

**Select Committee on Energy Planning and Regulation in Australia**  
Answers to questions on notice  
**Climate Change, Energy, the Environment and Water Portfolio**

**Inquiry:** Select Committee on Energy Planning and Regulation in Australia  
**Question No:** IQ24-000183  
**Hearing Date:** 29 October 2024  
**Division/Agency:** National Energy Transformation Division  
**Topic:** Countries with increased solar and wind electricity and reduced prices  
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**Question Type:** Spoken

**Senator Canavan asked:**

Senator CANAVAN: ... Is there anywhere in the world you can point to that has adopted or increased its share of solar and wind electricity, to a substantial degree, and that has lowered their electricity price as a result?

Mr Duggan: Certainly, we are not alone in the countries that are seeking to use increased solar and wind. We will need to look and do a cross-comparison. I don't have the matrix on hand of who's increasing solar and wind and what's happened to their prices, so I'll need to take that on notice.

**Answer:**

- The most comprehensive analysis available on the relationship between energy prices and renewable energy shares is a study published by the International Monetary Fund (IMF)<sup>1</sup> in 2022. This study found that renewable energy was associated with a significant reduction in wholesale electricity prices in Europe during the period 2014-2021, and that the higher the share of renewables, the greater the downward impact on electricity prices. The study compared countries with a range of different generation mixes.
- The International Energy Agency in its World Energy Outlook 2024 similarly found that solar PV and onshore wind had the lowest system cost across its membership. It notes that for the European Union, investment in renewables is necessary to reduce future electricity costs, and this is borne out in its modelling, where the accelerated transition in its Announced Pledges Scenario leads to a more rapid fall in electricity costs<sup>2</sup>.

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<sup>1</sup> S. Cervik and K Ninomiya, Working Paper, *Chasing the Sun and Catching the Wind: Energy Transition and Electricity Prices in Europe*, November 2022.

<sup>2</sup> International Energy Agency, *World Energy Outlook 2024*, October 2024, p.259