in the market and the stabilising interventions have combined to reduce competition in the market and raise barriers to entry.

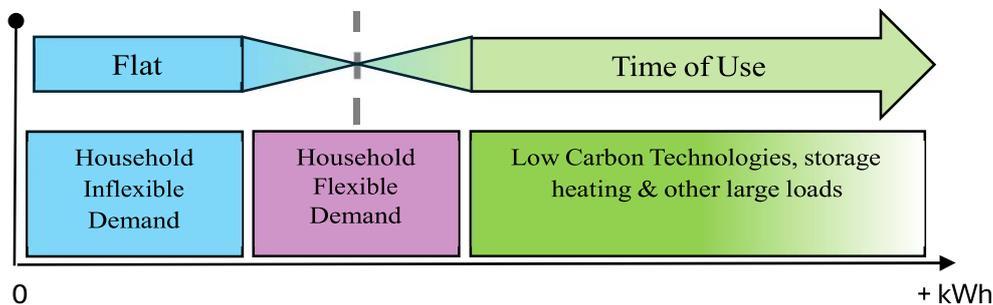
Focussing on access to TOU tariffs, while suppliers are launching new type of use tariffs for EVs and heat pumps, there is a lack of new simple, general purpose TOU tariffs accessible to all consumers. The competition issues previously identified in TOU storage heating tariffs remain unaddressed and supplier practices prevent these customers from accessing the competitively priced EV and heat-pump tariffs even where these might be suitable alternatives.

Q7. Do you have views on which of the three key parameters – the cap being flat, universal and stringent - should be relaxed when considering future price protection options?

Focussing on the ideal solution, the parameter which needs to be adjusted is the flat cap, but ideally this would be retained on the customer’s Household Inflexible Demand because this won’t flex and being inelastic it can bear a flat unit rate which averages costs across time of day and can include some degree of cross-subsidisation between different consumers, as it does currently with the existing flat rate tariffs.

For some portion of Household Flexible Demand and all of LCT, storage heating and other large loads, the cap should be TOU to ensure these receive price signals to incentivise and reward efficient use, to protect other consumers and suppliers from cross-subsidy costs and encourage efficient use of the electricity system.

On the face of it that might appear impossible to achieve, but it is possible as discussed in later questions, though there is a question of whether the benefits justify some added complexity.



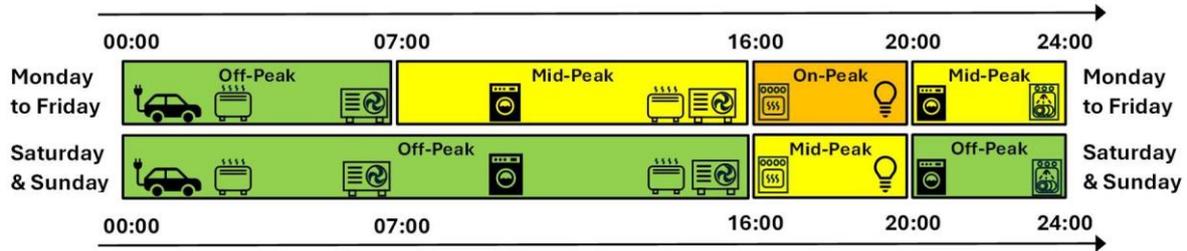
Q8. What are your views on options discussed? Do you have any preferred options or combination of options?

Flat Cap: For the option of moving away from a flat cap, the simplest solution would be to adopt a general purpose, 3-rate static TOU tariff (on-peak, mid-peak, off-peak) as used in other countries around the world. They are simple to understand, the off-peak band incentivises ‘valley filling’, the on-peak band incentivises ‘peak avoidance’ and the mid-peak keeps the peak costs squarely within the on-peak band, avoiding the need to smear on-peak costs across other times of day as occurs with the 2-rate off-peak/valley-filling tariffs. By ring-fencing peak costs into the on-peak band, the off-peak and mid-peak unit rates would be expected to be below that of a flat rate tariff and the mid-peak would be below the day rate of Economy 7 and EV tariffs, so for most of the hours in the day, the unit rate should be lower than existing major tariffs.

A 3-rate tariff design for Britain, considering wholesale prices, network charges and Capacity Market Levy, would quite likely look similar to Economy 7 with a weekday evening on-peak time band added and an off-peak band covering most of the weekend. Like other countries, there may be a case for a seasonal element, having a winter set of time bands, and a summer & shoulder months set of time bands to reflect changes in seasonal demand and generation patterns (shifts in costs, timing of peak demand, solar PV duck curve in summer periods).

Such a tariff would be suitable for EV charging off-peak, for heat-pump pre-heating in the early morning off-peak band and during mid-peak so avoiding evening peak. Storage heating can charge off -peak, top-up in the mid-peak. Domestic wet appliances can be used off -peak overnight and at weekends or during mid-peak, and there are signals for peak-avoidance.

It's likely to look something like that shown below, as an illustration:



The disadvantage of this tariff design is the on-peak band, which would be more expensive as it would reflect the actual peak-time costs of electricity consumption which are hidden by most existing tariffs, consumers are still paying these costs but they never directly see them because they are smeared across other times of day. The idea of a peak rate would be something new for consumers here, but it is common in many other countries, not only through static TOU tariffs but also dynamic TOU and the US utilities which use Critical Peak tariffs.

It's a reasonable 'one-size-fits-all' tariff to substitute for all of the static TOU tariffs – Economy 7, Economy 10, the EV tariffs and the heat-pump tariffs. While it is slightly more complicated with 3 rates rather than 2, by being more general purpose, it avoids the need for lots of different 2-rate type of use default tariffs, avoids the need for a mechanism to assign a customer to a particular TOU tariff type, avoid issues with consumers being excluded from access based on their particular equipment or loads and it supports different combinations of LCTs and flexible loads.

If it could be standardised, we might even see it spur the emergence of a large, competitive market in Britain for a mass-market general purpose TOU tariff, to support greater demand flexibility.

For the option of Dynamic TOU, even simplified versions, the potentially significant risk which should first be studied in much more detail is that arising from the interactions with electric heating, resulting from correlations between wholesale electricity prices, temperatures, windspeeds and the consumer's response to these price variations, how it affects their usage of heating and household temperatures.

The concern would be that electricity system demand is highest during periods of cold winter temperatures, with generating capacity margins very tight when these occur during periods of high pressure, still conditions when wind generation is low (the 'dunkelflaute' periods). The combination of low wind generation, high demand and narrow capacity margins pushes wholesale power prices to high levels, with this occurring at the same time as consumers with electric heating are needing to use greater than normal amounts of electricity to heat their homes.

With dynamic pricing, the tariff would be sending sharp price signals to consumers to reduce electricity demand on exactly the days and weeks that consumers with electric heating find themselves needing to use more electricity to stay warm and safe. That brings a wide range of welfare concerns for consumers with vulnerabilities who face financial pressures, who may curtail their heating in response to the high electricity prices, resulting in cold homes which are known to be harmful to consumers health and welfare.

Electric heating does not have the degree of flexibility necessary to reduce demand during these long duration, high price periods, for non-storage heating the flexibility is limited to a few hours or so at most. A static TOU tariff where the price signals to reduce consumption are limited to an on-peak period of upto 3 or 4 hours, with no price signals to curtail consumption across the day as a whole seems more appropriate. Or, as

practiced in other countries, some form of critical peak tariff, again targeting a reduction in consumption of at most a few hours across system peak, though this would likely first require enabling interventions in Capacity Market design to make these tariffs possible in Britain.

Universality: Both of the options appear rather flawed because of their exclusion of people with certain LCTs or exclusion of TOU tariffs, at a time when the whole thrust of Government policy is to broaden ownership to all consumers.

In coming years the consumer with a heat-pump could be a vulnerable person living in social accommodation. The EV owner could be a person living with disabilities provided with an EV through a mobility scheme provider. The assumption that anyone with an EV or heat-pump is not vulnerable and is able to navigate the competitive market is inconsistent with that policy drive to broaden uptake of these technologies across all consumers.

Expecting consumers to access the competitive market would be more reasonable if Britain had a well functioning, competitive market for TOU tariffs but the market has not reached that point yet:

- Markets for the legacy heating tariffs are not particularly competitive, suppliers are not launching competitive tariff offers, some newer suppliers offer no tariffs at all, the situation appears little changed from when the CMA investigated in 2016. Further, these consumers cannot access other type of use tariffs because suppliers typically impose restrictions; ownership of an EV or heat-pump, so even where competitive alternatives exist, access to them is prevented.
- There is no standardisation of tariffs, price comparison tools for these are not yet developed.
- Britain does not have a large market for a standardised, general purpose TOU tariff, as you see in other countries.

Q9. In particular, which options or combination of options do you think would best protect vulnerable customers?

Probably the single most important regulatory protection is not mentioned in the CfI, that is the standardisation of a simple, general purpose TOU tariff structure, to create a large, competitive market of perfect substitute tariffs, from numerous suppliers, free from any exclusionary practices, which is accessible to all consumers. That provides the competitive market backstop which supports consumers to engage and benefit, ensuring that changes to price protection can be made with the reasonable assumption that all consumers have access to a competitively priced alternative from the market, which is not currently the case.

Focussing on the options, a key issue which determines the answer to this question, is for how long is any proposed price protection regime expected to last and when will it next be changed again, 2 years? 5 years? 10 years? Is it targeting the market as it is today, or is it expected to be durable for the long term.

If it is short term, then within that time frame uptake of LCTs and the need for TOU tariffs is likely to be lower, which points towards favouring measures which maintain a flat cap for vulnerable consumers by making it more exclusive. Though the issues in the market for the legacy heating tariffs would require that price capping should remain on these existing TOU tariffs where competition is limited.

Over longer time frames, the ownership of LCTs will broaden and more vulnerable consumers are likely to own these and need the some form of price protection, so a long term price protection regime is likely to need some form of TOU cap.

Q10. How should consumers with large flexible loads, mainly EV and solar / battery users, be treated with regards to future price protection?

As in Q9, with Government policy goals of decarbonising domestic heating and transport, that requires consumers across all groups to take up electric heating (heat-pumps, storage heaters) and electric mobility (BEV/PHEVs), which will include vulnerable consumers who may struggle to navigate the market.

Thinking about technology diffusion models, as the market broadens and adoption grows beyond the 'Innovators' and 'Early Adopters' to the 'Early Majority', 'Late Majority' and eventually 'Laggards', it will encompass more consumers who are less tech-savvy, less engaged in their energy use, less likely to switch suppliers and more 'sticky' and cautious of complex TOU tariffs. Any solution needs to be cognizant of this.

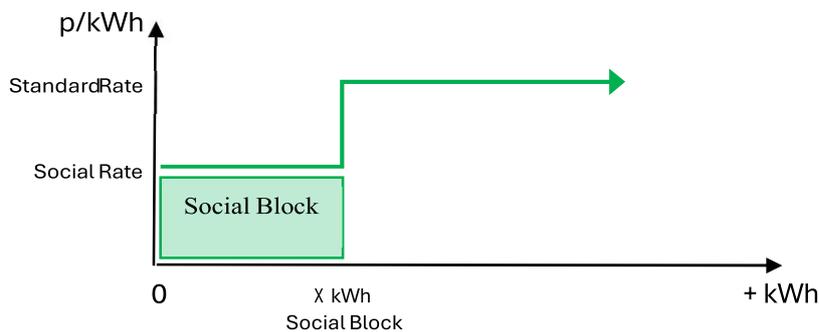
Q11. Are there any additional options that we haven't, but should be considering?

Aside from flat rate and TOU tariffs, the other major tariff type is the 'Block tariff' which is used around the world and has been used in Britain previously. The block tariff charges a specific unit rate for consumption upto a certain threshold, within a time period, then charging a different rate on the additional consumption beyond that volume upto any further thresholds, having 2 or more blocks.

The block rates can be declining, typically used to recover fixed charges from an initial block at a higher unit rate before reverting to a standard rate. Used to provide quantity discounts to attract new loads and to reflect lower customer and fixed unit costs on larger quantities.

Inclining block rates have been used as a form of social welfare intervention in some countries, charging lower rates on a first block for certain consumers, to provide them with a basic allowance of low-cost electricity.

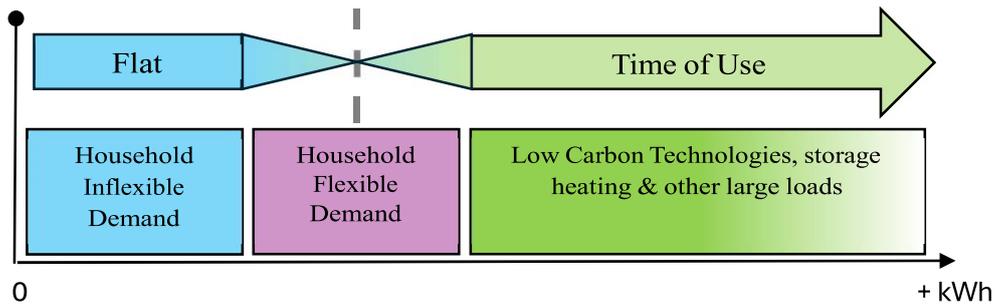
It is debatable whether electricity market regulation is an appropriate and fair method for delivering social welfare interventions and redistribution, and whether electricity suppliers are the appropriate group for making determinations of eligibility and providing that targeted support. That said, if there is an argument for exempting other classes of consumers like large Energy Intensive Industries from various electricity industry charges, presumably a similar argument could be advanced for a targeted 'social' block tariff for a limited group of vulnerable domestic consumers, for a basic monthly consumption allowance exempt from certain charges, set at volume that treads lightly on the electricity system and other customers.



Hybrid Block – Flat – TOU Tari :

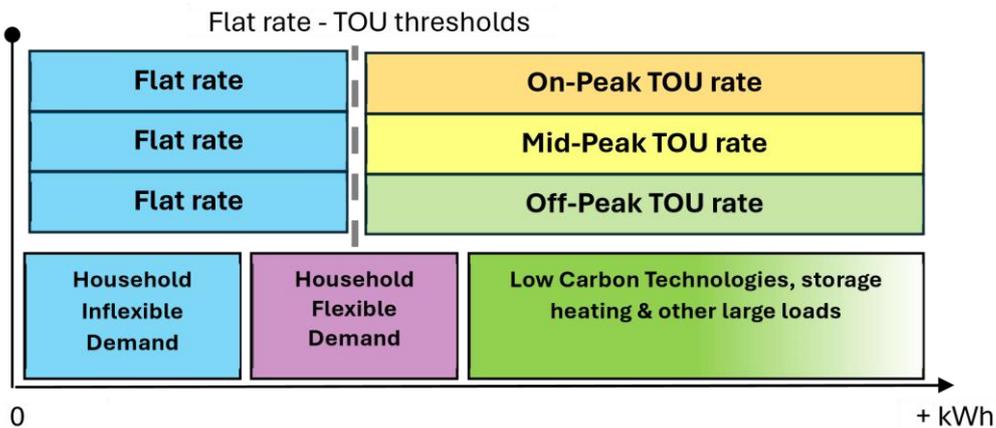
Changing topic away from social tariffs, going back to the consideration of price protection and whether it should be flat or TOU, the ideal is that it should be both; the consumer should have a flat rate tariff on a core level of Household Inflexible consumption, moving to a TOU tariff on their Flexible consumption and TOU on the consumption by LCTs, storage heating and other large loads.

Such a tariff would avoid the need to determine whether a customer's consumption is due to them owning or using certain LCTs, triggering tari switches between flat-rate and TOU tariffs. It also avoids potentially complex decision-making on determining exactly how and when consumers should be switched between tariff types, which at a high level in principle sounds simple, but it raises a potentially endless list of different scenarios which would need consideration.



One way that might be achieved is an innovative re-purposing of the block tariff mechanism, using it to change the mode of operation of the tariff, starting in operation as a flat rate tariff up to a threshold volume of consumption per month, with the block mechanism changing the operation to a TOU tariff for additional consumption beyond that.

Taking the general purpose 3-rate static TOU tariff discussed in Q8, adding a starting flat-rate block to each time-band, with the initial flat-rate blocks all set to the same unit rate across all TOU bands, gives a TOU-block tariff which behaves like a flat-rate tariff initially. Then if the customer's consumption rises and crosses the individual flat-rate thresholds, the unit rates charged on their additional consumption are the respective TOU rates.



The operation of the flat rate block is similar to existing flat rate tariffs, costs are averaged across time of day and day of week, there is a degree of cross-subsidy between different consumers, with the unit rate reflecting the total consumption patterns of consumers. Customers with average levels of consumption could use electricity at peak times for essential, inflexible purposes without concern or anxiety for high peak costs because of the flat rate block.

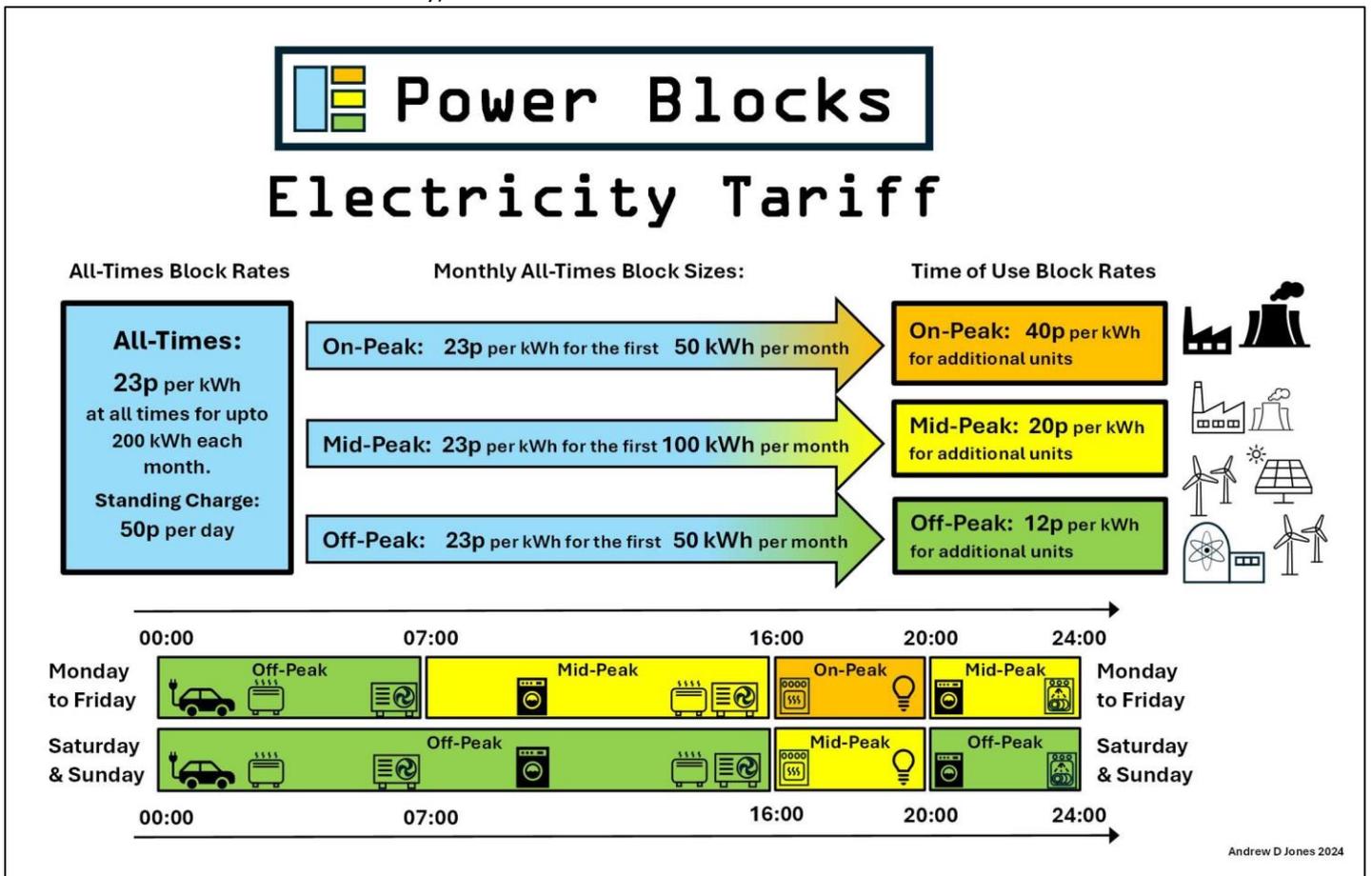
A block threshold quantity would need to be set for each of the TOU time bands, if these were set to accommodate typical consumption patterns for customers without LCTs, the tariff would function as a flat rate tariff for most customers. It might be better to keep thresholds the same across all blocks for simplicity, or set the off-peak threshold somewhat lower, to incentivise consumers to move into the off-peak TOU block and engage in flexibility.

Where customers purchase an LCT, or if they have particularly high levels of consumption at certain times, their consumption would cross the block thresholds exposing them to the applicable TOU rates on that additional consumption. For off-peak or mid-peak consumption this would reduce their unit costs, incentivising load shifting to off-peak times. For on-peak consumption the customer would pay the cost-reflective on-peak TOU rate incentivising them to use their flexibility to shift consumption to mid-peak or off-peak periods, or they would pay the actual costs of their consumption.

Unlike existing flat rate tariffs, the block mechanism puts a cap on the level of cross-subsidy between individual consumers, it also ensures that all consumers have access to time of use price signals from a general-purpose TOU tariff, so if they do increase their consumption or buy or install an LCT, they do so while suitably incentivised and can benefit from using their flexibility without needing a tariff change.

One of the key questions is if the concept and operation of the tariff could be clearly communicated and understood by consumers. Considering mobile phone tariffs, until recently these incorporated a range of monthly allowances; a number of inclusive telephone minutes, a number of inclusive SMS texts, a volume of mobile data after which a set of rates applied, very similar to the principle behind this tariff. Many mobile phone operators provided a simple app for people's mobile phone to show them their current allowance and consumption, something similar might be possible or displayed via the smart meter IHD.

It would need further investigation and trialling, but setting out the tariff visually, how it might be presented to a consumer, it looks like it could be reasonably understandable – see illustrative example below (prices and volumes are for illustration only):



I include this as a suggestion because it seems a reasonable solution to the problem; one default tariff which provides both the simplicity of a single rate for low to average levels of consumption, insulation against time of use on-peak pricing for essential inflexible consumption, while at the same time, providing those TOU price signals on additional consumption, needed to incentivise and reward flexibility when consumers install or purchase LCTs, with a general purpose TOU structure that broadly works for most LCTs and purposes.

From: Barry Lewis

Dear sir's madame

So you are looking to put more costs on to people ie the debt, what you already did this levelling up standard credit direct debit. Its not my problem to pay for others, everything you have done or are doing is has slightly increased my bills. Mainly due to the standing charges, or which more than what I'm paying for my actual energy use. I'm on the variable standard tariff, so I pay what the energy price cap, everything you have done recently is to protect people with debt, companies profits etc. What have you done to help me nothing, my concerns are increased costs due to net zero this dynamic system your on about. It just seems people who use less or low users of energy are ones being shafted. What please can you tell me are you doing to do to help me with my costs, I don't have a smart meter so I suppose I'll get charged more because of this.

Kind regards

Barry Lewis

From: Debra Abbott

Dear Sirs

I wish to give my views on the future of the price cap.

Setting different rates based on whether or not you can be bothered going to work or not is a ridiculous idea which will just make work virtually a hobby for most people. It is clear that the term "vulnerable people" includes those on benefits, how EXACTLY will this incentivise work?

The idea that you should pay more to subsidise people who are already subsidised is preposterous and if you go down this route, you can expect pushback.

Many working people are barely earning more than those on benefits as it is and those people will just leave the workforce to take advantage of the lower rates.

If you want to change the price cap then get rid of the standing charge so that ALL low energy users benefit.

Yours faithfully

Debra Abbott

From: Francesco Chemolli

Dear Mr Jarvis and Ofgem all,

as apparent from the current state of the energy market in the UK, it is obvious that the price cap is not working. We see energy companies oscillating between failing due to undercapitalization, and making ludicrous profits while families struggle to make ends meet. We see forced installation of energy meters, we see the abuse of smart meters to cut off struggling customers. This is obviously unacceptable.

Regulating such an environment is a challenge, I don't envy your position.

But it is a role that needs to be fulfilled, so here is my feedback.

1. profit of companies comes second to social well-being. If this means that energy companies will fail and the state will need to nationalise them, so be it.
2. In case time-of-use tariffs were to be introduced, there is a very simple metric that can be applied: the time-of-use tariff needs to be beneficial in economic terms **to the consumer** on a monthly basis. In other words, if someone were to sign a contract with time-of-use clauses, and if on a given months the bill were to be higher than what the cap would have allowed, then the user will pay the capped cost. This will allow companies to offer tariffs that influence user behaviour towards off-peak consumption, without burdening consumers with business risks.
3. Any new cap should be lower than the current baseline cap. Any changes in the price cap should be only coupled to the oil and gas prices for in proportion to the reliance of the UK energy production on these sources. In other words: it is not acceptable that if the price of oil doubles, the cost of wind energy doubles
4. The baseline cap should not be allowed to move by more than RPI-1% or 0%, whichever is lower
5. No companies should ever be allowed to introduce RPI-based in-contract price increases. We are seeing it in telephone companies' contracts, it's not doing any good

6. Any company distributing over a certain dividend (as a fraction of capital) or having executive compensation pass a sensible threshold should automatically be subject to a thorough public audit. The learnings from such an audit should be made available to all companies in the market, and the energy cost cap should be reduced with the assumption that the economies will be adopted by the market, and consumers should benefit from them

Looking forward to hearing your feedback about these proposals,
kind regards.

Francesco Chemolli

From: Geoff Rothern

I have 3.5kw of solar panels. Will I get more for the electric I put into the grid to offset the higher price I will have to pay for my usage at peak times. If no, then I will invest in batteries and more panels to become self sufficient and go 'off grid'. If I do this, will I still have to pay the rip off compulsory daily charge as I won't be drawing any electricity from the grid.

I feel that we people that have invested in panels to help our bills have been totally ignored by the government and Ofgem, when it was the government that pushed for us to go solar as it were.

Then only ones that will profit from this scheme will be the big suppliers from their exorbitant rip off prices which Ofgem back.

Best Regards

From: Gez Major

Just a few comments regarding your current ideas around price capping.

First of all - it doesn't work. You are making everything really complicated when it doesn't need to be.

A dynamic cap just allows the suppliers to up their prices when they want to by lobbying Ofgem.

Prices go up quickly and come down slowly when related to consumer bills.

Set the price at the beginning of a year for unit rates and make sure everyone uses this price. Competition has failed which is why we are at the place we are now. Realistically there should be one supplier with a set price. As the wholesale market evolves in that year you then reset the unit price at the start of the following year. The UK wholesale market, which is run in a different way to the European market is open to volatile changes and we should change this quickly to protect suppliers and customers. That is your job and you have failed to do this.

Get rid of the standing charge as this is basically a tax and cannot be justified. The maintenance of supplier equipment is a cost for the supplier and not the consumer. Customers failing to pay should not be a cost borne by other customers that pay - this is an unfair practice.

As a regulator you should be urging the Government to drop VAT on fuel. VAT stands for Value Added Tax brought years ago on luxury items. Gas and Electricity are not luxury items, they are necessary services.

I am appalled by the way Ofgem has behaved towards consumers and Breirley and the others talk about helping consumers but their actions do the opposite.

It's time to allow ordinary people onto the regulator board to oversee Ofgems work. A regulator that is partly paid by licences to suppliers has their hands tied and is not independent. This needs to change.

Regards

Dissatisfied consumer

From: James Wilson

Dear Ofgem

My energy supply is electricity-only with two meters, one for off-peak use for night storage heaters only and the other for everything else. A few years ago nPower suddenly withdrew the two-rate system I was on (Economy 11) and I began paying day-rate for all my electricity. This continued when eonNext took over from nPower and at present I am paying 28.06p for every unit I use at any time of day. This will continue until the end of my fixed term contract at the end of June so I do not benefit from the present reduced price cap, but that is not my concern here. It is *the complete lack of acknowledgement by EonNext and others of my off-peak use* which is the problem.

From July 1st 2022 to June 30th 2023 I used a total of 9,363 units of electricity at a rate of 36.4p per unit, giving a basic total of £3,408 (plus VAT and Service Charge) for the year. Since then I have been paying a lower rate of 28.197p per unit, fixed until June 30th. If I assume the use of the same 9,363 units by that date, the annual estimated cost will be £2,640, £768 cheaper than last year which is good news.

BUT if the present eonNext twin-rate of 32.06/13.71 was applied to those same 9,363 units divided between the two meters my net bill would be only £1,864, a further saving of £775.

Having two meters precludes me from having a Smart meter to send automatic readings to eonNext and I am happy to provide the readings every two months. Unfortunately my situation has not appealed to other suppliers so I have been stuck where I am for several years past. I am at present in touch with Octopus energy who say a transfer is complicated and have asked me to supply several bits of information before quoting for a transfer. This just confirms the difficulty I have in my situation.

In short, that is why...

I want you to know that I am completely in favour of your proposal to make off-peak electricity more accessible but whatever scheme you introduce you must commit to holding the suppliers to the rules.

Yours etc

James Wilson

From: Jason Granger

Greetings,

I appreciate it is difficult to set pricing with the market so volatile but I think this should be viewed in a different way than had been historically.

Pricing should be tiered, in that those who use more than average, should pay more.

For example if the average domestic household uses 3000kWh, the pricing thoughts be tiered from pre 3000kWh and post 3000kWh, e.g.

Tier 1 - 0 - 1999kWh - 20p/kWh

Tier 2 - 2000 - 2999kWh - 25p/kWh

Tier 3 - 3000 - 3999kWh - 30p/kWh

Tier 4 - 4000 - 4999kWh - 40p/kWh

And so on...

This creates an incentive to keep usage low, and higher usage households payments will in an effect, subsidise those who are making an effort to reduce use levels.

Additionally, pricing supplier get paid should not be a single unit value, but tied to the energy production type, and cost of production, thus if renewable energy is cheaper to produce, purchase of energy from this source should be cheaper as well.

This will again create an incentive for service providers to buy energy from renewable sources rather than the more expensive energy produced from fossil fuels.

I think, as with most things, what the incentive is the most important driver to achieve a positive result.

As a citizen, I do believe that profits are what drives decision making, and this was obvious when the energy cap was increased, and energy companies made record profits, and there was no recompense for this profiteering, in fact, to the majority of the working class, it appears bad policy and wrongdoing is rewarded, with the citizens not being protected, instead, taken advantage of.

Ofgem should be protection the citizenry mainly.

Regards

Jason Granger

From: John A Mitchell

BEWARE any plans that involve fully functioning smart meters.

SMETS 1 were a disaster due to the 2G communications being tied to a single supplier.

SMETS 2 are in my location no better - several British Gas engineer visits, three meters and two communications boxes. Sorry unable to register the meter as they are yet to install the necessary supporting infrastructure.

--

Regards

John A Mitchell

From: John Ritchie

Good morning,

Ofgem are considering issues around a review of the future price cap, relating to consumer electricity usage "off peak".

An important consumer issue for me to highlight, as a private citizen, is this:

Such tariffs with “off peak” rates rely on digital smart meters that will recognise use at specific times. The issue is that I read somewhere is that 3 million smart meters in the UK don’t work/communicate. I am one of those people.

The energy suppliers are super keen to have these meters installed, but when they don’t work in that they do not communicate (like mine, via Eon) they are completely disinterested in resolving it. It seems Ofgem are not policing/regulating this issue either and there are no incentives for the energy supplier to resolve these issues.

Interestingly I would like to have a tariff with a reduced rate at night because I run a heat pump & electric car. But I can’t and I am concerned that any Ofgem changes may adversely impact upon this of us who have smart meters that don’t communicate. I’m already disadvantaged because I cannot get one of those tariffs because I can’t get my supplier to fix the smart meter communicating function.

Perhaps forcing suppliers to provide discounts to customers without working meters might prompt them into action.

Regards

John Ritchie

From: Keith Asher

As a bill payer, and someone who has invested in solar and battery storage the idea of a TOU price cap is very appealing to me.

I am currently on the octopus FLUX tariff with a cheap rate 02:00-05:00, and a peak rate 16:00-17:00

Unlike many I’m aware of the 12P extra transport charge 16:00-19:00 and consciously avoid it (a price of 40p kWh makes you try that bit harder not to use electricity at peak).

Yes I'm aware that the grid has issues with capacity and generation, I do take part in the NGOESO saving sessions.

I was thinking on this :-

example

Price Cap

25P all day

or 0:00 - 07:00 10p (obviously this could be a shorter period)

16:00-19:00 40p

rest of the day 20p

A Uses 10kWh a day with a battery charged overnight pays £1

B uses 10kWh a day, 2 0:00-07:00, 1 16:00-19:00, 7 rest, pays £2

C Uses 10kWh a day, 2 00-07:00, 4 16:00-19:00. 5 rest, pays £2.70

D refuses a smart meter pays £2.50.

of course A,B,C would need HH readings on.

This is pretty much Octopus FLUX with a longer cheap rate.

what else would I do would I do it, well, I'd make the SC different I'd make it 50P on smart meters 75P on dials, maybe a daily discount if you use < 10% between 16:00-19:00 (I chose 10% as 3 hours is 12.5% of the day) of course you may need something to deal with someone charging an EV that will nearly always use most of the daily consumption at cheap rates.

you could also have a secondary cheap rate from 1st April to 1st October from say 11:00-15:00 when solar farms and home solar are at maximum production.

I think this sort of idea would encourage time shifting and thus reduce the need for DFS events in the winter period, again this would save suppliers money and reduce bills.

I'd be more than happy to discuss this further, or to take part in focus groups to look at the overall issue.

Keith Asher

From: Mark Sullivan

Dear Sirs,

I can see that there are strong arguments for moving to dynamic pricing of electricity supply at some point. However, it is clear to me that the national infrastructure is simply not up to it at the moment. There are large areas of the UK where a mobile phone signal is either far too weak to support a dependable "smart meters" system, or indeed simply not there at all.

Even here, in an inner suburb of an English city, our mobile phone reception is unreliable. Only when the phone network has become far more extensive and reliable, it seems to me, would a move of this kind be acceptable.

Mark O'Sullivan

From: Neil Lewis

Dear Sir/Madam

I'm all for the dynamic price cap as long as the standing charge is either scrapped or at least reduced significantly. Take an average bill to work out what the real price per unit is, then apply the new price cap.

Regards

Neil Lewis

OVO customer

From: Paul McDiarmid

Hi,

In summary installing ever greater numbers of so-called renewables like solar & wind power will inevitably lead to higher prices plus increasing the risk of shortfalls in electricity supply.

This in turn means that your organisation will push for universal smart metering to impose extremely high tariffs on consumers during periods of high demand & a shortfall in electricity supply.

In addition the smart metering rollout has been awful with many meters not functioning properly & being open to hacking.

I definitely do not trust your organisation to deliver anything other than high prices & erratic electricity supply.

Regards

Paul McDiarmid

From: Stuart Maclean

Following the April price cap which was supposed to reduce bills I wrote to my supplier following their notification that the effects of the price cap was to increase my costs. They replied that it was Ofgem who dictated the way the cap was applied and not of their doing. Here were my comments to their CEO.

'Like most Octopus customers I was looking forward to the effects of the April 1st energy cap reduction. Having invested my savings in solar panels and running electrical equipment at night on cheaper rate to reduce my more expensive daytime usage and be greener I was stunned to see the effect of my efforts leads to an increase in my annual costs. You can see this on the personal letter sent to me today in the email. This is clearly due to the unwarranted increase in the standing charge and the failure to reduce the nighttime rate. It is a continuing example of penalising those making costly efforts to reduce demand on the country's limited power resources. This is totally unfair and makes a mockery of the publicity given to the price cap. I would be better off staying on the old rates! I do not blame Octopus. It does however, show that the authorities are 'a sandwich short of a picnic' when it comes to governing this business in a fair way for the consumer. Please use my example with these so called professionals and show them why the consumer has no faith whatsoever in their ability to protect them.'

Perhaps you could take action to ensure that those like myself are not once again penalised by your actions by at least giving us the right to remain on the the most cost effective tariff for our energy if you are going to still fail to take action on the standing charge which is in my view legalised robbery. As far as I am concerned going green is quite frankly pointless and my aim to purchase an electric vehicle and heat pump is no longer desirable.

Stuart McLean

From: Susan Grayson

I'm very worried about being left behind and discriminated against on the basis of being in a rural location which previously had an RF signal allowing my Smets 2 meter to work well. On forced transfer from

Bulb to Octopus it's never worked and I have been told it never did!! How will customers like me be able to access flexible demand, time based pricing when the RF signal is gone and DCC have no intention of fixing the issue? It's incredibly unfair and distressing.

I have a solar array, battery storage and an EV charger and now on inflexible tariffs as smart meter is now dumb. Where is customer protection there?

My only option is to get off grid entirely as I've been excluded by the DCC and Arqiva any case!

Susan Grayson

From: Tony Fitzgerald

Response to Consultation on Future of Energy Prices

Introduction

There is considerable media speculation that *time of use* charging may well play a part in your considerations for future energy pricing. Adjusting unit pricing to reflect energy demand at any specific time does make a good deal of sense and could lead to consumers changing their power usage to benefit from cheaper energy charges, eg using washing machines and dish washers, for example, at times of lower energy prices instead of simply using these items on demand.

In order that *time of use* charging can be adopted then consumers would need to have a smart meter in order to identify the energy charges at any specific time. Again, that makes sense.

Operation of Smart Meters

Smart Meters send usage information back to the energy suppliers on a constant basis; they also send usage information in real time to the in-house displays.

It appears that two types of communication hubs are employed in smart meter systems:

- 1 Single Band Communications Hubs (SBCH) send data over a single frequency. These communications hubs work perfectly well for most properties - around 70% of homes and premises.
- 2 However, Dual Band Communications Hubs (DBCH), with a choice of frequencies, have been introduced to combat thick walls or situations where smart meters can't communicate adequately with the communications hub (in large blocks of flats, for example). With access to the existing 2.4GHz frequency and the HAN 868MHz frequency, they increase the DCC's network coverage to 96.5% of British premises.

Both employ radio frequency radiation (RFR) signals – and therein lies a major problem for a growing percentage of the population.

Electrohypersensitivity

This is a condition where individuals suffer a reaction to RFR signals, the degree of which varies from low impact to the need to totally avoid any such signals.

Page 114 of the WHO publication - *Compendium of WHO and other UN guidance on health and environment* refers to this issue as follows:

“What EMF exposure levels do we want to achieve?”

“Exposure standards for EMF generally refer to maximum levels of exposure to the body. Such standards have been developed by the International Commission on Non-Ionizing Radiation Protection (ICNIRP)*, and the Institute of Electrical and Electronics Engineers (IEEE/ICES), as well as many national authorities. WHO provides a framework which can be used to develop national standards

“Policies and actions

“1. Establish exposure standards that limit EMF exposures to the public and workers as part of national legislation.

“2. Inform the public about potential health risks from EMF (mobile phones, antennas and emerging technologies). Updates should be made as evidence from ongoing studies becomes available.”

The use of smart meters will be covered by the term *emerging technologies*.

Conclusion

There is therefore a need to consider those suffering from an adverse reaction to RFR signals and for any new proposals for energy costs not to unfavourably impact on such people.

As it is, those suffering from an intolerance to such signals already have a complex life in that they have to adjust their whole lifestyle to avoiding exposure to such rays and there are already significant costs they incur in order to safeguard themselves. They should not have to suffer the added indignity of not being able to benefit from reduced energy charges simply because they have taken the very sensible step of refusing the installation of smart meters in order to safeguard their health.

Such people ought to be charged at the lowest possible rate for their energy usage without the need to require a smart meter. How this is achieved will not be a simple matter so you need to come up with proposals to ensure that such individuals are not unfairly penalized when it comes to charging for their energy usage.

Note 1: * The International Commission on Non-Ionising Radiation Protection (ICNIRP) mentioned in the WHO report and quoted above sounds impressive. It is however a private organization based in Munich and consists of representatives drawn from the telecommunications industry.

Note 2: Resolution 1815 of the Parliamentary Assembly of the Council of Europe is a brief but hugely relevant paper on this subject. It can be accessed via a GOOGLE search.

Tony Fitzgerald

From: Trevor Johnson

I believe some of my responses were truncated by the online form, which unfortunately I couldn't cancel. I am responding as a consumer.

Before responding to the specific questions set out in the discussion paper, do you have any general comments that you would like to raise?

I believe the paper has been mistitled and should read “Future of the domestic price cap”. As a consumer, I would like to have seen a broader paper that addressed affordability, supplier bankruptcy, wholesale profiteering and increased dependence of imported electricity in the context of price protection. I am also concerned that the potential step changes in price with transiting from gas and petroleum to electricity have not been addressed. Apart from the need for price protection, it could lead to price wars and cross subsidisation as suppliers fight for market share. There is also a hint that price protection will be for a less available supply and that consumers will need to pay a premium or provide storage for a reliable supply. A price cap for different supply guarantees could be considered.

(Q1 Evaluating the cap today) Do you have any reflections on our list of the cap's successes and challenges?

(2.4) The price cap did protect disengaged customers, but they are exploited in markets perceived as competitive. The price cap did not incentivise disengaged customers to engage, which I believe should be an objective of any future solution.

(2.7) It needs to be understood why the price cap did not stifle retail competition and questions its stringency.

(2.14) The explanation that suppliers went bankrupt because of insufficient hedging misses the fundamental root cause that an exogenous shock (gas crisis) caused a reduction in supply. The shock would have been less if gas power stations had hedged gas supplies better and the UK had an excess and more diverse supply that was less heavily dependent on one fuel. I suspect small suppliers with a dependency on domestic consumers were at a higher risk of bankruptcy because of the historic imbalance in winning customers from incumbents, with implications on credit rating, hedge contracts etc. It's surprising they did not have back-to-back payment contracts to protect cash flow caused by a retrospective price cap. The lack of hedging suggests a risk to supply security.

(2.16) While over 30 suppliers went bankrupt, generating companies made what were described as excessive profits. This suggests the price cap did not maintain a fair price for consumers. In an ideal market, it might be assumed that they would have reduced profits to retain loyalty. The profits did not stimulate interest in the recent government wind farm auction and Shell left the retail market citing lack of profitability. Is regulatory intervention necessary to balance risk and reward across the industry?

(2.36) I believe there is a correlation between affordability and bad debt, which is a consequence of inadequate affordability measures. The net effect of the windfall tax was that it contributed towards EBSS, but not bad debt provision.

(2.32) (2.33) The points are well made. The difficulties facing suppliers are because they have no direct control on the cost of wholesale electricity, the price at which they can sell it or control over consumer demand within the price cap. Suppliers are effectively resellers. Customer service and billing are areas where they have direct control over their costs and so service could suffer when there is no incentive to differentiate, or ability to subsidise across more profitable (business or fixed rate) customers. Hedging appears to be another area where costs are cut, masking differences between suppliers from customers purchase decisions.

(1.9) With 90% of domestic households on the price cap, the issues raised in the paper and the challenges facing suppliers, it begs the question whether the industry model needs modifying.

(Q2 Evaluating the current cap for the future) Do you believe that the growing diversity of electricity consumption patterns will make it challenging to retain a flat, universal and stringent price cap? How quickly do you think this will materialise and with what impacts? What evidence can you provide to support your view?

I am not qualified to comment and accept Ofgem's view that it is impossible to maintain a flat, universal and stringent price cap (4.5), but offer the following comments:

- a) A regulated, flat, universal and stringent price ceiling under which a competitive free market exists is attractive. More regulation restricts differentiation, constrains suppliers and consumer choice. Domestic supply effectively becomes nationalised and it begs the question whether the large number of suppliers is desirable or sustainable.
- b) There is a perception that moving away from a flat, universal and stringent price cap will benefit suppliers more than consumers and this needs to be addressed to reduce consumer resistance.
- c) Despite benefiting the majority of consumers, time and type of use tariffs were historically unpopular. Consumers could not understand why it should cost more to burn a ton of coal at different times of the day, or why the price should vary depending on how it was consumed.
- d) Point (3.3) is unclear. I accept large flexible loads could lead to significant differences between customer costs, but it's unclear whether this is unfair, due to those loads or how they are solved by changing the price cap:

i. Suppliers are discriminating between customers with EV only contracts, but they could also discriminate customers by other factors. I believe regulation is necessary to restrict customer discrimination (e.g. EV owner tariffs), but allow service specific (e.g. EV consumption) tariffs.

ii. The introduction of EV tariffs by suppliers suggest normal market forces are working. The current (flat) cap may benefit some large flexible load consumers (e.g. night workers, multi-EV households, pensioners) and a new (variable) cap may benefit high EV usage. Regulated off-peak tariffs like Economy 7 already co-exist, but consumers are required to opt-in, as I understand it. Why is it necessary to treat large flexible loads different from night storage heaters?

iii. I don't believe disengaged customers are disadvantaged if a new price cap is always less than the existing price cap, a requirement of DESNZ-CFE Principle 3 (4.22). Consumers who invest in storage should be rewarded (DESNZ-CFE Principle 1). Arbitrage opportunities between wholesale and retail prices encourage supplier investment in storage systems for consumers who can't have them.

iv. Large flexible loads represent consumption transferring from gas and petroleum to electricity. This new revenue should pay for additional capacity and there is no justification to increase electricity prices for traditional electricity consumption or for disengaged consumers to be disadvantaged. As stated in the paper, cost savings should lower prices. Historically, diversity of consumer, use and demography have flattened demand volatility, improved ROCE and reduced consumer price through statistical averaging and ToU incentives. DESNZ-CFE principle 3 dictates there should be no cross-subsidisation (4.22).

e) Point (3.4) implies the price cap needs to change because of the need to match demand to supply and that large flexible loads are the solution, not the problem. It therefore seems disingenuous to suggest otherwise.

i. A stable supply and mitigation against weather patterns is possible with low-carbon electricity using a greater mix of nuclear, hydroelectric, tidal, biofuels and energy recycling. Wind and solar energy could also be stored until required, similar to the storage of coal and oil prior to generation. Clearly the increased reliability is at increased cost, which should be offset by the cost of home storage and levelling up / flood protection grants. I believe consumers should be consulted on quality as well as price. Excessive price regulation stifles suppliers from selling electricity like airline seats, levels of hedging etc.

ii. Generators that are unavailable at peak demand represent excess capacity and skews the wholesale market with higher peak prices. As wind and sunlight are national resources, there is an argument for a per kWh fuel tax on those generators. This provides fairer competition between generators and allows consumers to be compensated through grants for investing in home storage.

iii. The retail market could be protected from supply price volatility and mitigated against weather patterns by regulating the price at which suppliers purchase electricity. For example, the national grid operators could purchase domestic electricity from the wholesale market and resell it to suppliers at some averaged regulated price, which may include a demand based ToU profile. This would be similar to the 1926 Central Electricity Board. Potentially a reduced number of buyers will increase buying power to the benefit of consumers.

iv. The increased interconnection of national electricity grids will create a pan Eurasian electricity network that will mitigate against local weather patterns and flatten demand by operating over different time zones. The increased load factor has historically paid for increased transmission costs and led to cheaper retail prices.

f) It's unclear how committed suppliers are to offering ToU tariffs and may justify regulatory intervention (3.5).

i. Consumer polarisation among suppliers may mean that some suppliers have little or no demand for ToU tariffs, at least in the short term.

ii. Conversely some suppliers may be benefiting from price cap rates at night, because EV consumers were forced onto the price cap by the recent gas crisis and may not have changed behaviour or tariffs. If behaviour had changed, suppliers would have been incentivised to offer discounted night tariffs to minimise losses.

iii. There are potential advantages of ring-fencing electricity for EV charging (and other large flexible loads) to dedicated companies, similar to street charging. By excluding large flexible loads, a flat, universal and stringent price cap can be maintained.

g) Point (3.12) regarding supplier polarisation affecting profitability is well made. However, I'm not convinced it is the regulator's responsibility to prevent suppliers from going bankrupt, only to mitigate against the consequences.

i. Suppliers could be obliged to insure against bankruptcy, similar to the Financial Services Compensation Scheme. This would protect consumer payments and pay the new supplier's excess electricity charges over a nominal (e.g. year) period.

ii. By excluding large flexible loads from the price cap, the current cap can be maintained, as stated in (4.40) onwards. It may be unnecessary to provide further regulation because suppliers will be motivated to offer ToU tariffs and be rewarded for their success. Some suppliers could still go bankrupt, but the price cap is higher than it would otherwise be and maintains the DEFNZ-CFE principles (4.22)

iii. Instead of regulating, Ofgem could become the default efficient supplier, contracting with select suppliers (e.g. incumbents or network operators) to provide service. Consumers are automatically transferred to Ofgem at the end of a contract unless they engage. Ofgem could then react rapidly to shocks requiring intervention, which suppliers are free to copy.

(Q3 Evaluating the current cap for the future) What plans do suppliers have to launch ToU tariffs and to incentivise customers to shift their electricity consumption once MHHS is implemented?

I am not privy to supplier plans, but I'm concerned that some of the current ToU offerings are anticompetitive and discriminatory. I believe the market led prices are aimed at increasing market share and destroying value. I am also concerned that the industry cannot adequately protect consumers against misuse of MHHS data and may violate article 8 of the Human Rights Act 1998.

(Q4 Evaluating the current cap for the future) How quickly and at what scale do you expect customers, especially those with large flexible loads such as EV and solar/battery users, to take up ToU tariffs once MHHS is implemented?

I agree with the assumption that the adoption of ToU tariffs is likely to depend on the purchase of large flexible loads, whose sales and forecasts should be known. This demand will be tempered by:

- a) Shift (night) workers who are unable to benefit from EV ToU tariffs, or day workers if off-peak changes to daytime
- b) Those with no off-street parking or limited space for home storage
- c) High consuming multi-EV households who are unable to charge all EVs in the off-peak period.
- d) Pensioners with low EV consumption, but high daytime consumption.
- e) Those on long term, fixed price contracts who are unable to switch because of high exit fees.
- f) Fear of future price changes and inability to return to a flat price tariff.
- g) Fear that routine maintenance will prevent consumers charging at off-peak rates.
- h) Fear of heating home during peak winter rates, where no home storage exists or it needs a boost.

- i) Difficulty determining the best offer. Suppliers should publicly publish T&Cs for all services (e.g EV only tariffs) and provide tools so consumers can determine if they would be better or worse off.
- j) If permitted, consumers may switch on a seasonal basis, for example in the summer when peak and daytime consumption is low, but travel is high. Some days may have heavier or lighter loads (e.g. Sundays).
- k) Lack of supplier commitment.

Demand for large flexible loads could be increased by reducing the entry barriers. Large, flexible loads can also cause power surges due to panic buying. I also believe the current incentives are too generous for tweaking default consumer behaviour. These may be skewed by gas power stations improving ROCE before their demise.

(Q5 Evaluating the current cap for the future) In addition to the factors set out in this chapter, are there any other important changes that might affect the ability of the current default tariff cap to achieve its objectives?

- a) I believe the transition from gas to electric cooking could increase peak loads.
- b) I also believe consumers with solar panels will increase peak winter load because they consume more than they generate. Demand and wholesale electricity prices are therefore peakier than they otherwise would be and it begs the question whether these consumers should pay a higher unit price.
- c) International interconnection and price globalisation threatens investment in UK generation from those with a natural advantage towards low-carbon generation. This threatens supply security and potentially makes the UK hostage to ransom. Protectionism through import and export duties could protect UK generation outside a stringent price cap. Globalisation may potentially lead to more frequent exogenous shocks.
- d) High domestic consumption, home businesses and home workers blur the distinction between business and domestic consumers. It begs the question whether SMEs should be considered in the price cap and what impact it would have.

(Q6 Options for evolving price protection for the future) Do you agree that we need to retain some form of price protection in the retail market?

Price protection is essential because energy demand is inelastic. Without protection, supplier prices will creep up in a fully competitive market as suppliers test their ceiling. Its benefit was seen in the recent crisis and avoided the worst experience of some Texan consumers (Financial Times online 20/2/21 “Bills mount in Texas power market after freeze sends prices soaring” <https://www.ft.com/content/0e746280-e72c-4087-9c0d-df2a7af82b77>).

Moreover, as society constrains lifestyle choices, I believe energy for heating and lighting becomes a basic human right; It must be protected and affordable for all. The level of bad debt suggests it is too high and that affordability measures are inadequate. I believe many other consumers are cutting back on heating, washing etc to unsafe levels and prioritising energy over food and clothing.

(Q7 Options for evolving price protection for the future) Do you have views on which of the three key parameters – the cap being flat, universal and stringent - should be relaxed when considering future price protection options?

- a) A move away from a flat, universal and stringent price cap will potentially be unpopular for the reasons stated in response to Q2 and arguably violates the spirit of DESNZ-CFE principle 2 (4.22). It’s possible that its advantages outweigh its perceived disadvantages and may be reintroduced at some future date. For example, a universal and flat price cap prevents retail arbitrage and discrimination, while a stringent price cap protects consumers with an inelastic demand from exploitation in a single energy monopoly.
- b) By adding the principle of equivalence to the DESNZ-CFE principles, it will mitigate against arbitrage and discrimination and allow tariffs to be homogenised in the future.

c) Historically, standing charges were introduced to allow the introduction of a flat and universal tariff. I believe a stepped standing charge based on maximum load / current thresholds encourages consumers to flatten demand and allows distribution costs to be apportioned fairly. Consumers already accept two standing charges for dual fuel and a stepped standing charge is analogous to broadband tariffs.

d) I believe the least-worst option is to relax the principle of universality based on type of use. By ring fencing and partitioning services into stove pipe solutions, consumers are better protected from unintended consequences caused by the large number of variables and market forces. I believe the requirements of large flexible loads are very different to the standard service, which is a highly reliable, on-demand supply. Its tariff should be discounted by its storage / generation element and a lower level of service. It would also allow a temporary, political type-of-use surcharge or subsidy to be added that speeds up, smooths and protects the migration of gas and petroleum customers to low carbon electricity and protects intrinsic value that could otherwise be lost.

e) I believe the advantages of having a separate meter for each type-of-use outweighs the cost disadvantage. This could be in a single smart meter, or part of the wall-box charger. For example, Economy 7 was originally a dual meter offering. The obvious advantage is that suppliers can compete for customers on type. I believe the big 6 incumbents have an unfair advantage for EV consumers and the nascent demand provides an opportunity for fairer competition.

f) The principle of a variable price cap already exists with Economy 7 and similar services, while the price cap tends to fall in summer and rise in winter. Any ToU mechanism should include flexibility for day and season profiles, even if they are unused. Some days (e.g. Sunday) may be more or less popular for EV charging, while travel and air conditioning may shift peak load from winter evening to summer days.

g) I believe the UK should maintain an on-demand supply and not move to an on-supply demand, which could happen with a variable price cap. I believe the latter destroys value, encourages under-dimensioning, risks supply security and leads to a two-state nation. Spot pricing is the extreme variable price cap and could lead to extreme price volatility without consumers knowing how much they're paying, e.g. on Christmas day and on televised live events. There is also a perception that peak prices would rise at the expense of off-peak prices, which because of new demand need not occur. Legacy consumers who do not want to heat their home in the summer, light their house during the day or watch TV when they sleep need protecting. DESNZ-CFE Principle 3 must be enforced by regulation, over and above any default service.

h) If home storage and ToU become regulated, should Ofwat consider a similar strategy to avoid the cost of upgrading sewers and sewage treatment works?

i) I believe faster migration from gas and petroleum, and shorter loan periods on low-carbon electricity investment is cheaper overall for consumers, providing prices are affordable. However, I'm not sure this is achievable within a competitive wholesale market.

j) I am not convinced that relaxing the stringent price cap will result in a better quality of service because price is the consumer's dominant consideration. If the price at which suppliers buy electricity is regulated, they have no option but to differentiate on service.

k) Nor do I believe relaxing the stringent price cap will allow suppliers to control bad debt. Those consumers are not encouraged to switch, but others will when prices increase. I believe the bad debt element should be treated as a tax, from which suppliers claim a grant after their accounts have been independently audited, analogous to consumer affordability claims. I believe suppliers should be able to perform a credit check on new consumers and insist on a deposit to reduce risk, that could include affordability payments, pre-payment meters etc.

(Q8 Options for evolving price protection for the future) What are your views on options discussed? Do you have any preferred options or combination of options?

- a) Of the options offered, my preferred option is to retain the bottom-up cap for traditional consumption and to have a separate ToU, or rather time-of-charge (ToC) tariff for large flexible loads (4.40). It is implementable and meets all three key principles of DESNZ-CFE.
- b) I distinguish between time-of-use (ToU), time-of-supply (ToS) and time-of-charge (ToC), depending on demand, supply and contract profiles. The latter may have no bearing on demand or supply, but is the period when large flexible loads can be charged at a particular price and lasts for the duration of the service / contract. Suppliers could potentially offer different ToC periods within some overall Ofgem framework. EVs can only be charged at home if they are there, and this needs to be reflected in the off-peak period; cheap day time rates are unlikely to work for the majority of EV owners.
- c) A simplified, early proof-of-concept tariff based on contracts could be offered. Large flexible loads would be excluded from the standard variable tariff (SVT), but covered by a second contract dedicated to them. This would limit the hours of charging, or have the same peak rate as the flat SVT. As previously stated, the two services should eventually be metered separately, or have signalling (e.g. I2C) between the charger and smart meter to indicate when current is drawn. The idea is that the smart meter could also cut or restrict supply in an emergency to maintain the standard service, for example in the case of panic buying, or under a dynamic ToC when demand exceeds supply. The contract should also specify the maximum load(s) drawn by the charger (e.g. 3kW, 10kW, 100kW) with any associated standing charges that could include wall box rental. I also believe the charger should evolve to support multiple bill payers in multi-occupancy households with multiple EVs or company vehicles. Consideration should also be given to limiting the quantity of energy that can be consumed within a specified period (e.g. 50kWhr/day). For example, it may be beneficial to encourage more frequent top-up charging, encourage multi-EV households to charge on different days, or restrict consumption to driving.
- d) Regardless of any regulated ToC tariff, Ofgem needs to define an acceptable minimum, industry wide, quality of service for EV charging that is future proofed and technology independent. As a minimum, suppliers and network operators should publicly publish tariffs and black spot locations respectively to allow consumers to make informed purchases.
- e) I am not convinced a dynamic ToC is practical for EVs, but may be practical for home storage. Again, Ofgem should define acceptable industry wide standards before unregulated services are marketed. To ensure excess generation isn't lost, I see no alternative to having some network storage capacity, possibly on a local or regional basis to help with load balancing and managing demand under the Standard Export Guarantee (SEG).
- f) A universal variable (ToU) cap (4.25) is unworkable until all consumers have smart meters and the peak rate must not be greater than the current flat price cap (DEFNZ CFE Principle 3). I am also wary of unregulated ToU tariffs and believe some regulatory intervention is necessary. For example, I believe some suppliers are cherry picking high value customers with attractive EV only tariffs and only offering price cap tariffs (that hedge the EV only tariffs) to less profitable customers who are attracted to competitors. Those suppliers have first mover advantage in attracting new EV customers and secure the best off-peak wholesale hedge contracts.
- g) I agree with (1.8) that a price cap is not a mechanism for affordability and do not support a customer targeted cap. It suffers similar issues as bad debt distribution, and customer circumstances may change over time. I believe energy should be affordable for all and ought to be achievable with renewables.
- h) I fear a relaxation of the stringent price cap will benefit shareholders more than consumers. I also suspect consumers are not getting the best price from the wholesale market. If the stringent price cap is relaxed, I believe a blend of options is beneficial. For example, a market-basket cap provides a degree of demand led pricing, but is flawed because of inelastic demand; a within-supplier-relative cap reduces discrimination by suppliers; acquisition only tariffs are probably necessary to reduce incumbent market share; a margins cap reduces risk taking and innovation.

(Q9 Options for evolving price protection for the future) In particular, which options or combination of options do you think would best protect vulnerable customers?

- a) I am not convinced that the options offered will protect all vulnerable consumers

b) I do not believe all vulnerable customers can be identified for a targeted cap to work. I also believe an unlimited supply is open to fraud. For example, allowing others to recharge EVs at cheap rates. The Dutch system of having a number of cheaper units is attractive; these could be included as 'free' units within the standing charge. I also believe a tiered standing charge protects customers with low consumption. The standing charge could also be abolished by adopting a maximum load tariff that includes its costs in the peak rate.

c) A variable (ToU) tariff is unlikely to have a sufficient low off-peak rate for vulnerable consumers. Vulnerable consumers may have difficulty understanding or complying to achieve the best rates. A variation would be to offer a reduced service for a reduced tariff, but could result in bad PR.

d) Relaxation of the stringent price cap to allow cross subsidisation between customers will not work because of supplier polarisation and profitable customers switching to cheaper suppliers.

e) A margins cap where suppliers are obliged to provide 0.x% of profits on vulnerable services could work, if vulnerable consumers are enticed to move and a unit price between wholesale and fully allocated is offered. These suppliers are profitable and still make money from ring fenced vulnerable consumers. It also provides good PR.

f) I believe vulnerable consumers are best protected if consumers on the default tariff are contracted to Ofgem, or electricity becomes affordable for all.

(Q10 Options for evolving price protection for the future) How should consumers with large flexible loads, mainly EV and solar/battery users, be treated with regards to future price protection?

I do not believe it will be possible to categorise customers with large flexible loads in future. They could be disengaged, vulnerable laggards as well as engaged early adopters, particularly as EVs and homes are resold. I am also wary of generalising all large flexible load consumption. I believe it is helpful to differentiate on type of use. Consequently, different price protection mechanisms can coexist fairly. I do not believe the differential between maximum and minimum tariffs in a cost-based ToU tariff will be sufficient to entice consumers and therefore a market-basket cap is needed. The coexistence of a bottom-up, flat and stringent price cap maintains a price ceiling at which consumers are likely to switch back.

Should the Standard Export Guarantee be changed to reflect changes in the price cap? i.e. should it have a ToU profile?

(Q11 Options for evolving price protection for the future) Are there any additional options that we haven't, but should be considering?

I am concerned that the price cap(s) will become increasingly complicated to calculate and it helps maintain the status quo. A global market basket cap based on international country comparisons, suitably averaged and skewed to UK conditions may be easier to calculate and be less vulnerable to supplier collusion, while encouraging innovation and providing aspiration. My hope is it would help suppliers get the best prices from the wholesale market, which as I've previously argued appears skewed in favour of the generating companies.

I've also argued that the current flat, universal and stringent price cap and legacy network could exclude large flexible loads that could be provided by say new companies providing a DC overlay distribution network from substations under new regulation. This may ease some of the technical issues, allow truly fast charging, cost sharing and provide a clear distinction between type of use.

I do not believe price protection has been adequately considered in the context of a widely distributed, dynamic environment, perhaps based on local or regional needs with households being generators as well as consumers, supplemented by energy recycling and local storage. The current architecture with large power stations evolved from economies of scale and minimising coal transportation costs that are less applicable with wind and solar energy. Will the regional factors in the price cap need to change, either because of an evolving architecture or because of the impact of large flexible loads?

From: V A Hamilton

To Whom It May Concern

I am writing in response to your recent proposals to change the energy pricing regulation to a more 'dynamic, smarter, flexible' system.

I urge you very strongly to consider the needs of people like me in your consultations. I am 77 years old with a small pension and limited income who has the usual old-age additional needs for energy in the home. I rely on energy prices being controlled to some extent and not allowed full rein to run with market forces; these are rarely customer focussed but rather always push prices to the highest level possible within the law. Thus I am fully in favour of price caps or other market limitations to the cost of essential services like energy.

I also am concerned by climate change and energy challenges and do all I can to use energy responsibly and affordably. To this end I have already abandoned gas/fossil fuels and have made my home as energy efficient as possible. I also choose energy companies with good 'green/renewable' credentials.

However, I neither have nor want a smart meter. On almost the same day as this new idea of yours was announced, the BBC reported that of circa 35 million homes and businesses with smart meters, at least 4 million were not working as they should at any given time. That is 1 in 9. In fact, Martin Lewis (who is *the* most trusted person in the country with regard to finances and energy costs and who has no vested interest to profit from as far as I can see) estimates that when *all* the faults that these meters may have are taken into account, the ratio is nearer 1 in 5.

I do not want to be that 1, and the odds would not be good if you try to force people like me to choose between affordable energy and smart meters. As you can imagine, I have been reading gas and electric and other 'analogue' meters for nearly 60 years without any issues. Nothing in the 'digital world' works for 60 years without a glitch.

When a smart meter does go wrong it can take weeks and months or even years of hassle to resolve the issues, or even to contact the energy company in question, which I am sure you know to be true; and this can be particularly distressing to the elderly. Your proposal to link prices to 'time of day' would effectively force old people like me to install a smart meter and risk having to lose chunks of our *precious remaining time* fighting with energy companies or otherwise to use less and less energy. In my opinion that choice is cruel and unacceptable.

I'm sure all the hype around digital this, smart that sounds exciting and wonderful to many, mostly younger, people. BUT NOT TO ME, and I can safely say the same for pretty much all of my family and friends over pension age. There is a right place for digital in this world [mobile phones, personal computers, even DAB radio] but essential services like energy are NOT THAT PLACE. One can manage comfortably without the internet for awhile, but not without heating and light.

Unless and until 'smart' meters actually do become smart, not vulnerable to hackers, not vulnerable to power cuts or digital crashes, and unless and until you at Ofgem create an **always accessible, reliable and specific team** to resolve any issues that nevertheless might arise **without** all the hassle, especially for the old, then I urge you to rethink attempting to put this proposal into action until that day.

I have written extensively because I feel especially passionate about this issue. Ofgem hasn't given the impression (to me, at least) of being particularly interested in how its policies affect the lives of individual, real people. But I would like to hope that on this occasion my views have been read and noted and taken seriously.

It would be kind to have that acknowledged, and I thank you in advance.

Yours faithfully

V A Hamilton

From: Harry Diack

Sirs,

I live in a granite house in Aberdeen and cannot get a smart meter as the electric and gas meters do not communicate with the smart meter.

Should pricing be based on time of fuel usage then I will be prejudiced since I do not have a smart meter and so the fuel supplier will not be able to measure when fuel used. I have attempted to get a smart meter to take advantage of cheaper fuel costs over night but this is not available.

I hope this can be taken into account in your study.

Regards

H Diack

From: Ian Thirkill

I have reservations about a fluid cap. I don't believe the cap at present works. The suppliers seems to max out the cap whenever they can this can be seen as a license to charge full price whenever possible and only reducing the charge as a marketing ploy. More efforts should be given on reducing the standing charge which punishes low users.

My feelings are at peak times the energy companies will charge as much as they can get away with, once again exploiting any cap that may be in place. The suggestion of suppliers being limited to what profits they can make may be better but once again can be manipulated by the suppliers where necessary.

There is a simple solution that is never talked about which is nationalise the broken energy market where massive profits can go back into the economy. It's good that things are being considered but I have fears it will not be consumer friendly.

From: Mike Stone

Dear sirs, I have become aware over the last few years of issues which need to be addressed.

1. Energy suppliers must as a part of their licence be required to offer at least the standard variable tariff for Economy 7 & 10.
2. Suppliers should not be allowed to provide E V tariff lower than E 7 & E10..
3. There should be no penalties for E7 & E10 tariff that is the penalty charged for day time use, . The day rate should be the same as the standard variable tariff not higher.
4. The split 58 % 42% and the 3900 deemed average kWh makes very little sense, since most customers are unaware, because of their higher or possibly lower kWhs , and generally comparison sites not being helpful, merely confusing.
5. When the Government is trying to encourage those using gas or oil to move to electric, but the price of electricity overwhelmingly is too high. It currently actually encourage the status quo and maybe encourage wood burners.
6. Customer service must be based in UK.
7. Customer Bills should be clear and easily understood.
8. There should be an optional tariff for those who believe the daily standing charge unfair.

I hope you will take my comments seriously and act as a regulator to protect the customers not the industry.

Regards Mike Stone