New Challenges in Energy Efficiency in the European Union: A consumer perspective

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In November 2016, the European Commission presented an ambitious package of measures for a consumer centred clean energy transition with a central objective of cutting CO2 emissions by at least 40% by 2020.[1] The proposals had three main goals: putting energy efficiency first, achieving global leadership in renewable energies and providing a fair deal for consumers. The aim of this paper is to focus on two aspects of the consumer side of this package: how the market is envisaged to work for consumers in general and the protections which are envisaged for consumers in vulnerable circumstances and those at risk of energy poverty.

It is often said that there are three main objectives in energy policy: security of supply, protection of the environment and affordability and that this creates a "regulatory trilemma" because policies to achieve one policy can undermine the objectives of another policy. What I am going to argue in this paper is that the Commission's prioritising energy efficiency and the development of renewables is likely to undermine its desire to create a competitive market and will make energy more expensive. Although the package recognises the position of the energy poor and consumers in vulnerable circumstances it does provide sufficient compensation for them.

Introduction to the new proposals

The package sets stiff targets for reducing CO2 emissions, cutting them 40% by 2030 and in respect of energy efficiency reaching a target of 30% by 2030. These targets are to be reached by a combination of savings and the encouragement of renewable energy. Under the proposed new Energy Efficiency Directive savings can be made either by imposing an energy efficiency obligation scheme or by alternative policy measures.[2] Energy efficiency obligations may have a social aim and may require the share in energy savings to be made in households affected by energy poverty or social housing as a priority. Alternative policy measures should consider the effect on households affected by energy poverty. Increasing use of renewables may be encouraged through the provision of support measures, which must be compatible with state aid rules as well as being provided in an open, transparent, competitive, non-discriminatory and cost-effective manner. Support schemes are also supposed to ensure that renewable energy producers respond to market price signals.

There are two inter-related points about this approach. First, renewable sources of energy are more expensive than conventional fossil fuels and therefore need subsidies to compete on the market.[3] This price is ultimately paid for by the consumers and therefore becomes an element in rising energy costs. According to the Commission's study, the average price of electricity in the EU increased at an annual rate of 3.2% between 2008 and 2015. The main driver of these prices was not the increase in wholesale energy costs, which decreased slightly in this period, but the increase in taxes and levies for households: an annual rate of 7.9%.[4] The two largest components of the taxes and levies category

[1] . See: http://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition (accessed 6/3/17).

[2] . Proposal for a revised Energy Efficiency Directive New Articles 7a and 7b. Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1485938766830&uri=CELEX:52016PC0761 (accessed 4/3/17)

[3] . See House of Lords Economic Affairs Committee `The Price of Power: Reforming the Energy market' (2017) at para 38.

[4]. European Commission Staff Working Paper `Energy prices and costs in Europe' (2017) at p. 33.

were VAT and support for renewable energy.[5] This policy does, therefore, seem to create a problem in that it contributes to the rising cost of electricity in a significant manner unless there is a compensating drop in the wholesale price of electricity. If affordability is one of the aims of energy policy, and this is not explicitly an aim of the EU package, then there is a tension between the two goals.[6]

There is a further issue with the increasing presence of renewable energy on the market which is that all sources of renewable energy are intermittent, wind power being the obvious example. When this is combined with a system of subsidies for renewable energy this reduces the incentives for investment in conventional fossil fuel generation with the consequent risks to security of supply. This can be illustrated by the UK's experience where the last power station to be built without some form of government guarantee was in 2012.[7] What this implies is that again, the consumer will end up footing the bill for ensuring security of supply and not in a way provided by competitive markets.

The Commission's vision for the energy market

The Commission's view is that the energy market should be a competitive one. This is reflected in Article 5 which states that electricity suppliers should be free to determine the price at which they provide electricity and that Member States "shall" take appropriate action to ensure effective competition between electricity suppliers.

The Commission also wishes to encourage active customers and local energy communities. The former are defined as a customer or group of customers acting jointly who consume, store or sell electricity generated on their premises, including through aggregators, or participate in demand response or energy efficiency schemes provided that these activities are not their primary commercial or professional activity. The latter are defined as legal entities effectively controlled by local shareholders or members, generally value rather than profit driven, involved in distributed generation and in performing activities of a distribution system operator, supplier or aggregator at local level, including across borders.

Under Article 16(2) Member States are required to provide an enabling framework for local energy communities which will ensure that participation is voluntary, members or shareholders do not lose their rights as households or active customers and that they can leave a local energy community in line with the rules on switching provided in Article 12. System users who are not members of the local energy community connected to the distribution network shall be subject to fair and reasonable cost-reflective charges. If they cannot agree, this will be a matter for the relevant regulatory authority. Local energy communities installing generation, so long as it can be considered small and decentralised or distributed, should be subject to a specific authorisation regime provided for such generation in Article 8(3). Local energy communities are subject to the same obligations as a distribution system operator and may conclude agreements with distribution system operators to whom their network is connected.

Member States are obliged to ensure that local energy communities can exist and operate, can access all organised markets directly or indirectly in a non-discriminatory manner, benefit from non-discriminatory treatment in relation to their operations generally and are subject to fair,

[5] . Ibid at p. 39.

[6] . In the UK context, see the comments of the Competition and Markets Authority `Energy Market Investigation' (2016) at para 2.37

[7] . See: See House of Lords Economic Affairs Committee `The Price of Power: Reforming the Energy market' (2017) at para 51.

proportionate and transparent procedures and cost reflective charges. Member States are also obliged to ensure under Article 15, that active customers can carry out their activities without being subject to disproportionately burdensome procedures or non-cost-reflective charges. In addition, their network charges should be cost-reflective and non-discriminatory and reflect, separately, the amount of energy supplied to the grid and consumer by the active customer.

The Commission is placing a great deal of faith in the provision of smart meters as a means of optimising energy efficiency although, as Deller and Waddams say, this may be over optimistic.[8] Article 19 says that Member States, or their regulatory authorities, shall "strongly recommend" that electricity undertakings provide, among other things, interoperable smart meters. The roll-out of smart metering is to be assessed according to a cost-benefit analysis and it is envisaged that the result of this analysis might be negative, thus preventing such a roll-out. Even if such an assessment is negative, and there is no general roll-out, Article 21 provides that final customers are entitled to the provision of a smart meter, although the associated costs are to be borne by the final customer.

To try and encourage engagement with the market, the new proposals offer a right to switch suppliers with no switching related fees[9] and to enter into a contract with an aggregator.[10] Furthermore they want the Member States to set up independent comparison web-sites.[11] Finally, the Commission is planning to set minimum requirements for billing and billing information in a way that will facilitate comparisons for energy consumers with the details of what has to be provided laid down in Annex 2 of the Directive.[12] This is an important step forward in getting consumers to engage with energy markets but it will undoubtedly need further development, as discussed below.

One important change for consumers is in relation to out of court dispute settlement where the new version of the Directive which states that customers should have access to simple, fair, transparent, independent, effective and efficient out-of-court dispute resolution mechanisms for the settlement of disputes concerning rights and obligations under the Directive. If customers meet the definition of "consumer" in the ADR Directive, such mechanisms must meet the quality requirements of the ADR Directive and provide for a system of reimbursement and compensation.[13] The re-draft removes the previous reference to having an energy ombudsman or a consumer body in place. This omission has been criticised by the National Energy Ombudsman Network (NEON) who feel that this change would limit their role to simply dispute resolution as opposed to being able to provide advice to stakeholders in the market-place which would restore the balance between individual (vulnerable) consumers and the energy companies.[14]

There is force in this criticism, even though the ADR Directive makes provision for ADR entities to publish information about systematic problems and to cooperate with national bodies which have the responsibility for enforcing EU rules on consumer protection.[15] First, the energy sector is a regulated one where competition may be limited and will be determined in part by the regulatory rules. It is

[8] . C Waddams and D Deller `Affordability of utilities' services: extent, practice, policy' (2015, CERRE) at 11.
[9] . Proposal for a revised Electricity Directive Article 12. Available at: http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v7_864.pdf (Accessed 4/3/17).
[10] . Ibid, Article 13.
[11] . Ibid, Article 14.
[12] . Ibid, Article 18.
[13] . Ibid, Article 26.
[14] . See: http://www.neon-ombudsman.org/2016/12/01/clean-energy-package-lets-not-miss-the-opportunity-to-improve-consumer-protection-and-consumer-dispute-resolution/ (accessed 3/3/17)
[15] . Directive 2013/11/EU on alternative dispute resolution for consumer disputes OJ L 165, 18.6.2013, p. 63–79, Articles 7(2)(b) and 17.

necessary for there to be a good channel of communication between the regulator and the external complaint handling body so that the regulator can understand relevant developments. Although in some countries, like the UK, the regulator is also responsible for enforcing consumer protection rules, this is not always the case. Secondly, the focus is too narrow. Energy customers may have disputes where they are not "consumers" in the sense of the ADR Directive, that is, in a contractual relationship with a trader. So, for example, there may be a dispute with a distribution company or in relation to a feed-in tariff or over an energy efficiency measure supplied via a government scheme. Thirdly, the focus is on persons acting as "consumers" which means acting for purposes outside a person's trade, business, craft or profession.[16] This will exclude micro-businesses and, arguably, active consumers where it is said that the process of active consumption is not their primary professional or commercial activity. In other words, an active consumer in the energy context is engaged in a commercial activity and so is not a consumer for these purposes under the ADR Directive. If the number of active consumers, as well as micro-businesses, grows, this problem can only get worse. It can be solved by an Ombudsman, or ADR scheme, taking on jurisdiction for these types of energy customers, as has been done in the UK.[17]

A final point in relation to complaints is that most complaints are dealt with at company level. So, for example, there were about 3.5 million complaints to energy companies in the UK last year but only around 40,000 found their way to Ombudsman Services: Energy.[18] The draft Directive does not require that energy companies should have, as a minimum, internal complaint handling procedures nor does it require information on company complaint handling procedures to be publicised on the bill (although the right of access to an ADR provider must be publicised).

The Commission's vision is for a competitive electricity market populated by engaged and active consumers, with local energy communities taking their part. There are, however, several challenges to achieving this and a cautionary tale from the UK. The behavioural economics literature highlights that consumers are not necessarily rational economic actors and that their decision-making may contain a number of biases. Ofgem identified four of relevance to the energy markets:

- Limited consumer capacity: Consumers have difficulties assessing many different options and large amounts of information about them,
- Status quo bias: Consumers prefer the current option,
- Loss aversion: consumers attach more weight to monetary losses then gains and avoid risk taking behaviour, and
- Time inconsistency: the preference for immediate gains means that they place too much weight on costs incurred now compared to future savings.[19]

Ofgem also makes the point that while all groups of consumers are susceptible to these biases, some groups are more likely to have them then others, for example, those on low income.[20]

[16] . ADR Directive Article 1(a).
[17] . See Ombudsman Services: Energy at: https://www.ombudsman-services.org/who-can-we-help-energy.html (Accessed 3/3/17).
[18] . See: https://www.ofgem.gov.uk/publications-and-updates/energy-complaints-fall-third-2016 and https://www.ombudsman-services.org/complaints-data.html (accessed 3/3/17).
[19] . Ofgem `What can behavioural economics say about GB energy consumers?' (2011) at 1.
[20] . Ibid at para 4.6.

The literature suggests that it may be difficult to get consumers to engage in markets and that, even when they do engage, they may make sub-optimal decisions.[21] This is borne out by the experience in the UK energy supply market which has been competitive since 1998 although there have been long-standing concerns about the effectiveness of competition which culminated in a market investigation reference to the Competition and Markets Authority (CMA) in 2014 leading to a two-year investigation.[22] The central conclusion of the report was that there were features of the market leading to an adverse effect on competition. For our purposes, the important conclusion was that there was a lack of domestic customer engagement in the market which allowed the supply companies to have unilateral market power which they could exploit.[23] The CMA also commented that some aspects of this problem were the result of intrinsic and irreducible properties of energy, namely, its homogeneous nature and the role of traditional meters and bills and, in particular, the gap between estimated and actual consumption.

The Commission's vision is for a more competitive market, with more energy suppliers and much greater possibilities for consumers in relation to tariffs driven by an increasing roll-out of smart meters which will, presumably, allow different dimensions to be incorporated into tariffs, such as fuel mix, time of day pricing, as well as traditional matters such as payment methods. From a consumer perspective, this looks like a more complex market. Mehta and Sugden make the point that choice overload is less likely to be a problem if choosers know their own preferences, the choices are arranged in salient categories and choosers are trying to find the best set of desirable options, rather than the least bad set of undesirable options.[24] The energy market as envisaged by the Commission seems far away from these characteristics which suggests that more intervention will be necessary to obtain better results for consumers.

In defence of the Commission, they are aware of this literature and the problems it highlights. The revised Electricity Directive does take some steps towards dealing with the issues through, for example, encouraging the development of comparison web-sites and the provision of certain standard information on energy bills. This is, however, the start of a debate about the way forward. As Waddams-Price puts it:

> recognising the differences between consumers, and the interaction between their behaviour and that of the suppliers in the market, are crucial components of any remedy which is to prove effective and not introduce unintended adverse consequences. [25]

Vulnerable consumers and the energy poor

The proposed new Electricity Directive talks in its recitals about electricity as an essential service for European citizens and the introduces the idea that energy poor households cannot afford these services due to a combination of low income, high energy expenditure and poor energy efficiency of

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[21] . On sub-optimal decisions see C Waddams-Price `Shedding Light on Consumer Behaviour in Energy Markets' in J Mehta (ed) *Behavioural Economics in Competition and Consumer Policy* (2013) available at: http://competitionpolicy.ac.uk/documents/8158338/8193541/CCP+economics+book+Final+digital+version+-+colour.pdf/30214557-cace-4b0b-8aac-a801bbde87bc (accessed 4/3/17).

[22] . See CMA `Energy market investigation: final report' (2016).

[23] . Ibid at para 9.283 – 9.290.

[24] . J Mehta and R Sugden `Making sense of complex choice situations' in J Mehta (ed) *Behavioural Economics in Competition and Consumer Policy* (2013) at 47. Available at: http://competitionpolicy.ac.uk/documents/8158338/8193541/CCP+economics+book+Final+digital+version+-+colour.pdf/30214557-cace-4b0b-8aac-a801bbde87bc (accessed 4/3/17).

[25] . Above, n. 19 at 77.

their homes. Member states should collect information on these indicators and, if they are affected by energy poverty should develop a national action plan to tackle the problem. Member states should ensure the necessary energy supply for the vulnerable and energy poor consumers which could be done through energy or social policy or through energy efficiency improvement for housing.[26]

Protection of the energy poor or vulnerable customers is to be done by means other than public intervention in price-setting, although the draft Directive does allow for some transitional arrangements as well as later intervention in cases of extreme urgency. Such interventions must pursue a general economic interest, be clearly defined transparent, non-discriminatory, verifiable and guarantee equal access for all EU electricity companies. They must not go beyond what is necessary to achieve the general economic interest, be limited in time and proportionate as regards their beneficiaries. The measures must also be notified to the Commission and the Commission may, within two months of notification ask the Member States to withdraw or amend the measures.

The Directive does not provide a definition of energy poverty. It says the Member States shall define a set of criteria for measuring it, monitor the number of households in energy poverty and report on the position and the effectiveness of their policies to prevent it.[27] This reflects the position that there are several different definitions in place within Member States, as well as several Member States which either do not regard the concept as useful or relevant to them. The Commission's research found that less than a third of Member States explicitly recognised the concept of energy poverty and those that do saw it as a linked yet distinct issue to that of protecting consumers in vulnerable circumstances.[28] This creates a challenge because the extent and nature of the problem depends upon how it is defined. Once the problem is defined in a particular way, policies to deal with it will be developed and assessed on the basis of that definition. So, for example, if a Low Income/High Consumption (LIHC) criterion is adopted, as has been done in the UK, this generally identifies less households as having affordability problems than, by comparison a simple metric based on percentage of household income spent on energy.[29]

What research so far tells us is that the problem of energy poverty varies significantly across Member States. For example, in 2010 4% of household expenditure in Sweden went on energy as compared to over 16% in Hungary.[30] Furthermore, within different types of households there are different spending patterns on utilities. Generally, those with the lowest incomes spend the highest proportion on utilities. The same research also shows that the gap between those on lowest incomes and the general population, in terms of utility arrears and the ability to keep warm, continued to increase after 2010 and was an even greater problem in new Member States.[31] The research which has been done on policy interventions in this area suggests that it is highly important that they are properly targeted. It also suggests that the most effective interventions are those that take place at local levels, particularly when the issue is that of improving the energy efficiency of housing.[32]

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[26] . Proposal for a revised Electricity Directive, Recitals 40-1.

[27] . Ibid, Article 29.

[28] . Insight_E `Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures' (2015) at 2.

[29] . See C Waddams and D Deller `Affordability of utilities' services: extent, practice, policy' (2015, CERRE) at 10.

[30] . Ibid at 18-19.

[31] . Ibid at 20-1.

[32] . D Deller and C Waddams `Affordability of utilities' services: extent, practice and policy: Research Paper 3: Policies used to tackle affordability in different EU Member States' (2015) at 20.

There is a new Article 28 (Article 3(7) and (8) of the 2009 Directive with some slight changes), entitled "Vulnerable consumers" which asks Member States to ensure that there are adequate safeguards to protect vulnerable consumers. A definition by each Member State is to be provided which may refer to energy poverty and to a prohibition on disconnection at critical times. European Commission research in 2015 showed that there was a high level of variation between the Member States in their definitions.[33] High levels of consumer protection are to be applied. Member states are to take appropriate action which may include providing appropriate welfare benefits and energy efficiency improvements. Such measures should not impede the effective opening of the market and should be notified to the Commission even if they are measures within the general social security system.

Conceptually, the new proposals place more emphasis on energy poverty, even though they do not provide a definition.[34] In addition, a distinction is drawn implicitly between energy poverty and vulnerable consumers which seems to have its origins in research done for the Commission which said:

> It is important to recognise that the issues of vulnerable consumer protection and energy poverty are distinct. The issues can affect different energy consumer groups, and require different measures.[35]

One point is that the package should use, rather than the terminology "vulnerable consumers", "consumers in vulnerable circumstances [or situations]". Although this might seem to be a semantic point, there is an important difference between the terms. The former term places the emphasis on the consumer's personal circumstances and, implicitly, suggests that this circumstances are permanent. Thus, it encourages a group approach to identifying people who fit within this category, for example, all people over a certain age or with certain types of disability. This approach ignores several dimensions or drivers of vulnerability. First, it ignores the fact that vulnerability may occur because of the inter-action of personal circumstances with market conditions or company policies or processes. Secondly, it makes it easier to ignore the transient nature of vulnerability which can be brought about by changes in personal circumstances, for example, divorce, bereavement, illness, loss of job etc. Thirdly, it tends to look for single factors, rather than recognising that vulnerability may be a consequence of the inter-action of several factors. Finally, evidence suggests that people are unlikely to identify themselves as "vulnerable consumers", as opposed to being in difficult circumstances, and so such an approach is likely to under-estimate the number of people who might be affected.

[33] . Insight_E `Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures' (2015) at 26-33.

[34] . On the use of the term at EU level see: H Thomson, C Snell and C Liddell `Fuel Poverty in the European Union: a concept in need of definition?' (2016) 10 *People, Place and Policy* 5.

[35] . Insight_E `Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures' (2015) at 62.

Conclusions

By failing to provide an EU wide definition of either energy poverty or vulnerable consumers, the Commission has ducked a vital issue. The perception of the problem is determined by the way that it has been defined. Furthermore, determining the effectiveness of policies to deal with the problem will depend on how the problem is defined because that determines what indicators are used to monitor or observe the problem and policy interventions will be judged by their effectiveness in relation to those indicators. The Commission has appointed the University of Manchester to provide an Energy Poverty Observatory which will start operating in November 2017.[36] Its main aim is to provide substantially more information about energy poverty across the EU as well as the measures taken to combat it. This looks to be a step forward because there is a lack of comparable data across the EU and this Observatory should at least help to fill this gap.

It is evident that the revised proposals do not offer much in the way of encouragement at an EU level for Member States to develop policies to tackle the issues facing consumers in vulnerable circumstances and those in energy poverty, even if the Member States recognise the problems. Nor does the package offer much in the way of improving the position of consumers in relation to the energy supply market. The Commission's preferred position seems to be to rely on technology (smart meters), active consumers, local energy communities and competition to provide a fair deal for consumers. Yet the experience in the UK is that there will be significant numbers of consumers who will not engage in the market and that many of these may be among more vulnerable customer groups. Local energy communities are a relatively small part of the energy market and it is reasonable to be sceptical about how far they can develop. Within the UK, they have depended on subsidies via the feed-in tariff and the cut in this subsidy has created a challenging environment.

At the same time, the Commission is pushing ahead with the de-carbonisation goal, which will require governmental subsidy, which will be passed onto consumers, thus leading to higher prices. This may be further exacerbated by the need to subsidise investment in base-line generation which again will be passed onto consumers. In the UK, the financing deal for the Hinkley point nuclear reactor is a good, albeit possibly extreme, example.[37]

So, from a consumer point of view, there is some reason to be sceptical about the Commission's proposals. At a political level, there is further scope for scepticism about the progress that will be made given that most political energy over at least the next two years, and maybe longer, will be consumer by the negotiations over Brexit and subsequent arrangements between the EU and UK.

[36] . See: http://fuelpoverty.eu/about/eepo/ (accessed 01/03/17).

[37] . See House of Lords Economic Affairs Committee `The Price of Power: Reforming the Energy market' (2017).