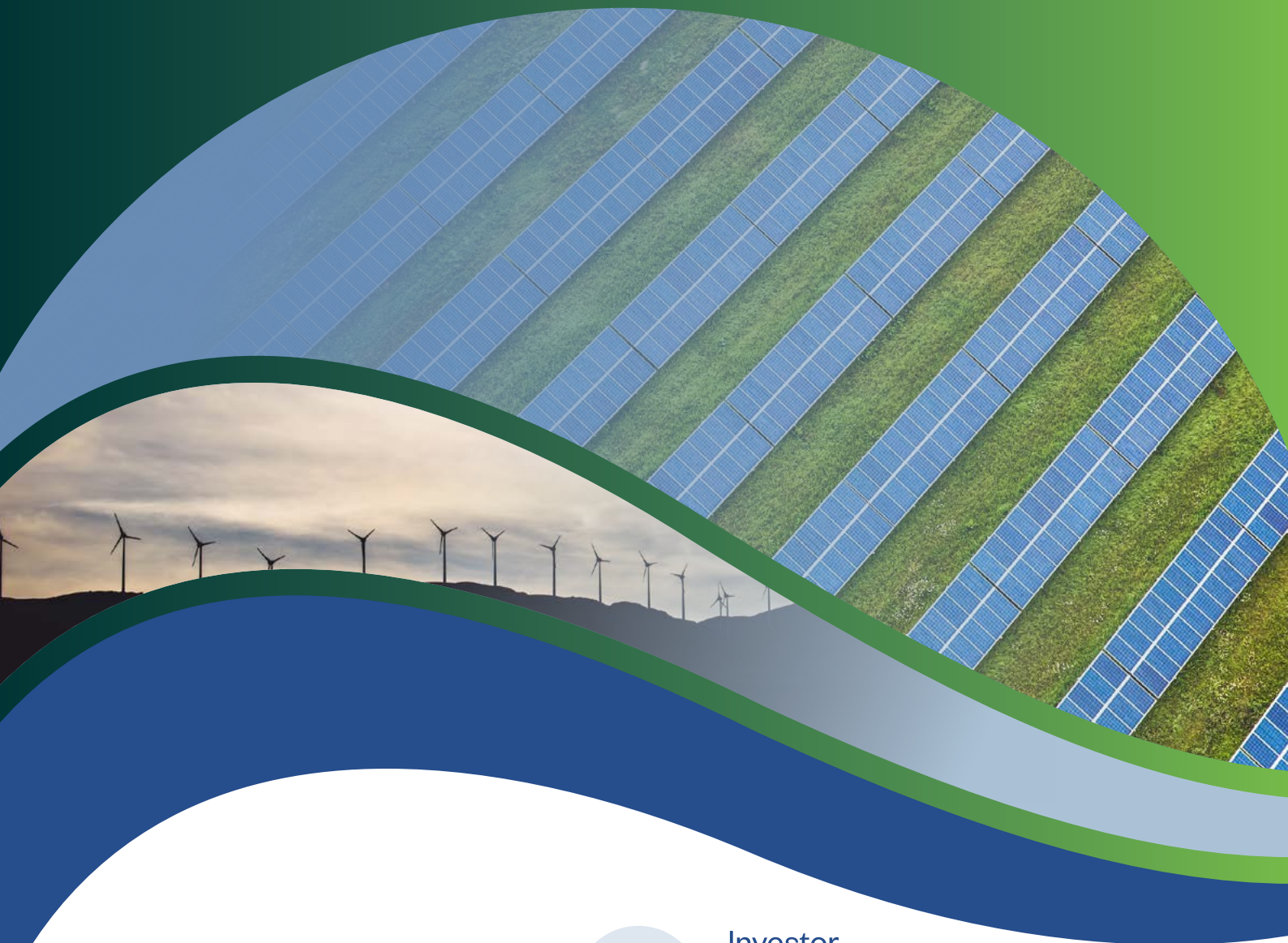


# Collaboration to Support Transition

Investor positions on public ownership of renewable energy



**Clean Energy  
Investor Group**



**Investor  
Group on  
Climate  
Change**

April 2023

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Thank you to CEIG and IGCC members for providing invaluable input into this report and for their participation in the research that underpins this report.

In the spirit of reconciliation, the Clean Energy Investor Group (CEIG) and the Investor Group on Climate Change (IGCC) acknowledge the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

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## About Clean Energy Investor Group

Clean Energy Investor Group (CEIG) is the voice for domestic and global renewable energy developers and investors in Australia. Collectively, CEIG members represent more than 16GW of renewable energy capacity across more than 76 power stations and a combined portfolio value of more than \$38 billion. CEIG members' projects represent 16% of installed capacity in the National Electricity Market (NEM), or 40% of the NEM's renewable energy capacity.

## About Investor Group on Climate Change

The Investor Group on Climate Change (IGCC) is a collaboration of Australian and New Zealand institutional investors focused on the impact of climate change on investments. IGCC represents investors with total funds under management of over \$3 trillion in Australia and New Zealand and \$30 trillion around the world. IGCC members' beneficiaries include more than 7.5 million people in Australia and Aotearoa New Zealand.

# Forewords



Australia is not currently on track to meet its emission reduction target of 43 per cent by 2030, let alone the pursuit of efforts to limit temperature increases to 1.5 degrees. This is a critical issue that requires urgent attention from all levels of government and the private sector.

Achieving this goal will require significant investment. According to AEMO, its Step Change scenario is anticipated to require \$320 billion in investment, with significantly more required to be 1.5-degree aligned. This investment will be necessary to decarbonise the NEM and the broader economy.

The electricity sector has a critical role to play in this transition. By decarbonising the electricity sector, we can enable the decarbonisation of other sectors, including transport and manufacturing. This transition will require collaboration between governments and private capital.

Governments are currently planning public investment in the transition to achieve specific policy outcomes and CEIG recognises that this is a legitimate policy choice, but we need clarity around “how it will work”. Collaboration with the private sector will also be critical to achieving the decarbonisation of the NEM and the broader economy.

The Clean Energy Investor Group and Investor Group on Climate Change has drawn on the wealth of experience of our members to outline four positions on how to collaborate with governments to achieve the decarbonisation of the NEM at pace.

Working together with governments on the design of policy to support the transition will result in reduced risk and lower cost to consumers.

**Simon Corbell**  
*Chief Executive Officer*  
CEIG Ltd



Australia is now gaining momentum on climate policy and action. With the recent passage of the Safeguard Mechanism reforms, investors have been given greater clarity and certainty on Australia’s path towards net zero emissions. However, barriers to decarbonising energy – the greatest source of our national emissions – remain.

Achieving deep, rapid and sustained cuts to emissions in Australia is in the national interest and will require high up-front capital deployment from both public and private investors. For Australia to remain an attractive market for investment in clean energy, unprecedented levels of co-ordination and close collaboration will be required: International markets, including the EU and USA, are moving ahead at pace, setting incentives that provide attractive risk and return profiles for clean energy investors.

The good news is that decarbonising Australia’s energy systems will be a boom to our economy and international competitiveness. The right policies and terms of engagement will see capital flow at scale; to rapidly deploy the clean technology that is already mature, and to back the innovations we need to get all the way to net zero.

It has been a pleasure for Investor Group on Climate Change to work with the Clean Energy Investor Group on this report on how governments and investors can collaborate effectively to decarbonise the Australian grid.

**Rebecca Mikula-Wright**  
*Chief Executive Officer*  
IGCC Ltd



# Introduction

## The need for a 1.5 degree aligned transition

The urgent need to mitigate the impacts of climate change is the key driver for policy makers and investors to ensure emission reduction activities are aligned with efforts to limit warming to 1.5 degrees. Australia is already experiencing some of the effects of global warming, such as more frequent and intense bushfires, droughts, and heatwaves, and the electricity sector is a significant contributor to the country's greenhouse gas emissions.

To achieve Australia's commitments of the Paris Agreement, which aim to limit global warming to 1.5 degrees Celsius, it is crucial that the electricity sector rapidly decarbonises.

*"The electricity sector needs to decarbonise first to enable other sectors to decarbonise... and time is running out."*

The transition of the electricity sector to a low-carbon system is already underway in Australia, with the rapid uptake of renewable energy sources such as solar and wind. However, to achieve a 1.5 degree aligned transition, more needs to be done to accelerate this process.

Australia still relies heavily on coal-fired power, with coal accounting for around 60% of the country's electricity generation.<sup>1</sup> One key step towards a 1.5 degree aligned transition is the closure of coal-fired power plants, which are the largest source of greenhouse gas emissions in the electricity sector.

The closure of coal-fired power plants will require significant investment in generation, storage and transmission infrastructure as well

as ensuring a just transition for affected workers and communities.

The deployment of energy storage technologies such as batteries and pumped hydro in particular is critical to enable the integration of more renewable energy into the grid and ensure a reliable and secure electricity supply as the share of intermittent renewable energy sources increases.

There are many benefits to a 1.5 degree aligned transition of the electricity sector in Australia. In addition to reducing greenhouse gas emissions, it will also create jobs and investment opportunities in the renewable energy sector, improve energy security, and reduce reliance on fossil fuels.

It will also help to position Australia as a leader in the transition to a low-carbon economy, which is becoming increasingly important as other countries around the world move in the same direction, with a noticeable acceleration in global ambition on the back of the US Inflation Reduction Act and EU Net Zero Industry Act, Japan's GX Roadmap and India's Production Linked Incentives scheme.

The transition will also present challenges, including the need for significant investment in new infrastructure and technologies, potential job losses in the coal sector, and the need for regulatory reform to enable the integration of more renewable energy into the grid. These challenges will need to be addressed through a collaborative effort involving government, industry, and the community including the creation of an independent statutory National Energy Transition Authority.

# Collaboration between governments and investors is critical

The decarbonisation of the energy system in Australia is a critical issue for reducing the country's greenhouse gas emissions and mitigating climate change. Achieving this goal requires a collaborative effort between governments and private investors.

The National Energy Market (NEM) is the largest interconnected electricity system in Australia, covering five states and the Australian Capital Territory. Decarbonising the NEM, and other electricity grids across Australia, involves reducing the reliance on fossil fuels and increasing the use of renewable energy sources, such as wind and solar power.

This transition also requires significant investment in infrastructure, such as new transmission lines and energy storage systems.

## **Governments and private investors have complementary roles in decarbonising the NEM.**

Governments can set policy targets and provide regulatory support, such as large-scale renewable energy certificates to encourage investment in renewable energy. They can also invest and fast track the new transmission needed to accelerate the transition as well as in research and development to improve the efficiency and reliability of renewable technologies as has been seen through investments by the Australian Renewable Energy Agency (ARENA).

Private investors, on the other hand, have the capital and expertise to build and operate renewable energy projects. They can also develop innovative business models and financing structures to accelerate the transition to a low-carbon economy.

## **Collaboration between governments and private investors can help overcome some of the barriers to decarbonisation.**

Governments can provide a stable regulatory environment and access to funding, while private investors can bring technical expertise and market knowledge. Together, they can develop a coordinated approach to decarbonizing the NEM, with clear targets and timelines, and the necessary investment and infrastructure in place to achieve those goals.

Moreover, collaboration between governments and private investors can also create opportunities for job creation and economic growth. The transition to a low-carbon economy will require new skills and expertise, and this can be an opportunity to develop new industries and create jobs in regions that have been affected by the decline of traditional industries.

## The purpose of this position paper

This position paper provides guidance to investors and governments on how to work together to achieve a 1.5 degree aligned NEM.

It also aims to help governments design policy and shape its public investments in the energy transition.

CEIG and IGCC outline four investor positions on public ownership of renewable energy in the energy transition:

1. Government can support decarbonisation by reducing transition risks
2. Governments must design efficient and effective policy to best accelerate the energy transition including new transmission
3. The private sector is best placed to be a majority asset owner of established technologies
4. Private investors need clarity on corporate governance of public enterprises

# Investor positions on collaboration with governments in the energy transition



1

Government can support decarbonisation by reducing transition risks

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2

Governments must design efficient and effective policy to best accelerate the energy transition including new transmission

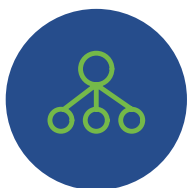
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3

The private sector is best placed to be a majority asset owner of established technologies

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4

Private investors need clarity on corporate governance of public enterprises

# Government can support decarbonisation by reducing transition risks

Governments have an important role to play in reducing transition risk and facilitating the decarbonisation of the NEM. By setting clear targets, implementing supportive policies, investing in modern transmission and distribution infrastructure, facilitating market reform, and providing support for affected communities, governments can help to accelerate the transition to a low-carbon future and reduce the risks associated with the energy transition.

## Transition Risk: Policy & Regulation

Market forces alone are not enough to drive decarbonisation of the NEM in Australia. Markets focus on short-term price signals and often ignore externalities like carbon emissions. This leads to market failure in the transition to a low-carbon economy. Investors recognise the need for government policy to address this market failure.

### Long-term signals and policy implementation

The decarbonisation of the NEM requires long-term signals from governments to the energy market. Governments must implement policies that promote the transition to net-zero emissions and provide clear signals to investors about long-term plans.

When implementing policies, governments should consider the benefits of coordinating and centrally planning their efforts. Doing so can result in more effective and cost-efficient implementation. For example, in Renewable Energy Zones governments may consider streamlining the connection processes, central provision of system strength and the delivery of shared transmission assets.

## Transition Risk: Technology Development

New and emerging technologies may be more risky, expensive, and less mature compared to established technologies that have been in use for many years. The risks may include uncertainties around technical performance, market viability, and regulatory and policy frameworks. These factors may make private sector investment in these technologies more challenging.

## Government support for deployment of new technologies

Governments can play a role in supporting the deployment of new and emerging technologies by directly investing in research and development, providing subsidies, and creating regulatory and policy frameworks that encourage investment in these technologies.

Governments can provide a level of certainty and stability to investors by signalling long-term commitments to these technologies, thereby reducing risks, lowering costs and encouraging private investment. Through these actions, governments can help to bring new and emerging technologies to market and support the transition to a 1.5 degree aligned energy system.

Governments can also invest, de-risk and/or fast track transmission projects enabling new projects to connect to the grid faster. Renewable generation owners are not in a practical position to do this, making this a key area for government action.

## Technologies Facing Transition Risk

Offshore wind, long-duration storage and renewable hydrogen are examples of new and emerging technologies that are considered more risky, expensive and immature.

Given the potential benefits of these technologies, governments may see a role in supporting their deployment. Governments can provide research and development funding, support demonstration projects, take a majority ownership position, and provide subsidies or other incentives to encourage investment in these technologies.

Where technologies do not face transition risk, such as onshore wind and solar generation, it is less clear why governments would consider taking a majority ownership position. Governments' role in this case is not to source additional capital where there is sufficient capital in the market but rather focus on reducing other risks such as supply chain development.



## Transition Risk: Supply Chains

The development of skills and training programs as well as ensuring sufficient manufacturing capability will be critical for the energy transition. There is a leadership and coordination role for government to plan in reducing supply chain risks.

Governments would be best placed to take on this role and create certainty in the level of demand for the renewable energy supply chain so it can develop in confidence.

This could be achieved by:

- A policy mechanism, such as a regular schedule of government auctions (see below), should be introduced in the electricity sector to incentivise the early, managed phase-out of coal-fired generation, and promote its replacement with zero emission technologies.
- Supporting education and training including vocational education and training programs, apprenticeships, and other forms of training and development;
- Setting a clear transition pathway that sends a long-term investment direction to support the development of supply chains and local manufacturing;
- Providing incentives for manufacturers including through tax incentives, grants, and other forms of financial support;
- Encouraging local manufacturing including policies that prioritise local content in government tenders for renewable energy supply and provide support for local manufacturers to develop their capacity;
- Supporting under represented groups and energy workers to ensure they have access to training and job opportunities in the manufacturing and renewable energy sectors.

### A regular schedule of auctions can support the development of local supply chains

Government renewable energy auctions can be designed to create a sufficient level of predictable demand to support the growth of a local renewable energy supply chain, promote local jobs and local skills, and encourage best practice in ESG.

Examples of these auctions in the UK, NSW, and ACT show how governments can use a schedule of auctions to support the growth of a local renewable energy supply chain, promote local jobs, and encourage the development of local expertise in the renewable energy sector.

#### UK's Contracts for Difference (CfD) auctions:

In addition to creating a predictable demand for renewable energy components and equipment, the UK government's CfD auctions also aim to promote local content. The auctions include a requirement for developers to report on the extent to which they have used local supply chains and have supported local jobs in the development of their projects.

#### NSW's Emerging Energy Program:

The NSW government's Emerging Energy Program includes a renewable energy auction that has a local content requirement. Developers are required to demonstrate that they have a plan to maximise local content in the construction and operation of their projects, and are awarded points based on the extent to which they meet this requirement. The program aims to support the development of a local renewable energy supply chain in NSW through a regular schedule of auctions.

#### ACT's and VIC's Renewable Energy Reverse Auctions:

The ACT and the VIC government's Renewable Energy Reverse Auctions included a requirement for developers to demonstrate their commitment to using local suppliers and supporting local jobs in the development of their projects. The auctions have helped to support the growth of a local renewable energy supply chain and have encouraged the development of local expertise in the renewable energy sector.

# Governments must design efficient and effective policy to best accelerate the energy transition including new transmission

Governments are currently proposing to commit billions of dollars in public funds to support the decarbonisation of the NEM. In considering how best to allocate these public funds, governments should explore the risks and benefits of the options available to ensure resources are deployed towards the best value-for-money opportunities.

There are multiple ways in which governments can accelerate the energy transition including:

- taking equity positions in renewable energy assets; and/ or
- designing policies that support contracted revenues to reduce the financial risk of projects and leverage more private capital.

## Achieving governments' Policy Objectives by Reducing the Financial Risk of Projects

To accelerate the adoption of renewable energy in the NEM, it is essential for governments to implement policies that address the issue of financial risk for projects.

While there is a strong pipeline of renewable energy projects in the NEM (209 GW in the proposed pipeline)<sup>2</sup>, many face challenges in reaching financial close due to a lack of demand for their output in the market. To overcome this challenge, governments can provide contracted revenue policies that guarantee a certain price for the energy generated by these projects, thereby reducing the financial risk associated with those investments.

By providing stable and committed revenue streams, governments can reduce the financial project risks, lowering the cost to consumers and attracting more private investment in the sector and accelerate the development and deployment of renewable energy projects.

This, in turn, will help governments to achieve policy objectives such as reducing greenhouse gas emissions, enhancing energy security, and creating new jobs and economic opportunities in the renewable energy industry.

## Ensuring governments can attract sufficient co-investment

Governments may choose to support the development of projects on a sub-commercial basis through their government-owned entities by offering lower contracted prices for electricity.

This may impact governments' ability to attract co-investment. For example, all super funds have mandates to deliver financial returns to their customers, including meeting performance investment benchmarks. Private investors have a duty to deliver risk-adjusted financial returns to their shareholders.

This can also have a significant impact on the Power Purchase Agreement (PPA) market – including by lowering price expectations from off-takers.

Existing off-takers may also seek to renegotiate their PPAs to benefit from lower prices. This may not be beneficial for private sector entities that have invested in renewable energy projects with the expectation of a certain return on investment.

Finally, the increased involvement of government-owned entities in the market may lead to greater vertical integration which could create potential conflicts of interest and reduce competition.

Overall, while government support for sub-commercial projects can help to accelerate the transition to a low-carbon economy, it is important to carefully consider the potential impacts on the PPA market and to ensure that the private sector is still able to operate and compete effectively in the renewable energy sector.

An aerial photograph of a large concrete dam with water cascading over it. The dam is situated in a lush, green forested area. The image is oriented vertically, with the dam and forest on the right side and a dark blue body of water on the left side. A white vertical bar is visible on the left edge of the image, partially overlapping the text box.

## Benefits of partnering with a broad range of private investors

By including a diverse range of investors, governments can tap into a wide range of expertise, resources, and networks, building scale and competitive market forces. This can help to drive innovation, reduce costs, and accelerate the transition to a low-carbon economy.

Governments can also create a more competitive environment, which can lead to more efficient and cost-effective outcomes.

In contrast, seeking to partner with only a narrow group of private investors can limit competition and reduce the potential benefits of government-led initiatives. It can also send a negative signal to the investment community and reduce investor confidence in the renewable energy sector. Ultimately, this could limit the amount of private investment flowing into the sector, which could slow down the energy transition.

Finally, it is important to ensure that government-led initiatives are transparent and inclusive, and that all interested parties that meet due diligence requirements have an opportunity to participate. By considering a broad range of private investors, the government can demonstrate its commitment to transparency, fairness, and good governance.

# The private sector is best placed to be a majority asset owner of established technologies

There is a role for governments to take a majority ownership position on more risky, expensive and immature technology, such as offshore wind and long-duration storage, to reduce transition risk. However, if governments take a majority ownership position on established technologies, such as onshore wind and solar, the options to draw in minority investors might be more limited.

## Governments risk failing to attract private minority owners

The majority owner holds the investment mandate, which sets out the broad expectations for a renewable energy asset. This includes their own Environmental, Social, and Governance (ESG) principles, which guide capital allocation.

There may be misalignment between governments and private investors due to different forces and motivations around investment mandates and ESG principles.

As such, private investors may not be willing to take a minority ownership position over concerns with how governments will participate as majority owners.

Furthermore, it may be difficult for private investors to negotiate with governments or criticise governments on issues due to competing responsibility, such as regulatory roles.

## Considerations around the share of public ownership

When allocating ownership of renewable energy assets, it is important to ensure that the risks are spread among those who are best placed to manage them.

While both public and private investors can contribute to the development of renewable energy projects, the private sector may be better placed to take the majority ownership position due to their ability to access capital, expertise, and risk management practices.

Governments may face increased risks in taking a majority ownership position in renewable energy assets, as they are subject to political and bureaucratic processes, which can impact their decision-making and create delays in project development.

In contrast, the private sector is generally more agile and can respond more quickly to changes in the market and adapt to the changing investment environment.

## Operation and maintenance (O&M) requirements can be a significant challenge in the renewable energy sector.

While the private sector has experience in managing risks associated with O&M, the government may not be the best placed to manage O&M requirements due to a lack of operational and risk management experience and a lack of global expertise. This could lead to increased costs and reduced efficiency in O&M processes, impacting the profitability and sustainability of the renewable energy projects.

Private sector investors often have the technical knowledge and global expertise required to effectively manage O&M and deliver projects that are cost-effective and profitable.



## Interaction with the market and competitive neutrality

While public ownership of renewable energy assets can provide certain benefits, such as greater control over the transition to a low-carbon energy system and the ability to direct investment to underserved regions, it can also create challenges related to market interaction and competitive neutrality.

### Conflicts of interest and unfair competition in the energy market.

Regulatory agencies that are run by the government, such as planning, grid connection, and Renewable Energy Zone (REZ) access, should treat renewable energy assets proposed by government-owned utilities and private sector competitors equally. Providing favourable treatment to government-owned utilities can create conflicts of interest and unfair competition, resulting in higher energy prices for consumers and reduced innovation in the renewable energy sector.

### Inefficiencies in the market.

Government-owned utilities may not have the same incentives to operate efficiently as private sector companies, resulting in higher costs for consumers. There can also be political interference in energy markets, creating uncertainty and instability, making it difficult for private sector companies to make long-term investments.

One solution to address these issues is to establish clear and objective performance metrics for government-owned utilities, such as efficiency, cost-effectiveness, and innovation, to ensure that they operate efficiently and meet the same standards as private sector companies. This can be achieved through rigorous and transparent monitoring, evaluation, and reporting of their performance, along with appropriate incentives and penalties.

### Financing and investment.

Private sector investors may be hesitant to invest in renewable energy assets that are owned or subsidised by the government, as they may perceive the market as being less competitive and less attractive. This can limit the amount of investment in the renewable energy sector, which can slow the transition to a low-carbon energy system.

### Regulatory oversight and transparency.

Government-owned utilities may not be subject to the same level of regulatory oversight as private sector companies, which can make it more difficult for consumers and regulators to hold them accountable for their actions. To address this, regulatory oversight and transparency should be enhanced to hold government-owned utilities accountable for their actions and to preclude even the appearance of unfair competition.



# Private investors need clarity on corporate governance of public enterprises

**Governments may need to establish new corporate entities to implement proposed investments of public funds in the energy sector. Any new public entity needs to be set up in a way that does not deter private investment, but rather encourages the 'crowding in' of private investment to support government objectives and accelerate the decarbonisation of the NEM.**

Governments need to initiate a clear, open, and regular consultation process with industry and other stakeholders to provide clarity on the operation of any new entities that will interact with the energy market. This will ensure that these entities operate effectively, transparently, and fairly. This process should provide the market with:

## **Clarity around how an entity will be setup and governed.**

Investors need to understand how a new entity will be structured, how it will be funded, and what its mandate will be. This is important to ensure that it has a clear remit to deliver on its objectives.

## **Clarity around the role of ministers**

Investors need to know how much influence ministers will have over the decision-making process, and how this will be managed. It is important to ensure that any new entities are independent and that their decisions are based on sound economic and technical considerations rather than political considerations.

Any new entities should be independent and their board members should be appointed based on their expertise and experience rather than political affiliations. This will help to ensure that the entity is able to make objective decisions that are in the best interests of the energy market and ultimately consumers.

## **Clarity around how a public entity will acquire assets**

To better determine the level of risk and benefits from government investment, investors need to understand if governments are looking to buy projects once they are ready to proceed to construction or be involved earlier in the development cycle.

## **Clarity around an entity's objectives**

Finally, governments need to provide clarity on the objectives of any new entity, and the extent of its commercial focus.

For example, does it aim to deliver returns to taxpayers, enable the transition, deliver large investments in the sector, or de risk assets that are currently more difficult to achieve financial close on such as offshore wind.





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