



**public interest**  
ADVOCACY CENTRE

## **NSW Expanded Inquiry into Sustainability of Energy Supply and Resources**

**2 June 2020**

## About the Public Interest Advocacy Centre

The Public Interest Advocacy Centre (PIAC) is an independent, non-profit legal centre based in Sydney.

Established in 1982, PIAC tackles barriers to justice and fairness experienced by people who are vulnerable or facing disadvantage. We ensure basic rights are enjoyed across the community through legal assistance and strategic litigation, public policy development, communication and training.

## Energy and Water Consumers' Advocacy Program

The Energy and Water Consumers' Advocacy Program (EWCAP) represents the interests of low-income and other residential consumers of electricity, gas and water in New South Wales. The program develops policy and advocates in the interests of low-income and other residential consumers in the NSW energy and water markets. PIAC receives input from a community-based reference group whose members include:

- NSW Council of Social Service;
- Combined Pensioners and Superannuants Association of NSW;
- Ethnic Communities Council NSW;
- Salvation Army;
- Physical Disability Council NSW;
- Anglicare;
- Good Shepherd Microfinance;
- Financial Rights Legal Centre;
- Affiliated Residential Park Residents Association NSW;
- Tenants Union;
- The Sydney Alliance; and
- Mission Australia.

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The Public Interest Advocacy Centre office is located on the land of the Gadigal of the Eora Nation.

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***Recommendation 1***

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*That the NSW Government should prioritise renewable energy technologies in its COVID-19 economic recovery.*

***Recommendation 2***

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*That the NSW Government implement an energy efficiency retrofit scheme targeted at low income households and renters.*

***Recommendation 3***

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*That the NSW Government manages the transition away from gas use while providing direct support for households and businesses struggling with high gas prices.*

***Recommendation 4***

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*That the NSW Government reconsiders Snowy 2.0 as a priority in the COVID-19 recovery. In any case, we recommend the NSW Government seek for Snowy Hydro pay all of the transmission costs required for the project to operate.*

***Recommendation 5***

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*That the NSW Government continue to encourage the delivery of REZs by overcoming the barriers to transmission investment and supporting investment in them through updated regulatory and investment frameworks.*

***Recommendation 6***

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*That the NSW Government expand support for access to residential batteries.*

## Introduction

The COVID-19 pandemic has had a devastating impact on NSW communities. Hundreds of thousands have lost work and income. Community activity, business and resources normally taken for granted have been forced to close down, or be altered drastically in response to the health crisis.

As the immediate health crisis subsides, the economic crisis continues. Many industries have been permanently impacted and will struggle to recover. Communities in NSW have been particularly hard hit, with this event coming immediately after devastating bushfires and while much of the state still struggles with drought.

As the focus turns to rebuilding the economy post COVID-19, governments must consider the opportunity to address the damage done during these crises, and not lose sight of addressing the larger long-term issue of climate change and affordable and sustainable access to essential energy and water services. The post-COVID period represents an opportunity to rebuild better, creating new jobs in sustainable industries, creating infrastructure with long term benefits, contributing to a healthier and more resilient NSW community and economy.

Renewable energy technologies present an opportunity to create long-term, high quality jobs in local areas, while contributing to a more sustainable and liveable environment. The NSW Government should prioritise the integration of renewables in its plans for the economic recovery of the state. Doing so will support its long-term energy goals by helping to facilitate the Electricity Strategy and meet its target of net-zero emissions by 2050, help NSW households reduce their energy costs, as well as provide a solid grounding on which to develop a strong, resilient state economy that supports a healthy and prosperous community.

### ***Recommendation 1***

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*That the NSW Government should prioritise renewable energy technologies in its COVID-19 economic recovery.*

## Energy opportunities

### **Household energy efficiency**

There is a wealth of evidence showing the significant benefits of improving household energy efficiency. PIAC strongly supports implementing a household energy efficiency retrofit program targeted at low income households and renters as part of COVID-19 recovery measures.

Such a program would help NSW households lower their energy costs, create more comfortable and resilient homes, reduce load on the energy grid, and help reduce emissions. The program can be quickly implemented for immediate benefits and if introduced alongside measures to target poor quality rental properties, social and community housing, and low-income home owners, provides relief for those most needing it.

As well as providing consumer and energy system benefits, a household energy efficiency program creates diverse direct and indirect employment, much of which can be generated locally.

An energy efficiency retrofit program requires employment in construction and installation trades, building product manufacture, delivery and logistics, sales and administration, household assessment, and accreditation.

Local employment can be further enhanced through the program by including domestic product quotas, implementing it in conjunction with training programs, and targeting workforces impacted by the crisis or otherwise needing support.

Importantly, jobs generated can be enduring, and support a key skills base.

Improving household energy efficiency delivers various co-benefits. It improves the health and comfort of households and the affordability of energy, which lower systemic health costs, energy system costs, and emissions. An energy efficiency program also offers the opportunity to target specific cohorts, such as remote Aboriginal communities with high energy costs and significant health issues, which in turn support other areas of community development.

A large-scale energy efficiency upgrade program could target regional disadvantage by being implemented in stages, with areas most impacted by COVID-19, regional decline or industry transition targeted first. This could include regions previously reliant upon fossil fuel mining or energy generation facing closure, regions with high rates of structural unemployment, regions with significant populations of Aboriginal communities, and regions heavily reliant on international tourism.

Household energy efficiency improves resilience by making homes more comfortable in increasingly extreme temperatures and reducing load on the energy system when it is constrained or at capacity, making household generation and storage more effective and helping ensure regional communities remain viable as temperatures become more extreme.

Improvements to household energy efficiency deliver immediate and long-term benefits. The immediate economic stimulus provided by widespread increases in jobs, production, manufacturing and other services can, depending on the nature of the program, persist into the future while providing opportunities to alter and adjust according to the status of the economic recovery. Many benefits to household health and affordability, systemic efficiency and carbon pollution reduction are permanent, accruing long beyond the life of the program.

## ***Recommendation 2***

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*That the NSW Government implement an energy efficiency retrofit scheme targeted at low income households and renters.*

## **The role of gas**

Gas will continue to have a role in NSW's energy future in the near term, in industrial and commercial production, to provide dispatchable electricity generation and for various other uses. In the residential sector, however, gas is becoming more expensive while alternatives improve in cost and effectiveness. As a fossil fuel, gas is unlikely have a major role in an affordable, zero-emissions energy system and has a limited long-term future.

Any recovery plans that include increasing and supporting the supply of gas come with significant risks and costs and are unlikely to achieve lower gas prices. They are also incompatible with the NSW Government's 2050 net zero strategy. Any price support for gas, if considered, should only be as a transition measure while other longer-term measures that reduce reliance upon gas are implemented.

As noted in our submissions to this Inquiry, gas extraction, particularly the practice of 'fracking', faces strong opposition in many parts of the state. Gas extraction poses unacceptable environmental and health risks and bans on its extraction in some parts of NSW reflect community concern surrounding it. As gas is a fossil fuel its use is incompatible with addressing climate change and securing a safe and healthy environment for future generations.

High gas prices in the East Coast Gas Market have put extreme pressure on commercial and industrial gas users and in some cases caused them to cease production or move it elsewhere. The impact has been particularly bad for manufacturing businesses, many of which are large gas consumers. We strongly support measures that boost manufacturing in the COVID-19 recovery, including supporting gas users, however we caution against subsidising gas suppliers as a means to reduce energy costs and support manufacturing.

Gas prices on Australia's east coast have risen sharply over the past few years, but not primarily as a result of the volume of gas extracted. They are dependent on various factors unrelated to supply, including international demand for gas, its export price and business decisions made by gas producers and sellers.

The sustained increase in gas prices occurred during a massive expansion in domestic gas production which has seen Australia become the world's largest gas producer. Gas prices in Australia's East Coast Gas Market have remained largely unchanged at around \$9-12/GJ even as the export price has declined to less than \$7/GJ.<sup>1</sup> In these conditions, Australia's main gas producers continue to sell into the international market while maintaining the high domestic prices that cripple industry and households.

The owner of the Narrabri gas project has long sought the necessary approvals to proceed into development and expediting the project may be considered among COVID-19 recovery measures. We note the ACCC has demonstrated many gas projects such as Narrabri are uneconomic and would only lock in higher prices for domestic gas.<sup>2</sup> The Narrabri project is particularly controversial and faces considerable community opposition as well as support.

The NSW Government is yet to implement a number of recommendations contained in the NSW Chief Scientist's Independent Review of Coal Seam Gas Activities in New South Wales and the NSW inquiry into the implementation of the recommendations of the NSW Chief Scientist on Coal Seam Gas (CSG) activities. These outstanding recommendations include establishing a single regulatory regime for CSG extraction in NSW, developing an environmental data portal, making the Environmental Protection Agency the lead regulator of the industry, developing clear rules on

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<sup>1</sup> ACCC, 18 February 2020. *East Coast gas prices appear too high and future supply is uncertain.*  
<https://www.accc.gov.au/media-release/east-coast-gas-prices-appear-too-high-and-future-supply-is-uncertain>

<sup>2</sup> The Guardian, 29 September 2017. *The high price of Australian gas: is low supply really to blame?*  
<https://www.theguardian.com/australia-news/2017/sep/29/the-high-price-of-australian-gas-is-low-supply-really-to-blame>



access to farmers' land and rules around compensation, and developing a system to consult with communities. While these recommendations remain outstanding, the risks of gas development cannot be effectively managed and communities and industry cannot have confidence in best practice regulation, monitoring, and compliance.

Given it is unlikely that increasing supply will lower east coast gas prices, and the significant environment and community costs and risks associated with gas production and its limited role in the future energy mix, we recommend the NSW Government look for alternative means of assisting consumers impacted by high gas prices and use the COVID-19 economic recovery as an opportunity to transition the economy away from gas.

To directly alleviate financial stress on gas-reliant businesses while supporting employment, the Government could look to directly subsidise those businesses' energy costs, particularly those that are large employers and can contribute to an effective and sustainable economic recovery.

The same principle should apply for households struggling with gas prices. The NSW Government should help them to pay their gas bills rather than subsidise gas producers and retailers, and should look to support the conversion of households from dual fuel to efficient electric, to reduce household reliance upon gas.

While doing this, NSW should look to address the immediate causes of high gas prices including considering establishing a domestic gas reserve.

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### **Recommendation 3**

*That the NSW Government manages a transition away from gas use while providing direct support for households and businesses struggling with high gas prices.*

## **Hydro power**

The Snowy Hydro 2.0 project has been given accelerated planning approval as part of measures to help in the COVID-19 recovery. The project promises to create jobs and provide benefits to the energy system. However, PIAC is concerned Snowy 2.0 has not yet clearly demonstrated its benefits and may actually lead to higher energy bills for NSW households and hamper decarbonisation efforts.

Snowy 2.0 is intended to provide dispatchable power to consumers in NSW, Victoria and QLD and is slated for completion around 2025. PIAC's cost concerns stem from the new transmission required to deliver energy from Snowy 2.0 to consumers, not just to connect the project to the grid, as well as the uncertain effect it will have on energy prices and emissions reductions.

Snowy 2.0 will add materially to NSW household's electricity bills through the cost of expanded transmission, currently estimated to be up to \$2 billion<sup>3</sup>. This transmission investment will include new infrastructure to connect Snowy 2.0 to the grid, as well as upgrades and augmentation of the grid to accommodate the project's increased load and generation and to deliver power 'north and

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<sup>3</sup> Infrastructure Pipeline <https://infrastructurepipeline.org/project/snowy-2.0/>

south'.<sup>4</sup> TransGrid estimates an increase in transmission capacity between the Snowy Mountains and Sydney of 2,000 MW could be provided for between \$790 million and \$1.9 billion.<sup>5</sup>

Snowy has agreed it will pay the costs for two new 9 km long lines from the Snowy 2.0 generator site to a new substation in Maragle but this is just a fraction of the transmission costs required to make the project operational. The remaining transmission costs will be borne by NSW households through TransGrid's regulated revenue.

While the increase in costs related to transmission are certain, an equivalent reduction in wholesale energy prices or emissions as a result of the project are unlikely for a number of reasons, including:

- Snowy 2.0 will only dispatch electricity at peak events and at a price almost on par with that charged by existing gas generators that currently determine peak prices.
- Snowy 2.0 will be charged using the lowest cost power that is predictably available. This will likely be coal power which is reliably low-cost and available overnight.
- Snowy 2.0 requires materially – around 40% - more energy to charge than it can dispatch. It is a net consumer of energy. As the energy required to charge will likely be coal-fired, this may create a new coal load larger than what is dispatched into the wholesale market to offset peaks.

NSW consumers will not be the sole recipients of the intended benefits of Snowy 2.0 but, as the overwhelming majority of transmission expansion will be undertaken in NSW, will shoulder the burden of transmission costs regardless of the realisation of those benefits. However, Snowy 2.0 will provide energy to Victoria, South Australia and Queensland, with consumers in those states benefitting accordingly.

Snowy 2.0 has high transmission infrastructure needs compared to other solutions, because of the large distances from any major load or generation centres. Distributed storage options offset costs in distribution and transmission and reduce losses in the system. Snowy 2.0 adds transmission costs and losses that consumers must pay for. Under the current trajectory of the energy system, long term, centralised projects are a liability for consumers as well as investors. This has been seen in the recent east coast bushfires, where transmission lines from Snowy Hydro were damaged causing extremely tight supply in NSW, and cutting the connection with Victoria.

PIAC considers it is appropriate for new generation to pay directly for the transmission infrastructure required for it to connect to the grid, and contribute to the indirect costs of augmenting the grid to accommodate it. This is particularly important in the case of Snowy 2.0 where its intended benefits are dependent on transmission infrastructure upgrades.

The cost of extra transmission infrastructure can be recovered in different ways including by access charges or by direct investment. We note the NSW Government has supported this cost recovery approach in its Electricity Strategy, which outlines a plan to incentivise generators to cover some of the costs of building new transmission for Renewable Energy Zones.

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<sup>4</sup> Snowy Hydro News [https://www.snowyhydro.com.au/wp-content/uploads/2018/06/SHLNews\\_June2017\\_LR.pdf](https://www.snowyhydro.com.au/wp-content/uploads/2018/06/SHLNews_June2017_LR.pdf)

<sup>5</sup> Transgrid, 2019. Reinforcing the New South Wales Southern Shared Network to increase transfer capacity to the state's demand centres. [https://www.transgrid.com.au/what-we-do/projects/regulatory-investment-tests/Documents/TransGrid%20PSCR\\_Reinforcing%20NSW%20Southern%20Shared%20Network.pdf](https://www.transgrid.com.au/what-we-do/projects/regulatory-investment-tests/Documents/TransGrid%20PSCR_Reinforcing%20NSW%20Southern%20Shared%20Network.pdf)

Due to the certain higher transmission costs and uncertain lower wholesale costs, as well as the private benefit to the Snowy 2.0 project of extending transmission lines to it, PIAC recommends the NSW Government seek for Snowy Hydro pay directly the portion of the transmission costs required for the project to operate. PIAC does not consider that the project is a priority in the COVID-19 recovery.

#### **Recommendation 4**

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*That the NSW Government reconsiders Snowy 2.0 as a priority in the COVID-19 recovery. In any case, we recommend the NSW Government seek for Snowy Hydro pay all of the transmission costs required for the project to operate.*

### **Renewable energy zones**

Large scale renewable energy generation will be an important component in the state's transition to zero-emissions. We note the NSW Government has announced plans for three new renewable energy zones (REZ), starting with one in the Central West of the state.

One of the key constraints to developing large-scale renewable generation projects in the NEM is a lack of transmission infrastructure to deliver energy to the market at scale. Incremental and ad-hoc investment with each new generator is inefficient and expensive to the point of prohibitive, yet, under current regulatory arrangements, speculative investment in transmission infrastructure to service large-scale renewable generation is risky because it relies on uncertain future generation connections to recoup revenue. Transmission investors have little certainty of number and capacity of new generation connections prior to investing. It is also unrealistic to expect generation investors to voluntarily co-ordinate and take on this risk themselves.

As a result, optimal transmission infrastructure to support new energy projects may not get built. Consequently, generation projects which would have benefited the energy system and surrounding communities, are at worst not developed and at best are built at a much higher cost than is optimal.

As part of the COVID-19 recovery, the NSW Government should look for opportunities to encourage the delivery of REZs by overcoming the barriers to transmission investment and supporting investment in them through updated regulatory and investment frameworks.

PIAC has developed a framework to help address the barriers to investment in generation-leading transmission investment. It provides a model for how the cost of this investment could be shared between consumers, generators, Transmission Network Service Providers (TNSPs) and speculative transmission investors (who may or may not be TNSPs) in a way that helps drive timely, efficient system-wide outcomes and place less risks on consumers. It also allows the option for governments to underwrite a portion of the investment cost to help reduce uncertainty. Elements of PIAC's model are being adopted already by the NSW Government.

PIAC's model is well suited to the context of REZs - shared transmission assets servicing renewable generation within a geographic area as prescribed by a regulatory process, such as

the Integrated System Plan - but could be applied to any part of the energy system where new transmission infrastructure is built to support future access to multiple generators.

### ***Recommendation 5***

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*That the NSW Government continue to encourage the delivery of REZs by overcoming the barriers to transmission investment and supporting investment in them through updated regulatory and investment frameworks.*

## **Distributed storage**

A government program supporting community and residential distributed storage can drive a strong and sustainable economic recovery while supporting the NSW Government's energy and emissions priorities, including reduced energy bills, lower emissions, reduced load on the electricity grid and, potentially, improved safety and health of vulnerable people.

Like an efficiency upgrade scheme, a battery scheme should target low income households and renters and areas hard hit by COVID-19, bushfires or other disaster to maximise benefits. As the cost of batteries decline, they will be an increasingly economic option to support the transition of the energy system while keeping energy affordable. We note the NSW Government already supports access to batteries through its Empowering Homes program, however, this program is limited to owner-occupiers. We recommend opening up access to support for batteries as part of the COVID-19 recovery.

### ***Recommendation 6***

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*That the NSW Government expand support for access to residential batteries.*