

TO WHAT EXTENT HAS COVID-19 IMPACTED HARD-TO-REACH ENERGY AUDIENCES?

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1: HTR Annex by Users TCP by IEA
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1. Introduction

Energy users who haven’t yet participated in efficiency and conservation programmes despite ongoing outreach are often referred to as ‘Hard-to-Reach’ (HTR), or ‘underserved’. These individuals or organisations can include, e.g., low income or otherwise vulnerable households; and small businesses or commercial building operators. More effectively engaging underserved and HTR audiences is key to ensuring everyone benefits equitably from energy efficiency (EE) policies and programmes. This is even more the case in light of the COVID-19 pandemic, and the ongoing implications for energy use and affordability for the most vulnerable (and newly vulnerable) members of our society.

We focus on HTR audiences from the residential and non-residential sectors in this paper and have undertaken a broad stakeholder analysis (Ashby et al, 2020) and a critical in-depth literature review (Rotmann et al, forthcoming). In these works we have characterised HTR audiences - segmented into vulnerable and high-income households; renters and landlords; commercial sector; and SME audiences - as well as energy services (e.g. mobility) and their energy-saving behaviours (ESB) and barriers to their engagement. Building on this, we have also looked at the impacts of COVID-19 on these specific audiences, including their added vulnerabilities, and whether the pandemic has exacerbated or decreased HTR audience size estimates.

2. Methodology

Our primary method for this work was a comprehensive, critical literature review (see [1] and [2]) and a compilation of recent statistics. In addition, we collected survey, interview and focus group data during the 2020 COVID-19 pandemic in the US, UK, New Zealand (NZ) and Sweden. Data from NZ consisted of an online survey (with 330 respondents), and follow-up interviews with 25 householders to explore changes in home energy use in the four months following the initial COVID-19 (lockdown) restrictions in April and May.

3. Findings

3.1 Literature review

Depending on the definitions and metrics, the potential size of the HTR energy users group is vast; estimated by some authors to exceed 50% of the population [3]. This is especially the case when looking beyond the residential sector. The rental sector alone with its split incentive issues makes up more than $\frac{2}{3}$ of commercial and residential properties in most countries. SMEs make up almost 99% of all businesses and create over half of commercial and industrial greenhouse gas emissions [4]. They are also regarded as one of the hardest-to-reach segments.

The number of low income and vulnerable households and small businesses is expected to rise due to COVID-19, and the huge number of people who are newly unemployed, furloughed or who have lost their businesses because of the economic fallout following extended lockdowns. This suggests that it will be more important than ever for policy makers and programme managers to identify, define and engage this large user group as part of COVID-19 recovery efforts, particularly in countries where vulnerable households (will) face excess utility bills by being forced to stay and work (and school their children) from home.

For example, new research [5] shows that children from low-income families will be hit the hardest by those policy interventions, with energy use of some households with children rising by 75% [6]. Sovacool et al [7] summarise some of the worrisome public health and economic predictions, including that 300 million people worldwide are likely to lose their jobs. At the end of April 2020, more than half (54%) of the entire global population was under some kind of lockdown, with the share of energy use exposed to containment measures reaching 50% [7]. We also know that certain behavioural changes, like working from home, differed between different energy users (e.g. the most vulnerable, low income households who often included essential workers, were also the ones least likely to be able to work from home).

3.2 Empirical insights

- Unlike most countries, Sweden has taken a different approach to manage COVID-19. When it comes to mobility, declines in demand (~30%) has shown relatively similar patterns found in countries with stricter measures. Mobility has become more “reachable” due to the pandemic but variations do exist: whereas air traffic has experienced strong low demand levels (~55-70%), road traffic has returned to near normal levels [8].
- In the UK, fuel debt is growing due to higher domestic consumption arising from lockdown measures and the reduced income of many households due to unemployment, shielding and furlough. By May 2020, 4% of all energy consumers had already fallen behind on energy bills, with a further 7% expected to fall behind in the future [9].
- In the United States, a survey of 1,000 energy customers [10] found that many are using more energy and monitoring their energy use less; 15% reported postponing a utility bill. COVID-19 impacts have varied by customer: some are postponing planned upgrades while others are making new plans to improve the comfort and style of their homes.

We will discuss these empirical findings (including those from NZ) in more detail, following further analysis, at the BEHAVE conference.

4. Conclusions and recommendations

Although the COVID-19 pandemic may eventually abate, its significant economic (e.g. widespread unemployment, whole job sectors disappearing), health (e.g. chronic illness and disabilities, susceptibility to other respiratory diseases) and social consequences (e.g. high level of evictions and homelessness, compounded structural inequalities) will likely persist [11]. Positive trends are also possible to observe (e.g. declines in household mobility and commercial sector electricity demand) and an important challenge is how (behaviourally-informed) policy interventions can help sustaining positive changes among certain HTR segments in the long term. Still, the number of people who will fall into the various HTR audiences described here is likely to increase due to COVID-19. Vulnerable households and businesses will likely suffer disproportionately from additional global challenges, such as the climate crisis, economic recession, inequality, etc. This pandemic has certainly helped to highlight the need for deep, structural changes in our societies, and foster research on (newly) vulnerable populations who are in dire need of support, and who are often also hard-to-reach for energy Behaviour Changers.

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