**Article Summary**

**Title*:*** *Drivers behind Residential Electricity Demand Fluctuations Due to COVID-19 Restrictions*

**Author(s):** Stephen Snow, Richard Bean, Mashhuda Glencross and Neil Horrocks

**Keywords:** COVID-19, electricity demand, Australian, household, temperature level

**Accessed:** 2 November 2020

|  |
| --- |
| Key Findings |
| This study is about the impact of the COVID-19 blockade on residential electricity demand in Australia. The study found significant differences in the impact of the blockade on states with different Australian temperatures. In the warmer state of Queensland, the reduction in energy use during the blockade was lower than during the same period in 2019, suggesting that the blockade had an impact, but not enough to offset the reduction in air conditioning loads. Comparatively, in the colder states, more households increased their electricity use during the blockade, likely due to increased daytime occupancy and increased demand for space heating. The timing of the blockade has an impact on the cost of energy use, including network demand. However, if the blockade occurs during the hot summer months, the impact on overall energy use is likely to be greater. |

|  |
| --- |
| Quotes |
| Snow, S, Bean, R, Glencross, M and Horrocks, N. (2020) *Drivers behind Residential Electricity Demand Fluctuations Due to COVID-19 Restrictions*. MDPI. Available at: <https://www.mdpi.com/1996-1073/13/21/5738> |

|  |  |  |
| --- | --- | --- |
| Strengths | | Limitations |
| The study used Smart Inverter Data and Per-circuit monitoring to gather detailed analysis of the impact of epidemic restrictions on individual consumption patterns in Australian households. | * The sample is primarily drawn from urban areas, with regional and remote areas of Australia under-represented. * Household size, demographics and occupancy characteristics were not available from the dataset, so it was not possible to control for socio-economic status or occupancy type. * The small sample size of houses monitored in each circuit limits the generalisability of the findings. | |