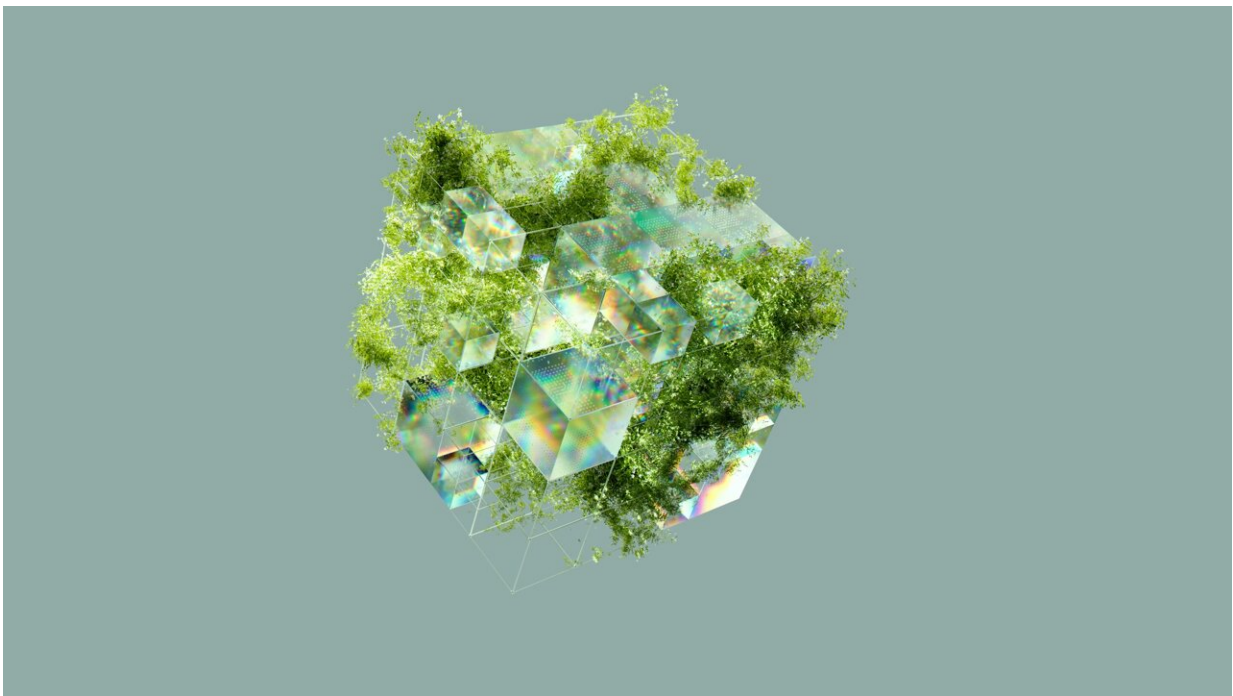


Energy poverty in the climate crisis: What Australia and the European Union can learn from each other

February 23 2022, by Sangeetha Chandrashekeran, David Ritter, Dylan McConnell, Johanna Cludius, Viktoria Noka



Credit: Google DeepMind from Pexels

As the transition to clean energy unfolds, some fear the decarbonisation of the electricity sector will mean higher prices. And high prices can lead to energy poverty: when a household cannot afford the essential

electricity services needed for a decent standard of living, such as heating.

[Our new report](#)

[, released today, compares approaches to energy affordability in the EU and Australia.](#)

[The EU is experiencing an](#)

[energy price spike](#) due to an increased demand as part of the post-COVID economic recovery and gas supply constraints from Russia. In Australia, wholesale electricity prices reached unprecedented levels in 2018, although they've [since declined](#).

We found Australia can learn a lot from the EU about putting policies in place to alleviate [energy poverty](#). We also show that under the right regulatory and market settings, electricity prices can be kept in check as the electricity sector decarbonises.

Apples and oranges?

Why compare a large populous union of member states with Australia? The EU and Australia have important similarities when it comes to the energy sector, such as a vast grid that crosses jurisdictions and shared governance arrangements.

Both are experiencing an influx of renewable energy supply (although this has been more policy-driven in the EU than in Australia). And EU member states, like Australia's states and territories, are ultimately responsible for energy regulation within their boundaries.

So, coordination and [governance](#) of energy involves gaining agreement

across jurisdictions.

The EU takes a more co-ordinated and top-down regulatory approach on energy affordability than Australia. While there are lessons we can learn from the EU, there are no cut-and-paste solutions.

What's driving the cost of electricity?

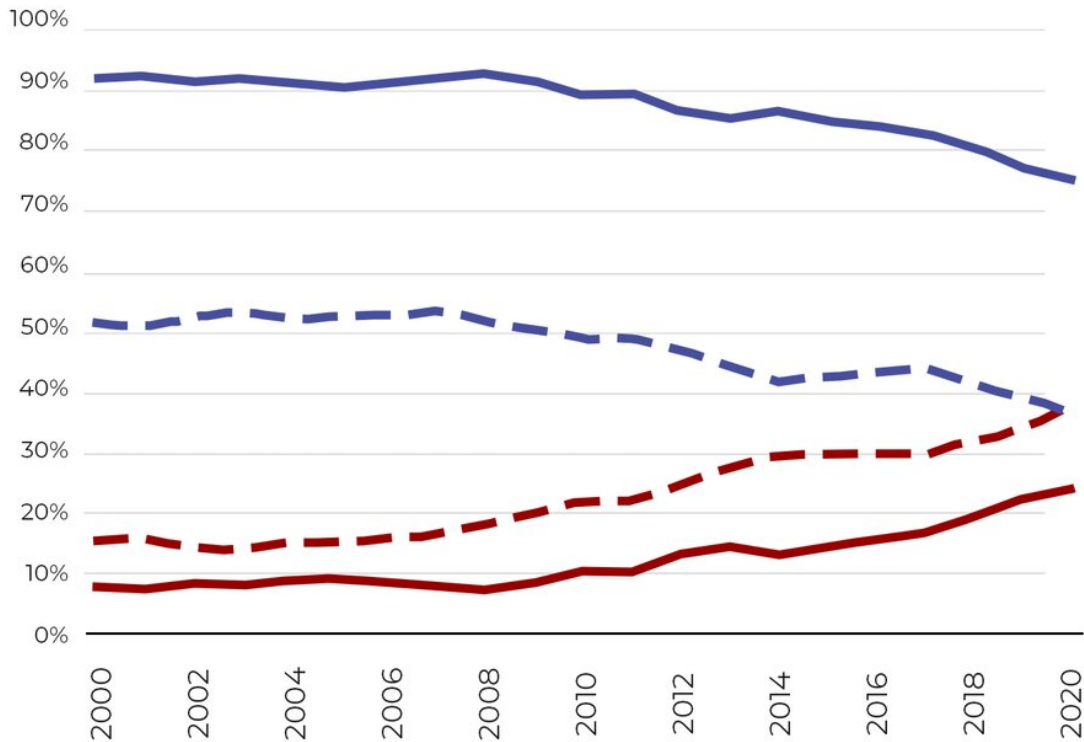
Well, it's complex. The introduction of low-cost renewable supply over the last decade has moderated wholesale and retail electricity prices in both [Europe](#) and [Australia](#). This is likely to continue in the short to mid-term.

Adding more renewable energy into the grid, however, requires upgrades to the poles and wires that carry the electricity—and this is costly. What's more, low wholesale prices will encourage the early exit of aging coal plants, which needs to be managed to avoid price shocks.

The share of fossil fuel and renewable energy sources making up electricity production

In Australia and 27 countries in the European Union

— AUS fossil share
 - - - EU fossil share
 — AUS RES share
 - - - EU RES share



Data from Eurostat (2021b) and Australian Bureau of Statistics (2021)



EU shares do not match up to 100%. The remainder is supplied by nuclear energy, not shown here. Credit: Sangeetha Chandra-Shekeran, Author provided

Australia can learn from the EU in this regard, where almost all member

states—such as France and Germany—have announced [plans](#) to phase-out coal. They often set requirements and define closure dates for the plants.

This isn't yet the norm in Australia, as most recently seen with Origin Energy's surprise decision to bring forward the closure of Eraring—Australia's largest coal plant—last week.

The Australian electricity system has more limited interconnection between states compared to most parts of the EU electricity market (although this is [starting to change](#)). This means shocks, such as early plant closures, are less easily absorbed in Australia.

Both the EU and Australia are grappling with how to fairly and efficiently distribute the cost of network upgrades across society. This includes in Germany, where electricity stakeholders [are discussing](#) how to distribute grid costs equally across the country and not overburden regions with higher renewable generation.

If the upgrades are financed by greater use of the grid, such as with more electric vehicles or heat pumps, this spreads the costs across a broader base.

Energy poverty in Australia

Determining which households spend the most on energy tells us a lot about energy inequality and [justice](#). There are big differences between Australia and Europe.

In Australia, as seen in the graph below, the average household spends a lot less on electricity and heat (2% of a household's disposable income) than their EU counterpart (6%).

In both Australia and the EU, households in lower income groups spend a much larger fraction of their income on electricity and heat while consuming much less in absolute terms.

However, this dispersion is a lot more pronounced in Australia, where it has [increased](#) over the last ten years. This means low-income households are disproportionately affected by rising energy prices, and there needs to be a concerted effort to address this.

Policies to address energy poverty

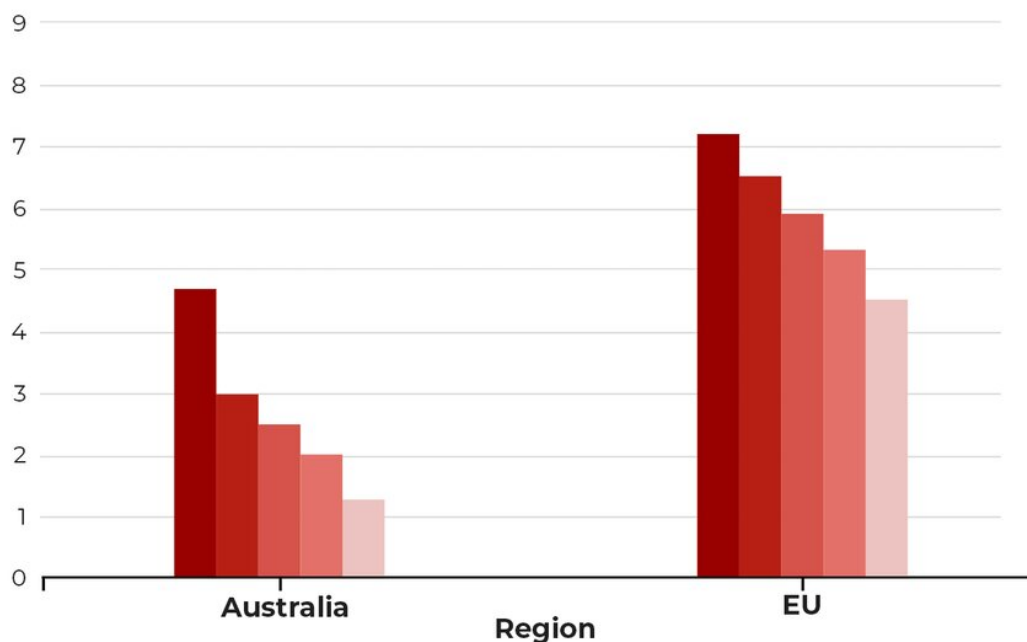
Alleviating energy poverty is a central [policy issue](#) within the EU, with the European Commission positioning it as a key aspect of a [fair energy transition](#).

Share of household disposable income spent on electricity, gas and other heating fuels

Based on income level, in Australia and 27 countries in the European Union

■ lowest ■ second ■ third ■ fourth ■ highest

Share (%)



Data from Eurostat (2021b) and Australian Bureau of Statistics (2021)



Credit: Sangeetha Chandra-Shekeran, Author provided

A range of regulations and institutions are [dedicated to](#) addressing it. The European Commission's "[renovation wave](#)" policy, for example, is a large-scale renovation plan that focuses on low-income and social housing. This offers long-term support to vulnerable households on a scale not yet seen in Australia.

The EU also provides member states with clear [guidance](#) on how to define, measure and address energy poverty. Multiple and composite measures are used rather than a single metric. This includes absolute energy spending, owed utility bills, and self-reported inability to keep the home warm.

The EU has also resourced institutions, such as the [Energy Poverty Observatory](#) and the new [Energy Poverty Advisory Hub](#), to better understand the nature of energy poverty.

Still, the translation of EU ambition to member states is uneven with, for example, Bulgaria performing much worse than Spain. The severity of the problem doesn't necessarily translate into national-scale policy efforts.

In Australia, there's no national overarching framework for the energy transition that includes principles on equity and leaving no one behind.

Australia has the [National Electricity Objectives](#) that guide market planning. These, however, don't reference equity or decarbonisation. Energy poverty remains a concept with no clear definition and, therefore, no clear objectives, targets or metrics for data collection, nor institutions to monitor and report on it.

Energy "hardship" or "stress" are more common terms, and Australia has a well-established [consumer protection framework](#). This is focused more on relieving costs via concessions, retailer obligations and protections against possible [electricity](#) disconnections.

Whatever the language used, Australia can learn from Europe's experience of developing a coherent definition, criteria for measurement, and independent institutions to report on energy hardship.

There are also lessons for Europe from Australia in the context of the rapid rollout of rooftop solar and smart meters.

In terms of this rapid roll out, Australia is getting on the front foot to tackle emerging consumer protection issues. This includes addressing inequitable cost allocations and barriers to market participation, and rule changes that address new responsibilities for providers in the changing energy landscape.

There are also good examples in Australia of industry-driven efforts towards cultural change on affordability. For example, the [Energy Charter](#) is a national CEO-led collaboration committed to customer-focused principles including [energy](#) affordability.

This can be effective and long lasting with buy-in from firms, big and small, and strong community engagement.

This article is republished from [The Conversation](#) under a Creative Commons license. Read the [original article](#).

Provided by The Conversation

Citation: Energy poverty in the climate crisis: What Australia and the European Union can learn from each other (2022, February 23) retrieved 17 July 2024 from <https://phys.org/news/2022-02-energy-poverty-climate-crisis-australia.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.