

Supporting Vulnerable Consumers to Access Dynamic Time of Use Tariffs

Summary of Research Findings

June 2022



Changeworks
36 Newhaven Road
Edinburgh EH6 5PY

0131 555 4010
consultancy@changeworks.org.uk
changeworks.org.uk

Introduction

Scotland's net-zero targets mean that the ways in which we consume electricity are changing. Time-variant tariffs, which encourage consumers to use electricity at times of the day when grid demand is lower, or when generation from renewable sources of energy is higher, have been entering the market and are predicted to become one of the main energy supply models in the future¹. Alongside this opportunity of greening the electricity grid come risks that could create new inequalities and vulnerabilities for consumers. This research investigated the implications that dynamic time of use (ToU) tariffs could have for consumers, with an emphasis on consumers with additional vulnerabilities.

Time-variant tariffs

Static ToU - price of energy is fixed at specific times of the day

Dynamic ToU - price changes based on the availability of energy in the system, usually daily.

The research included a literature review, surveys, focus groups and interviews with households and landlords. Initial findings were shared with Changeworks staff to incorporate applied insights. This document summarises the findings. The full research report, detailing the methodology and research process can be accessed [here](#).

Key Findings

- **Low Awareness**

There was very low awareness of dynamic ToU tariffs, with vulnerable consumers slightly less likely to have heard of the tariff

than non-vulnerable consumers. This was expected since there is currently only one supplier (Octopus) offering such a tariff in the UK.

Approximately a third of consumers were unaware of their current electricity tariff (30% non-vulnerable, 38% vulnerable), indicating that awareness on tariffs in general could be improved.

- **Mixed Attitudes**

Attitudes towards the tariff were mixed. Just over half (54%) of the vulnerable survey respondents stated they would be very likely or likely to switch to the tariff, slightly more (+7%) than non-vulnerable respondents.

The decision to switch to a dynamic ToU tariff appeared to be more closely related to personal circumstances (i.e., being time-flexible) than whether someone is vulnerable or not.

Both vulnerable and non-vulnerable consumers would only be likely to switch to this tariff if it saved them money.

The tariff was generally perceived to be unjust; favouring wealthier consumers or energy suppliers and viewed as a lot of effort for little gain. Financial savings were seen as being significant only to those who can afford to invest in storage technologies and/or smart appliances. Additionally, suppliers were seen as the main beneficiary of savings resulting from grid-balancing.

- **Challenges**

Consumers could face multiple barriers as a result of switching to this tariff. Generally, non-vulnerable consumers viewed a loss of flexibility as the main challenge with the

¹ The Committee on Climate Change estimates that 53% of future household demand could be flexible in the future.

tariff. However, poor health and a need for greater knowledge and understanding were seen as barriers for vulnerable consumers.

Challenges facing vulnerable householders

“I would much prefer the certainty of my energy outgoings rather than the stress of a potential large bill.” – Vulnerable Consumer

In understanding how dynamic ToU tariffs could impact vulnerable households, the literature shows mixed results and much of the research that does exist is based on modelled data.

One of the aspects which could reduce the attractiveness of this tariff for vulnerable consumers are its modest cost savings. Past research shows that the average customer would save around £7 annually, which would rise to £32 with the use of a storage battery.

Our research shows that consumers could face multiple barriers, with non-vulnerable consumers seeing a loss of flexibility as a main challenge with the tariff. This differed to more vulnerable consumers, who viewed health issues and a need for greater knowledge and understanding as the main barriers. The most common barriers included:

Complexity: Participants and social landlords discussed that the tariff may not be suited to those experiencing vulnerabilities, due to the complex nature of the tariff. This was reflected by the survey results from both vulnerable and non-vulnerable groups. Additionally, vulnerable consumers were more likely to find the tariff ‘not so easy’ to understand, compared to non-vulnerable consumers (Figure 1).

Knowledge and understanding: Linked to the above, vulnerable consumers were

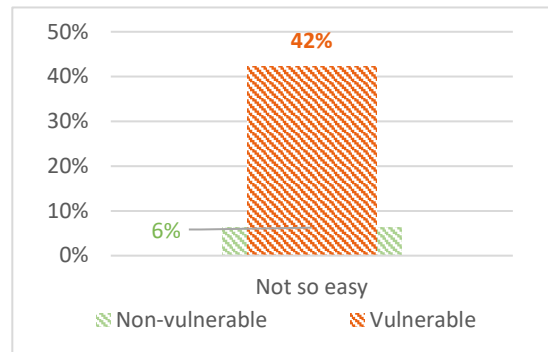


Figure 1: How easy or not easy did you find it to understand this information about the tariff? (N = 32, 26)

more likely to be concerned about their knowledge and understanding than non-vulnerable consumers. Knowing when the cheapest rates occur and how to achieve maximum savings were two major barriers identified for the group. Social landlords acknowledged that they could ‘just about’ support tenants with the tariff, but that time and training would be required to ensure this support was sufficient.

Budgeting and price comparison: Participants across the research felt that dynamic ToU would prove especially difficult to those with low incomes, since it would be likely that monthly expenditure on energy bills would fluctuate depending on one’s ability to take advantage (or not) of the cheaper times. Participants also felt that they would be less attracted to a dynamic ToU tariff because it is not possible to compare the prices of these tariffs between suppliers online.

Behaviour Change: The non-vulnerable group felt less *willing* to change their energy behaviour to suit the tariff and perceived behaviour change as a greater barrier than vulnerable consumers did. However, vulnerable respondents felt more limited in

their *ability* to change behaviour i.e. because of health reasons (Figure 2).

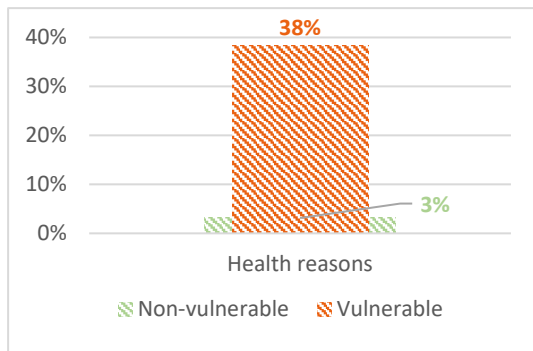


Figure 2: What would you say the main barriers are to changing when you use your appliances, heating etc? (N= 32,26)

Distrust: As is well documented in energy research, a major barrier for consumers is the distrust that they experience towards energy suppliers. Participants were very vocal around this theme and there was a greater lack of trust amongst vulnerable consumers than non-vulnerable consumers.

Time-flexibility: Many participants discussed the role that time plays in their lives and the personal circumstances that lead households to be more or less time flexible. Most of the practical barriers identified in the research related to being less time-flexible due to factors out with households' control i.e. work patterns, health issues, family members.

Highlands & Islands communities: A number of the participants living in the Scottish Islands, voiced concerns. They already experience many barriers to the energy market: higher energy prices, areas of low/no mobile signal/internet connection, delays in the smart meter rollout (essential for ToU tariffs) and lower choice of energy suppliers. All these factors make communities living in these areas less likely to be able to benefit from dynamic ToU tariffs.

Conclusion

The research made clear that awareness around tariffs in general is low, and particularly around dynamic ToU. The tariff was also found to be complex, especially for more vulnerable consumers, and it was suggested that either the tariff would need to be simplified or more education would be needed to help consumers better understand it.

Attitudes towards the tariff were mixed and largely depended on personal circumstances and consumers' ability and/or willingness to change their behaviour. More specifically, vulnerable consumers seemed less willing to change their behaviour due to challenges such as ill-health and the unpredictability of bills. Non-vulnerable consumers were less willing to change their behaviour due to the tariff requiring a perceived loss of flexibility. Crucially however, both vulnerable and non-vulnerable consumers would only be likely to switch to this tariff, if it saved them sufficient money to justify changes in behaviour.

In the context of a just transition to net-zero, an important question posed by participants and by this research is 'for who's benefit was this tariff created?'. Participants felt that suppliers were the main beneficiaries of this tariff, not consumers. This belief, coupled with the literature findings that savings from dynamic ToU are minimal without storage technologies, indicates that consumers are unlikely to switch to or see a benefit from this tariff, unless supplied with storage technologies or guaranteed savings by suppliers for supporting with grid-balancing. Implementation of the recommendations below may go some way to enabling ToU tariffs to play not just a role in the decarbonisation transition, but in supporting an equitable one too.

Recommendations

To overcome some of the barriers identified in the research, solutions were co-created together with the research participants to explore how dynamic ToU tariffs could be made more attractive and appropriate to them. The following recommendations have been shaped by these conversations and could minimise negative outcomes for vulnerable consumers as the dynamic ToU market grows.

- **Increasing awareness**

Dynamic ToU pilot schemes: more pilot schemes need to be conducted (with and without storage technologies) to evidence whether savings and grid balancing can be made by switching to a dynamic ToU tariff. These pilots should also consider the rural and island communities in Scotland.

Research: dynamic ToU tariffs are well established in some European countries, further research could be conducted into best practices and learnings from those most relevant to the Scottish context.

Tariff awareness: trusted intermediaries should be used to increase awareness on tariffs and tariff switching.

Housing Associations: housing providers should receive guidance and information on dynamic ToU tariffs and if introduced they should be able to access live dynamic pricing so they can better support their tenants.

- **Improving feasibility**

Technology: for dynamic ToU tariffs to become more attractive, funding for storage and renewable technologies should be made available.

Incentivisation: Households could be incentivised (financially or otherwise) for using ToU tariffs which support grid balancing. This is a model which is currently in place for large commercial energy users who are paid to minimise energy usage at peak demand.

- **Overcoming barriers**

Price cap guarantee: households should have the option to leave the tariff at any time with no exit fee. Additional support for vulnerable households should also be provided through a price guarantee that ensures costs will be no more than their existing tariff. With the current level of energy prices, this will be crucial for the adoption of ToU tariffs, and protecting consumers, especially those with vulnerabilities.

Tariff comparison: dynamic ToU tariffs should be included on comparison sites so consumers can make informed decisions on whether to switch. The use of smart meter data to assess whether dynamic ToU tariffs are a viable option for consumers should also be considered.

- **Other**

Fabric first: fabric upgrades should continue to be prioritised across the housing stock, with particular focus on fuel poor and vulnerable households.

Time of use for non-vulnerable households: our research and experience shows that vulnerable households already struggle with the static time of use tariffs. We think that dynamic tariffs will suit those with higher incomes and pre-existing interest in the net-zero agenda.





Contact us

If you wish to know more or discuss this project or report, please contact the Project Researchers:

Isabella Impesi, Senior Researcher iimpesi@changeworks.org.uk

Megan Lancaster, Researcher mlancaster@changeworks.org.uk

Call 0131 555 4010

Email consultancy@changeworks.org.uk

Visit changeworks.org.uk

Follow us 

Sign up changeworks.org.uk/subscribe

Changeworks ~ delivering positive low carbon living

Copyright © 2022 Changeworks. No part of this publication may be reproduced without prior permission except for purposes of review or referral.

All images in this publication copyright Changeworks.

Changeworks Resources for Life is a company limited by guarantee registered in Scotland No SC103904 and a Scottish Charity No SC015144. Registered office: 36

