## Vulnerable households and fuel poverty: policy targeting efficiency in Australia's National Electricity Market

EPRG Working Paper 2108 Cambridge Working Paper in Economics 2129

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Australia was an early mover vis-à-vis economic liberalisation policies, undertaking extensive and broad-ranging microeconomic reforms across many industries during the 1980s and 1990s. Policymakers throughout this period focused on maximising economic efficiency and in the aggregate, the 1990s proved to be golden decade of productivity, efficiency and improved living standards. Vertical state-based electricity supply monopolies were a central target of reforms.

Yet with the benefit of hindsight, too little thought went into second- and third-round effects of microeconomic reform, and in particular, the possibility of economic gains being unevenly distributed throughout Australian communities. To be sure, adverse distributional effects and rising inequality *are not* inevitable outcomes of a microeconomic reform. Structural reforms often prove to be progressive in nature, and while it is conceivable that monopoly reforms may produce regressive impacts, sizable initial gains in productive, allocative and dynamic efficiency would ordinarily offset any adverse distributional effects.

However, on energy reform it is not at all obvious that *any* thought went into policies relating to vulnerable households and energy affordability when Australia's NEM was being formed. In the NEM's second largest zonal market (Queensland: population 5 million, peak demand 10GW, energy demand 54TWh), inadequate thought vis-à-vis vulnerable households and energy affordability was apparent. Queensland's customer hardship policy was established in 1993 (five years prior to the

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establishment of the NEM) and there is little evidence that (household-level) distributional impacts of energy market reform were seriously examined by policymakers prior to reviews undertaken in 2015-2017.

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In this article, the role and function of 'targeted income supports' that directly subsidise utility bills are analysed. The targeting efficiency of Queensland's longstanding (1993) customer hardship policy is modelled in a standard welfare analysis focusing on coverage, under-coverage and leakage in an ostensibly two period model. Household Expenditure and Household Energy Consumption Survey data from the Australian Bureau of Statistics (ABS) form critical inputs to the analysis.

Principle findings are that the longstanding policy focused exclusively on the aged population and was therefore poorly targeted. And the mechanism, a fixed \$329 pa income support, was structured sub-optimally. Australia has the most accurate tax and transfer system in the world vis-à-vis its distributive capacity, and when existing welfare flags within that system are used to refine transfers (i.e. using means-tested welfare cardholders), material welfare gains are achievable.

Modelling results demonstrates refining the Queensland's policy targeting to include (means-tested) Commonwealth Health Cardholders produces sizeable improvements in horizontal efficiency, vertical efficiency, vulnerable customer spill-over benefit efficiency, and reduce the incidence and depth of fuel poverty. The reason for this is that Health Cardholders have a prevalence of low income families. Furthermore, when the policy mechanism is altered from a fixed payment to 'percentage of the utility bill' (holding program budgets constant), vertical efficiency, spill-over benefits and fuel poverty indicators improve further.

Contact Publication <u>p.simshauser@griffith.edu.au</u> April 2021