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**18 October 2024**

**To: Select Committee on Energy Planning and Regulation in Australia**
**RE: Institutional structures, governance, regulation, functions, and operation of the Australian energy market**

Thank you for the opportunity for the Institute for Energy Economics and Financial Analysis (IEEFA) to provide input to the Select Committee on Energy Planning and Regulation in Australia regarding the institutional structures, governance, regulation, functions, and operation of the Australian energy market. IEEFA is an independent energy finance think tank that examines issues related to energy markets, trends, and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.

IEEFA's recommendations on energy planning and regulation, and related matters, are summarised below.

- IEEFA has found that gas and electricity networks have received persistent supernormal profits over 2014 to 2022. To bring network profits to reasonable levels, rule changes and process changes should be undertaken, and increased transparency and monitoring of network profits are required.

- Efficient electric appliances offer the lowest-cost energy solution for households. therefore household electrification is expected to accelerate. Given the trend towards electrification and the fact that residential customers account for more than 80% of regulated gas distribution network revenue, a poorly managed phase-out could result in consumers bearing the cost of stranded gas distribution assets. Energy market governance needs to enable a managed, equitable phase-down of gas distribution networks. A federal government-led managed gas phase-down plan would provide certainty and direction.

- Distributed energy resources (DER) could deliver $19 billion in economic benefits to Australia by 2040, but action is needed to realise this economic opportunity. Economic regulation needs to be adjusted to suit a DER-rich world. An independent body should be set up to develop DER technical standards. The Australian Energy Market Operator (AEMO) should increase the focus on the demand side and DER in its modelling – IEEFA notes that the Integrated System Plan (ISP) review outcomes should help towards this. More focus is needed on the demand side and DER from all energy market bodies and in the rules and regulations.

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- Renewables with storage and transmission is the lowest-cost pathway for Australia, and the Capacity Investment Scheme (CIS) is set to play a key role in the renewables scale-up. However minor adjustments to the CIS design could help ensure its success and speed in bringing in a large amount of renewables and storage capacity. The Orderly Exit Management Framework (OEMF) risks delaying the exit of coal and pushing up electricity system costs for consumers. Further, introducing nuclear in Australia also poses a major risk to cost of living – IEEFA research shows that nuclear in Australia would raise household power bills. Increasing reliance on gas-powered generation while waiting for nuclear to come online would also raise wholesale power costs as gas is one of the highest-cost forms of electricity generation in the National Electricity Market (NEM).

Kind regards,

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**(a) the three overarching laws within which energy markets are governed: National Electricity Law, National Gas Law, and National Energy Retail Law;**

The National Electricity Law should be adjusted to bring electricity network profits to reasonable levels – see further detail below and in **Table 1**.

**(b) the role and function of the Australian Energy Regulator;**

IEEFA has found evidence for supernormal profits in both electricity and gas networks. There are significant inefficiencies in the current economic regulation of monopoly electricity and gas network businesses which is delivering excessive returns to equity shareholders.

- **Fully regulated gas networks** in east coast Australia generated an estimated $1.8 billion in supernormal profits between 2014 and 2022, receiving profits nearly double their "allowed" profits. These additional profits are persistent and excessive across the period. They contribute significantly to higher gas bills, accounting for approximately 5% of a typical residential gas bill. The primary cause of supernormal profits in the gas networks is revenue over-recovery due to consistently higher-than-forecast demand. This points to a systemic under-forecasting issue. Under the current regulatory framework, gas networks are exposed to demand risks, creating an incentive for them to submit demand forecasts that are lower than expected, as this results in additional revenue. Reform is needed to address under-forecasting and prevent excessive profits, in the long-term interests of consumers.[1]

- **Electricity networks** in the National Electricity Market (NEM) have consistently achieved profits exceeding the expected levels, with supernormal profits over FY2014-FY2022 totalling $11.1 billion. In FY2022, actual profits were 2.5 times higher than "allowed" profits, amounting to a supernormal profit of $2 billion over one year alone.[2]

    - The Australian Energy Regulator (AER) has also found similar figures to IEEFA's, confirming that there is outperformance in electricity sector returns on equity. The AER's response extract is copied in **Figure 1**.

    - Although the AER has claimed that these profits are expected under an incentive-based form of regulation, IEEFA considers that it has not provided adequate evidence to demonstrate such extraordinary profits have benefited consumers.[3]

[1] IEEFA. Gas networks are making persistent and significant supernormal profits. May 2024.
[2] IEEFA. Power prices can be fairer and more affordable. 22 November 2023.
[3] IEEFA. Response to AER statement on IEEFA report on electricity network profits. 22 November 2023.

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- Supernormal profits have increased in recent years. The gap between the actual and the allowed/expected return on equity is widening significantly, as shown by the latest AER network performance report – see **Figure 2** below.

**Figure 1: Extract from AER's response to IEEFA report on electricity network supernormal profits**

## IEEFA's estimates of outperformance on returns are similar to those reported in the AER's Annual Electricity Network Performance Report

The ability of business to outperform the regulated rate of return is the incentive-based framework working as intended under the legislation. The outperformance is not an indicator of "supernormal profits", nor having a material impact on customer bills.

The AER publishes an annual Electricity network performance report that assesses the overall performance of network businesses and outcomes under the existing regulatory framework.

In the last two reports the AER has highlighted that as provided for under the rules, electricity networks have outperformed the regulated rate of return, with the level of outperformance reducing over time.

IEEFA in its 2022 and 2023 report has used data from the AER's reports and converted the outperformance reported to a dollar measure and inferred a bill impact to consumers. IEEFA's 2023 report estimates outperformance based on a return on equity measure over the 2014–22 period of $11.1 billion ($2022, real).

We derive a similar outcome to IEEFA with a return on equity of $9.7 billion out of total revenue of $122 billion ($2022, real).

The difference is that our estimate uses the actual leverage of the networks businesses as opposed to average gearing across networks used by IEEFA.

*Source: AER.*[4]

[4] AER. AER Statement – Institute for Energy Economics and Financial Analysis report on electricity network profits. 22 November 2023.

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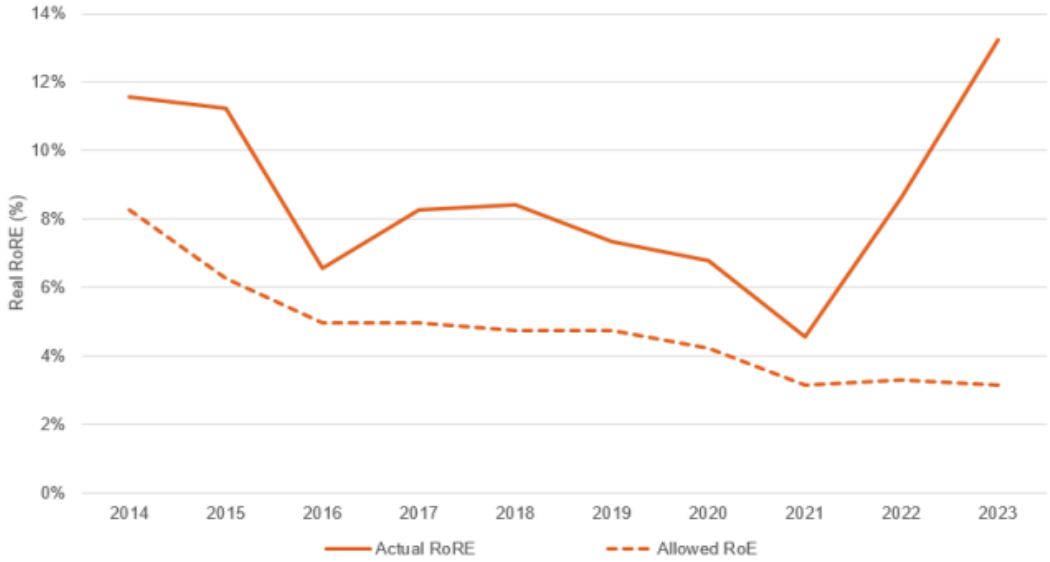
**Figure 2: Real return on regulated equity (RoRE) versus allowed return on equity (RoE) – electricity network service provider (NSP) – from AER Network Performance Report**




Source: Electricity financial performance model
Note: Financial performance numbers are nominal. The weighted average RoRE is calculated by multiplying an electricity NSP's real RoRE against the proportional size of the electricity NSP's regulated equity.

*Source: AER*[5]

Regulatory reform is needed to curb these excessive profits in both gas and electricity networks. This should include:

- **Increased transparency in network profits.** The dollar figure for actual and allowed net profit after tax should be reported in the AER's Network Performance reports for gas and electricity networks.
- **Monitoring of the AER's performance in keeping network profits to reasonable levels.** This could be undertaken by auditor generals.
- **Rule changes to promote more reasonable network profit levels**, particularly in the electricity sector. Additional electricity networks will be built in the coming years, and it is important to ensure it is as low cost as possible, in the long term interests of consumers.
- **Greater scrutiny to address the under-forecasting bias for gas networks.** More broadly, a gas network phase-down plan is needed to guide the efficient and equitable allocation of costs and risks between consumers and networks.

[5] AER. 2024 Electricity and gas networks performance report. September 2024.

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**Table 1: Summary of network regulation problems, solutions and required actions**

| Problems | Solutions | Action required |
|---|---|---|
| **Lack of transparency over the effectiveness of monopoly regulation including absence of data on leverage and net profit after tax** | Full regulated network **disclosure of actual network net profit after tax** and leverage, and timely consolidated **reporting** on this by AER | NEM jurisdictions change Chapter 6 and 6A of the National Electricity Rules (NER) and possibly the NEL to require networks to **publish** full economic profit and loss accounts (allowed vs actual dollar profit), in response to regulatory information notices, and for AER to consolidate and publish this information. |
| **Inadequate governance of AER performance in constraining monopoly network pricing power** | Establish **outcomes performance evaluation framework for monopoly network regulation** by the AER.<br>Amend revenue and pricing principles in the NEL to:<br>□ Clarify that actual not forecast return on equity is the relevant performance metric for assessing regulatory outcomes and the AER's performance.<br>□ Define a clear benchmark for defining when supernormal profits are excessive – any outcome is compatible with "commensurate". | Commonwealth develops and applies **performance evaluation framework** to AER for electricity and gas, especially in relation to reporting on, and evaluating, regulated price outcomes relative to Objective 3 of the AER Strategic Plan.<br>NEM jurisdictions amend the NEL revenue and pricing principles to set clear and testable benchmarks for testing whether AER performance is effective in constraining network monopoly pricing power. |
| **Flawed rate of return instrument** | **Amend** the 2018 and 2022 rate of return instruments to ensure consistency with the revised revenue and pricing principles, effective in the following annual price adjustment – not delayed to following revenue reset. | **NEM jurisdictions amend the NEL/NER** relating to the Rate of Return Instrument (RORI), and overwrite current errors in 2022 and 2018 RORI, using their reserve decision-making powers. |
| **Lack of transparency over interaction between incentive schemes and supernormal profits, meaning networks may be over-compensated** | **Improve transparency** regarding overlaps between incentive schemes and "outperformance" and consider rebasing thresholds for incentive scheme revenues, taking into account supernormal profits data, to avoid duplicating payoffs. | NEM jurisdictions **amend** the NER to require incentive scheme outcome reporting and baseline parameter settings within the wider profitability performance transparency package. |
| **No safeguard mechanism to address persistent and excessive supernormal profits** | Introduce **a safeguard mechanism** so that excessive, structural supernormal profits inconsistent with effective incentive regulation can be returned to consumers. | NEM jurisdictions change the NEL and NER (and AER guidelines and models are updated) to formalise a threshold for returning excessive and persistent supernormal profits to consumers. |

*Source: IEEFA.*[6]

The changes to bring network profits to reasonable levels could be implemented relatively quickly within the existing regulatory framework.

In the medium term, broader changes in the economic regulation of distribution networks is needed, given the significant technological change currently underway with increasing

[6] IEEFA. Power prices can be fairer and more affordable. 22 November 2023.

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uptake of distributed energy resources (DER). Consumers with DER technology can now provide services that have traditionally been provided by networks, and the regulatory regime needs to be adjusted to account for this – to ensure the appropriate, most efficient services provisioning and compensation.

In May 2024 IEEFA published a report exploring the need to review the economic regulation of distribution networks.[7] They key takeaways of this report as follows:

- *"The economic regulation of electricity distribution networks has a significant impact on electricity bills for households and businesses, and more broadly on Australia's economic productivity, but the current system has failed to deliver efficient costs for distribution network services.*

- *"The current system is based on the assumption that distribution networks are the monopoly providers of network services. However, increasingly, distributed energy resources (DER) owned by households and businesses can provide network services, including easing congestion to avoid augmentation or replacement of network infrastructure.*

- *"Internationally, momentum is growing towards reform of the economic regulation of electricity networks, with overseas jurisdictions introducing contestability and payments for DER to provide network services, totex regulation and performance incentives for decarbonisation.*

- *"IEEFA recommends the Productivity Commission undertake a first-principles review of the economic regulation of distribution networks, which would identify ways to ensure efficient costs of network services in a high-DER world."*

In the short term, supernormal profits should be addressed through changes to the existing regulatory regime. In the medium term, further adjustments to the economic regulation of distribution networks are required to ensure they are fit for purpose in a DER-rich future. The Productivity Commission should initiate a first-principles review into the economic regulation of electricity networks, to ensure both that network costs are efficient, and that the regulatory regime is well suited to a high-DER world.[8]

[7] IEEFA. Reforming the economic regulation of Australian electricity distribution networks. May 2024.
[8] IEEFA. Reforming the economic regulation of Australian electricity distribution networks. May 2024.

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**(c) the role and function of the Australian Energy Market Operator (AEMO), including its development of the Integrated System Plan in accordance with the National Electricity Objectives;**

AEMO performs a critical role through its independent market operation and planning functions. The significance of the Integrated System Plan (ISP) has grown through recent iterations, as it encompasses the most robust modelling of pathways for the NEM that are compatible with federal and state policies.

AEMO's independent status relative to other market bodies, state and federal governments, means it continues to be positioned uniquely to play this key planning role. However, the accelerating pace of Australia's energy transition and related policies necessitates some improvements to the ISP, and Australia's national energy regulations must be structured in a way that requires and empowers AEMO to make these improvements.

For instance, AEMO should:

- "propose changes to enable some level of co-optimisation or iterations between demand- and supply-side modelling, to better understand the possible range of options that might deliver the lowest-cost pathway".[9]

- Reconsider its support for NEM-wide solar cut-offs, as more dynamic instruments exist that could maximise solar exports, namely dynamic operating envelopes (DOEs).[10]

- Ensure that narratives in the ISP accurately reflect the underlying technology modelling. As IEEFA explored in a recent briefing note, "Despite featuring prominently in the narrative surrounding AEMO's 2024 Integrated System Plan, gas is forecast to play a reduced role in power generation for the National Electricity Market, and there are risks and uncertainties surrounding increased investment in gas."[11]

**(d) the role and function of the Australian Energy Market Commission;**

The development of DER technical standards needs to accelerate, and appropriate governance arrangements need to be put in place for these standards. Despite significant stakeholder support for reforms in DER technical standards governance, the Australian Energy Market Commission (AEMC) rejected proposals for new governance arrangements for DER technical standards in 2022, stating that it would manage DER technical standards using existing powers. AEMC in 2023 put out a report stating that "Reform is needed to

[9] IEEFA. Submission to the AEMC: Enhancing the Integrated System Plan to support the energy transition. July 2024. Page 2.
[10] IEEFA. AEMO is pursuing NEM-wide rooftop solar cut-offs, but not smarter alternatives. 17 November 2023.
[11] IEEFA. How much gas does the future grid need? September 2024.

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develop an enduring NEM-wide regulatory framework for CER technical standards" and proposed a range of DER technical standards governance options.[12,13,14] The slow progress and indecision on DER technical standards governance means there has been little action in DER technical standards development over the past three years.

IEEFA has recommended: *"Energy Ministers create a new DER Authority (an independent technical body) through a change to the NEL or, more simply, through Commonwealth legislation. The body would: set a vision for DER technical standards; develop a technical standards work program; monitor, review and set DER technical standards; consider issues related to compliance and enforcement of standards in their development; advise on standards to other government and energy market bodies; and undertake related reviews."*[15]

Further, the AEMC rule change process should be examined to determine if it is fast enough given the fast pace of the energy transition.[16] Some key rule changes have taken two years or more, though some minor rule changes appear much faster.[17]

IEEFA also notes that the National Energy Objectives now formally require market bodies, including the AEMC, to consider policies to achieve targets "for reducing Australia's greenhouse gas emissions" and/or "that are likely to contribute to reducing Australia's greenhouse gas emissions".[18] This implies that in its decisions, the AEMC must give regard to outcomes that would assist in the achievement of federal, state and territory emission reduction or renewable energy targets.

### (e) the role and function of Energy Consumers Australia;

The nature of Australia's energy market gives rise to inherent asymmetries between consumers and producers/service providers. For example, it is inherently easier for large network businesses, generators and retailers to engage with regulatory processes in the NEM, in comparison to a diffuse base of largely small residential consumers. The previous discussion of network supernormal profits highlights an example where consumer interests have not been adequately protected in regulatory decisions.

Meanwhile, the rise of DER continues to see consumers play a more active and varied role in the NEM. This only increases the need for effective consumer representation in the regulatory system, through an independent body such as Energy Consumers Australia (ECA). However, current barriers to the effective participation of consumer representatives in

[12] AEMC. Review into consumer energy resources technical standards, Final report. 21 September 2023. Page 18.
[13] IEEFA. Growing the Sharing Energy Economy. October 2023.
[14] IEEFA. The wasted years on governance arrangements for DER technical standards. 10 October 2023.
[15] IEEFA. Growing the Sharing Energy Economy. October 2023. Page 28.
[16] IEEFA. Growing the Sharing Energy Economy. October 2023.
[17] AEMC. Rule Change Projects. Accessed 17 October 2024.
[18] AEMC. National Energy Objectives. Accessed 17 October 2024.

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regulatory processes – such as information asymmetry – should be identified and removed wherever possible.

KPMG has found that ECA achieved higher performance ratings from market bodies and regulators and lower ratings from government and consumer groups.[19] Overall the rating was adequate or above. According to the KPMG review, "some advocates felt ECA was too close to networks, which indicated it played an insider role, preventing it from being critical of market bodies." This review was from 5 years ago, so it is unclear if these findings remain relevant.

**Table 2: Differing perceptions of ECA by stakeholder group**

| Stakeholder Groups | Rating | Commentary |
|---|---|---|
| Market Bodies and Regulators | Excellent | Market Bodies and Regulators consistently stated, with evidence, that ECA effectively contributes to regulatory processes and produced informative outputs. |
| Government | Adequate | Commonwealth and State Government representatives felt that ECA had not sufficiently provided input into policy processes or engaged with operational levels of Government. |
| Consumer Advocates | Good – Adequate | While some consumer advocates were highly complementary of ECA's performance, others expressed frustration over ECA's decision to cease ongoing advocacy funding, and the concern that ECA is seen as a peak. These same groups also emphasised the need for greater internal transparency of functions. |
| Grant Recipients | Very Good | Survey results indicated that most grant recipients were satisfied with the grant distribution process, and to a lesser extent, the grant application process. |

*Source: KPMG*[20]

### (f) the role and function of state energy regulators;

There may be a greater role for state and/or federal government auditor-generals to monitor electricity network monopoly returns, as we have outlined in our report *Regulated Electricity Network Prices Are Higher than Necessary*.[21]

[19] KPMG. Review of Energy Consumers Australia. March 2019.
[20] KPMG. Review of Energy Consumers Australia. March 2019.
[21] IEEFA. Regulated Electricity Network Prices are Higher than Necessary. October 2022.

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*"Annual public performance reporting to independently assess how well the AER and AEMC are performing in achieving value for money for consumers should be performed, led by state and federal governments' Auditor-Generals."*

**(g) the statutory framework which supports consideration of stakeholder views and the public interest; and**

No comment

**(h) any other related matters.**

- **IEEFA research shows that electrification is the lowest cost pathway for Australian homes** and delaying electrification is locking in Australian households to high energy costs:
    - "*Australians are incurring more than $3 billion in unnecessary energy costs for each year of delay in shifting to highly efficient, all-electric appliances."*[22]
    - *"Efficient electric appliances are cheaper than gas appliances when considering the full costs over their lifespan. In Victoria, IEEFA calculated that an average household would save about $1,200 each year if it replaced its gas appliances with efficient electric alternatives at the end of their life. Despite this, nearly a million gas appliances continue to be sold every year in Australia. Each year, these new gas appliances lock in an unnecessary $1.2 billion in lifetime energy costs for households across the country. Victoria is the most affected state, bearing nearly $900m of this total cost."*[23,24]
    - *"We calculated that every year, buying new resistive appliances costs Australians $2.2 billion in unnecessary energy costs compared with if they were buying heat pump-based appliances (reverse-cycle air conditioners or heat pump hot water systems)."* [25]
- **The phase-down of residential gas networks is being poorly handled under current governance arrangements.** Australia's gas consumption is expected to decline, driven by the fact that electrification is the lowest cost pathway for households, and government policies now promote electrification. As such there is a need to instigate a managed phase-down of residential gas networks. Given that residential customers account for more than 80% of regulated gas distribution network revenue, a poorly managed phase-out could result in consumers bearing the

[22] IEEFA. Fast, efficient, flexible electrification can cut energy bills and support the shift to renewables. 6 March 2024.
[23] IEEFA. Fast, efficient, flexible electrification can cut energy bills and support the shift to renewables. 6 March 2024.
[24] IEEFA. Managing the transition to all-electric homes. 17 October 2024.
[25] IEEFA. Fast, efficient, flexible electrification can cut energy bills and support the shift to renewables. 6 March 2024.

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cost of stranded gas distribution assets – something IEEFA has identified as being inequitable and incompatible with the National Gas Objective. Policy uncertainty and inconsistency make it challenging for market bodies to make regulatory decisions to support a managed phase-down of gas networks, and a federal government-led managed gas phase-down plan is needed to provide greater certainty and direction.[26]

- **DER could deliver significant benefits to Australia.** IEEFA research found that "*Distributed energy resources (DER) such as rooftop solar, electric vehicles and smart appliances could deliver economic benefits for Australia of at least $19 billion by 2040"*, plus a *"further potential consumer benefit of $10 billion in reduced generator super-profits".*[27]

- **More focus is needed on the demand side and DER** from all energy market bodies and in the rules and regulations, to reflect the fundamental shifts in both demand- and supply-side technologies that have occurred since the current rules and regulations were established, and given the significant economic benefits on offer from DER.

- **Australia needs a DER technical standards body** to unlock the full potential of DER. IEEFA's report *Growing the Sharing Energy Economy* calls for the creation of a dedicated body to oversee the development, enforcement and compliance of DER technical standards across the NEM.[28] The lack of such standards acts as a significant barrier to DER integration and raises concerns about interoperability among devices like electric vehicle (EV) chargers, smart inverters and home energy management systems. Without common technical standards, DER devices may fail to coordinate effectively, leading to inefficiencies – for example, batteries prioritising unnecessary energy storage over participating in significant frequency control events or grid services. Inconsistent standards across states results in confusion and increased costs. It is urgent to address these issues before widespread adoption of technologies like EVs and behind-the-meter storage, to avoid mistakes and inefficiencies.

- **Renewables with storage and transmission is the lowest-cost pathway for Australia.** The CSIRO GenCost shows that solar and onshore wind, with storage and transmission are the lowest-cost new generation resource in Australia. The AEMO ISP also shows that wind and solar will play a key role in delivering the lowest-cost pathway for the NEM. Further, the International Energy Agency (IEA)'s latest World Energy Outlook underscores how renewables are set to be a key player in the coming years internationally. The IEA reports that solar PV and wind are now the

[26] IEEFA. Submission to Electricity and Energy Sector Plan consultation. 26 April 2024.
[27] IEEFA. DER could provide $19 billion economic boost by 2040. 15 February 2024.
[28] IEEFA. Growing the Sharing Energy Economy. October 2023.

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cheapest electricity sources in most markets, and forecasts that renewables are set to make up four fifths of total capacity additions to 2030. The WEO states that there is abundant manufacturing capacity for clean energy technologies, notably solar PV and batteries. Existing solar PV manufacturing capacity allows for deployment almost three times higher than the installations seen in 2023, and battery manufacturing capacity far exceeds current demand. This plentiful supply will support downward pressure on solar PV and battery prices.[29]

- **The Capacity Investment Scheme (CIS) will play a key role in supporting the entrance of new renewable energy and storage capacity; minor adjustments could ensure the success of the CIS.** The CIS needs safeguards that enable any failures in the selection process to be revealed quickly, so that the causes of these failures can be addressed early, to enable the rapid renewable energy scale-up required to meet the 82% target. IEEFA put forward detailed recommendations on the CIS design in *Five ways to save the Capacity Investment Scheme from attack by zombies.*[30]

- **The Orderly Exit Management Framework (OEMF) poses a risk of delaying the exit of coal power, increasing emissions and increasing costs to consumers.** "IEEFA's view was that the OEMF has significant risks associated and should be avoided, and if it is implemented, it should be done so very carefully to prevent adverse impacts such as higher emissions, higher energy system costs and investor uncertainty."[31]

- **Increased reliance on gas power generation in Australia also poses a risk of power bill rises.** "Gas is an expensive form of generation, and low utilisation rates will likely require gas generators to increase their prices even further. Meanwhile, batteries are seeing rapid cost reductions and are outcompeting gas in many jurisdictions."[32]

- **IEEFA research shows that the nuclear proposal in Australia would raise household power bills.** IEEFA reviewed relevant recent international experience with nuclear reactor construction and found that the reactors were extremely expensive. Costs blew out far beyond initial expectations – overnight capital costs (excluding financing costs) of recent relevant builds increased by a factor of between 1.7 and 3.4. If nuclear reactors in Australia experienced similar costs to the recent international experience, and the plants were to recover their costs in the electricity

[29] IEA. World Energy Outlook 2024. October 2024.
[30] IEEFA. Five ways to save the Capacity Investment Scheme from attack by zombies. 9 May 2024.
[31] IEEFA. Submission: Orderly Exit Management Framework Draft Exposure Bill and Rule. August 2024.
[32] IEEFA. How much gas does the future grid need? September 2024.

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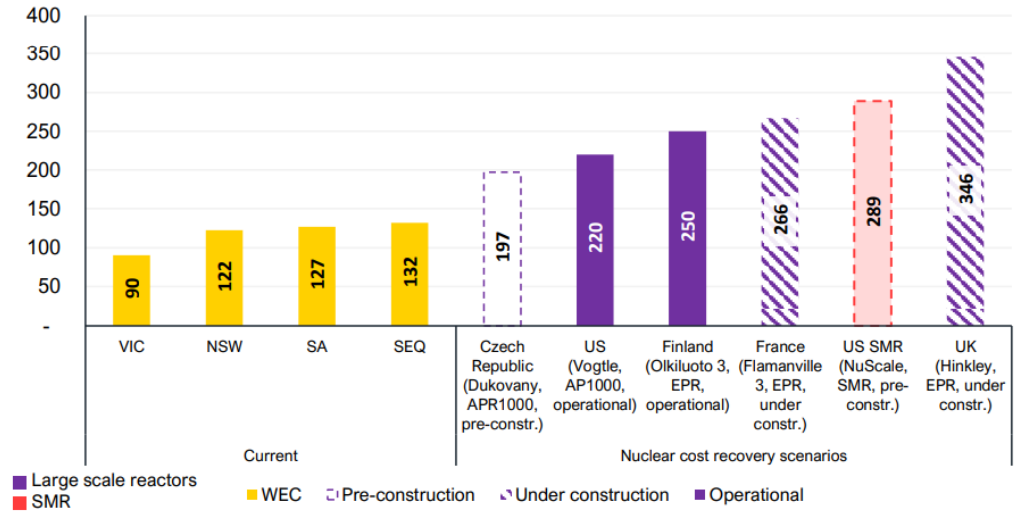
market (i.e. they are commercial plants), wholesale prices would need to rise to enable this. Key takeaways from our report include:

- *Typical Australian households could see electricity bills rise by AUD665/year on average under the opposition Coalition's plans to introduce nuclear to the country's energy mix.*
- *IEEFA analysed six scenarios based on relevant international examples of nuclear power construction projects; in every scenario, bills increased by hundreds of dollars.*
- *For households that use more electricity, bills could rise more – for a four-person household, the bill rise was found to be AUD972/year on average across nuclear scenarios and regions.*
- *The cost of electricity generated from nuclear plants would likely be 1.5 to 3.8 times the current cost of electricity generation in eastern Australia.*[33]

**Figure 3: Current wholesale energy cost (WEC) component of current household bills compared to commercial price to recover nuclear plant costs in Australian context (AUD/MWh)**




*Source: Various – see Appendix. SEQ: South East Queensland. Current wholesale energy cost is based on market rates, the DMO and the VDO. Current WEC excludes GST, losses, ancillary services, RERT, directions cost, prudential costs and fees. Nuclear LCOEs represent the cost of these projects translated to an Australian context with specific assumptions taken.*

*Source: IEEFA*[34]

[33] IEEFA. Nuclear in Australia would increase household power bills. 17 October 2024.
[34] IEEFA. Nuclear in Australia would increase household power bills. 17 October 2024.

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## About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

## About the Authors

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