

Submission to NSW DCCEEW on IPART Future of Embedded Networks

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About the Public Interest Advocacy Centre

The Public Interest Advocacy Centre (PIAC) is leading social justice law and policy centre. Established in 1982, we are an independent, non-profit organisation that works with people and communities who are marginalised and facing disadvantage.

PIAC builds a fairer, stronger society by helping to change laws, policies and practices that cause injustice and inequality. Our work combines:

- legal advice and representation, specialising in test cases and strategic casework;
- research, analysis and policy development; and
- advocacy for systems change and public interest outcomes.

Energy and Water Consumers' Advocacy Program

The Energy and Water Consumers' Advocacy Program works for better regulatory and policy outcomes so people's needs are met by clean, resilient and efficient energy and water systems. We ensure consumer protections and assistance limit disadvantage, and people can make meaningful choices in effective markets without experiencing detriment if they cannot participate. PIAC receives input from a community-based reference group whose members include:

- Affiliated Residential Park Residents Association NSW;
- Anglicare;
- Combined Pensioners and Superannuants Association of NSW;
- Energy and Water Ombudsman NSW;
- Ethnic Communities Council NSW;
- Financial Counsellors Association of NSW;
- NSW Council of Social Service;
- Physical Disability Council of NSW;
- St Vincent de Paul Society of NSW;
- Salvation Army;
- Tenants Union NSW; and
- The Sydney Alliance.

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Acronyms list

Acronym	Full name
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
CER	Consumer Energy Resources
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DMO	Default Market Offer
EAPA	Energy Accounts Payment Assistance
EWCAP	Energy and Water Consumers' Advocacy Program
EWON	Energy and Water Ombudsman NSW
IPART	Independent Pricing and Regulatory Tribunal
NEM	National Energy Market
NER	National Energy Rules
PIAC	Public Interest Advocacy Centre

1. Introduction

The Public Interest Advocacy Centre (PIAC) welcomes the opportunity to respond to the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) in consideration of the Independent Pricing and Regulatory Tribunal's (IPART) review into the future of embedded networks (the Review) Final Report (the Report) and an NSW embedded network work plan. Addressing the significant, long-running impacts and inequities experienced by residents of embedded networks is a critical step in ensuring fairer treatment of NSW households and their equitable, protected access to the energy they need.

It is critical to note that there was never an intentional decision made by governments, regulators and consumers to establish and grow a market for embedded networks. Scope for the operation of embedded networks and exempt selling arrangements was intended to ensure circumstances where the provision of energy was incidental – rather than the primary purpose of business – were not unreasonably exposed to the full range of regulatory requirements. The rapid and unchecked growth of embedded networks is an unintended (if foreseeable) consequence. They have become a loophole exploited by some businesses seeking to profit from the provision of an essential service without the responsibilities and costs associated with providing that service.

People in embedded networks generally have no practical alternative service options and experience a range of detriments including less protections and supports and less transparency of their circumstances than consumers in standard supply arrangements. While the developers and operators of these networks often benefit from lower costs as a result of embedded network arrangements, most residents do not see these benefits, and many pay well above what equivalent households outside the network pay.

The current circumstances are unacceptable and have real and ongoing impacts on NSW households which cannot continue to go unchecked. While the Australian Energy Regulator (AER) has responsibility for the exemptions framework, the NSW Government has a duty to ensure fair outcomes for NSW households, and to address the issues they face where Commonwealth action continues to be delayed or avoided.

We welcome the initiative the NSW government and IPART have taken to address the issue. PIAC strongly supports the NSW Government commitment 'to bring outcomes for embedded network customers in-line with those in traditional energy supply arrangements' and 'to provide more equitable consumer and price protections for embedded network customers.'¹ We see the response to the Report as the first crucial step in long-overdue action to deliver on this commitment.

The implementation of robust pricing and other protections for NSW residents in embedded networks should be regarded as the necessary first step but we strongly encourage the Government to embrace an ambitious, longer-term strategy to ensure all NSW households have access to fair, affordable, safe, reliable and sustainable energy. We cannot continue to allow the

¹ Office of Energy and Climate Change, NSW Treasury (2023) '[Embedded Network Action Plan – Improving outcomes for customers of embedded networks.](#)'

development of two classes of energy expectations in NSW, where some consumers are afforded rights and protections that others are denied, simply due to their place of residence.

This submission provides detailed comment on the recommendations made in IPART’s Final Report on the Future of Embedded Networks in NSW². We also provide further feedback on issues outside of the scope of IPART’s review, including the managed exit of some embedded network operators and considerations on embedded networks and NSW’s Net Zero by 2050 targets and goals.

1.1 Direct response to IPART’s recommendations

#	IPART Report	PIAC position	Further info.
IPART Findings			
1.	The Default Market Offer is not an appropriate maximum price for electricity embedded networks	Strongly Agree	P.13
2.	Embedded networks can incentivise the delivery of cost-effective hot water and air-conditioning services (over the life-cycle of the infrastructure), including the installation of low-emission infrastructure. However, there are currently many embedded network sites without low-emission infrastructure.	Agree - with strong qualifications.	P.10
IPART Final Decisions			
1	That the pricing methodologies be assessed according to the following objectives: a. ensures that embedded network customers are not paying more than non-embedded network customers b. provides price stability for customers c. is transparent, simple for customers to understand and easy to apply d. ensures that an embedded network seller is able to recover its efficient costs of supply e. is responsive to changes in the efficient costs of supplying customers f. incentivises embedded network sellers to supply energy efficiently and enable the efficient use of energy g. allows for cost-reflective pricing h. encourages sustainable energy solutions and accommodates innovation and investment in the energy sector i. involves regulatory costs that are proportionate to the problem j. results in prices that are enforceable and capable of being monitored.	Support – with qualifications.	P.15-17
2.	Setting maximum prices by benchmarking them to what on-market customers are paying best protects embedded network customers and meets our pricing objectives.	Support	P.13

² IPART, 2024, [Embedded Networks Final Report](#).

3.	The pricing methodology determines maximum unit prices, rather than annual bill caps at specified levels of consumption.	Support - with some qualifications	P.13
IPART Recommendations			
1.	That the NSW Government enact legislation to authorise IPART to determine maximum prices for the sale of electricity, gas, hot and chilled water to small customers in embedded networks in NSW.	Support - with additions	P.13
2.	That the maximum prices would be updated annually based on retailers' market offers available in July of each year, with the new maximum prices to apply from August each year.	Support	P.13
3.	That the NSW Government ensure that the regulatory arrangements allow embedded network sellers to renegotiate their supply contracts for embedded network services in the 6 to 12 months prior to the introduction of a requirement that sellers to comply with maximum prices, and require both parties to negotiate in good faith.	Support – 6 months prior	P.13
4.	That IPART review its price setting methodology at regular intervals, for example, at least once every 5 years.	Support – with qualifications.	P.13
5.	The NSW Government consider the arrangements for solar in embedded networks and provide guidance to embedded network operators, sellers and residents about the infrastructure needed at an embedded network site to facilitate: a. the installation of solar panels by residents b. payments, rebates, or other financial benefits that reflect the excess electricity generated from residents' solar panels that is supplied to the embedded network or distribution network.	Support – with qualifications.	P.21-22
6.	That the maximum electricity prices for residential customers in embedded networks comprise: – a consumption charge equal to the median consumption charge of each active retailers' lowest consumption charge (inclusive of guaranteed discounts and GST) for their generally available offers. – a fixed rate equal to the median supply charge of each active retailers' lowest fixed charges (inclusive of guaranteed discounts and GST) for their generally available offers. A separate price should be set for each distribution district. An active retailer is defined as any retailer with at least 1000 customers in NSW that has an active offer available at the time the benchmark is calculated.	Support	P.13
7.	For electricity embedded networks, an embedded network seller be permitted to apply different consumption tariffs for different time periods (i.e. time-of-use tariffs), as long as the average price does not exceed the determined	Support – with qualifications	P.17

	consumption charge when it is weighted by the AER's Default Market Offer model annual usage profiles.		
8.	A gas consumption benchmark is set based on the weighted average consumption tariff for 12,680 MJ of annual gas usage.	Support 10,000 MJ	P.18
9.	Where an embedded network seller provides unmetered gas services, they can charge an additional unmetered daily fee determined by multiplying: – the consumption benchmark of 1,000 MJ per year, and – the benchmark gas consumption charge.	Support	P.18
10.	That the NSW Government amend the Residential Tenancies Act 2010, and the Residential (Land Lease) Communities Act 2013, to allow tenants and land lease community residents living in embedded networks to be charged for unmetered gas up to the unmetered gas charge determined by IPART.	Support – with strong qualifications	P.18
11.	That embedded network sellers must charge for hot water in units of energy, based on the underlying fuel source at the site (cents/kWh or cents/MJ).	Support	P.19
12.	That the NSW Government amend the Residential Tenancies Act 2010 to clarify that tenants must pay charges for the supply of hot water to residential premises if the hot water consumed is individually metered.	Support	P.19
13.	Where gas is the underlying fuel source, sellers cannot charge more than IPART's benchmarked maximum gas consumption charge.	Support	P.19
14.	Where gas is the underlying fuel source, sellers cannot charge customers for more than 0.40 MJ of gas per litre of water consumed.	Support.	P.19
15.	Where electricity is the underlying fuel source, sellers cannot charge more for hot water than the customer would have been charged if gas was the underlying fuel source.	Do not support – with qualifications.	P.19
16.	That embedded network sellers selling hot water services from centralised gas hot water systems are allowed to recover a supply charge from hot water customers, only if that supply charge has not otherwise been recovered from a separate gas supply charge.	Support	
17.	That regulated maximum prices for chilled water be extended to all centralised air-conditioning services sold by an embedded network seller.	Support	
18.	That embedded network sellers of chilled water be permitted to bill customers using either a consumption charge or a fixed daily rate. Sellers must use the same charging approach for all customers at a given site.	Support	
19.	Where an embedded network seller imposes a consumption charge for chilled water embedded networks: a. the maximum consumption charge in kWh is equal to the maximum electricity tariff for embedded networks b. no additional fixed rate charge is permitted.	Support	

20.	Where an embedded network seller imposes a consumption charge for chilled water embedded networks, the seller must provide information on the efficiency of the centralised air-conditioning system on the seller's website. The information must include: <ul style="list-style-type: none"> – The Energy Efficiency Ratio (EER) – The Coefficient of Performance (COP) – The energy input for the last financial year – The energy output for the last financial year – The system's brand name or model number, where available. 	Support	
21.	Where an embedded network seller imposes a fixed daily rate for chilled water embedded networks, the maximum daily rate be determined by multiplying: <ul style="list-style-type: none"> – the consumption benchmark of 2.5 kWh per day for a typical low air-conditioning user, and – the benchmark electricity consumption charge. 	Support	
22.	That the NSW government amend the Residential Tenancies Act 2010, and the Residential (Land Lease) Communities Act 2013, to allow tenants and land lease community residents living in embedded networks to be charged up to IPART's maximum fixed daily fee for unmetered centralised air-conditioning services.	Support with strong qualifications	P.20
23.	That the NSW Government amend the Residential Tenancies Act 2010 to clarify that tenants must pay charges for the supply of chilled water to residential premises if the chilled water consumed is individually metered.	Support	P.19
24.	That business customers that are large corporate entities be subject to reduced price protections, with the maximum prices based on: <ul style="list-style-type: none"> a. for electricity and chilled water services, the business customer Default Market Offer b. for gas and hot water services, the local area retailer's business customer standing offer. 	No comment	
25.	That business customers that are not large corporate entities be subject to the same price protections as residential customers, but with the maximum prices based on: <ul style="list-style-type: none"> a. for electricity and chilled water services, the median of the active retailers' lowest business customer electricity consumption and supply charges b. for gas and hot water services, the median of the active retailers' lowest business customer gas consumption and supply charges 	No comment	
26.	The NSW Government impose a statutory obligation on embedded network operators and exempt sellers supplying or selling energy to business customers to become members of the Energy and Water Ombudsman NSW (EWON).	Support	P.21

27.	That the NSW Government enact legislation to provide for a statutory compliance and enforcement framework (statutory framework).	Support – with qualifications	P.20-21
28.	That the NSW Government enact legislation to require all embedded network sellers of hot and chilled water in NSW to become members of the Energy and Water Ombudsman NSW (EWON).	Support	P.21
29.	That the compliance and enforcement framework authorise the Energy and Water Ombudsman NSW (EWON) to: a. refer to the regulator any complaints that EWON reasonably suspects indicate an embedded network seller may have breached an embedded network pricing determination b. provide to the regulator any supporting information or documentation regarding customer complaints it receives related to embedded network sellers not complying with the maximum price.	Support	P.21
30.	30. That the compliance and enforcement framework: a. authorise the regulator to monitor compliance with a price determination (not related to complaints) b. authorise the regulator to investigate whether an embedded network seller has complied with an embedded network pricing determination c. authorise the regulator, to require an embedded network seller to provide information, documents or evidence (by notice in writing) for the purposes of: – monitoring compliance with a price determination or – an investigation d. provide that it is an offence, subject to a monetary penalty for non- compliance, to refuse or fail to comply with a notice requiring the provision of information, documents or evidence.	Support	P.20-21
31.	That the statutory framework require embedded network sellers to publish on their websites: – their current prices – the addresses of all the sites where they provide embedded network services, and the services they provide at each site.	Support – with additions	P.21
32.	That embedded network sellers that do not have a website be required to submit their prices and addresses of all the sites they provide embedded network services to the regulator; for publication on the regulator’s website.	Support – with additions	P.21
33.	That the NSW Government consider the information that owners corporations require before entering agreements with embedded network sellers.	Support	P.21
34.	That the statutory framework empower the regulator to take one or more of the following enforcement actions where it is satisfied an embedded network seller has not complied with an embedded network pricing determination:	Support – with additions	P.21

	<p>a. directing an embedded network seller to take specified action within a specified timeframe to remedy the non-compliance</p> <p>b. impose a monetary penalty on the embedded network seller and/or a person who is the director of or involved in the management of an embedded network seller.</p>		
35.	<p>That the statutory framework require the regulator, before issuing a direction or imposing a monetary penalty to:</p> <p>a. consider the action the embedded network seller has taken or is likely to take in respect of the non-compliance and be satisfied it is nevertheless appropriate to issue the direction/impose the penalty</p> <p>b. consider whether the non-compliance has been or is likely to be the subject of any other penalty or action or any claim for compensation, and be satisfied it is nevertheless appropriate to issue the direction/impose the penalty.</p>	Support – with additions	P.21
36.	That the statutory framework provide that failure by an embedded network seller to comply with a compliance direction of the regulator is an offence and is subject to a monetary penalty.	Support – with additions	P.21
37.	That IPART be the regulator that determines and enforces compliance with the maximum prices for the sale of electricity, gas, hot and chilled water to customers in embedded networks in NSW.	Support	
38.	That the NSW Government should not prohibit the installation of new hot and chilled water embedded networks in NSW.	Support – with qualifications	P.10 & 22

2. The Future of Embedded Networks in NSW

The future of embedded networks in NSW must be one that promotes the long-term interests of all NSW households. Legislative and regulatory changes are required to ensure:

- Any embedded networks which are permitted provide demonstrable, tangible benefits for consumers.
- Embedded networks align with NSW Net Zero by 2050 and the Climate Change (Net Zero Future) Act 2023.
- Embedded networks residents receive the same protections and outcomes afforded to households supplied 'on market'.
- The managed exit of embedded network operators seeking to unwind their arrangements.
- The collection of data on embedded networks (and residents) in NSW to improve transparency, facilitate stronger protections for residents, and inform ongoing reforms.
- Regular reviews to prevent or address emerging issues.

2.1 Demonstrable, tangible benefits for consumers

PIAC does not support embedded networks in their current form. However, we do not preclude the possibility that appropriately regulated embedded networks can help enable good consumer outcomes. For instance, where space limitations or building density mean it is more practical and efficient to provide centralised services, i.e. there is not enough space for individual efficient electric water heaters and/or air conditioning compressors.

Embedded networks, properly structured, can provide benefits to consumers through more efficient access to on-site generation, and shared, efficient infrastructure and appliances. This is not how they are currently being employed, with most embedded networks structured to absorb energy cost differentials and take advantage of lighter regulation and less responsibility, to deliver additional revenue for developers and operators. Experience to date demonstrates that benefit to residents of embedded networks will not occur without robust regulation.

PIAC broadly supports IPART Recommendation 38 not to prohibit new hot and chilled water embedded networks in NSW. However, any future for embedded networks (including hot and chilled water embedded networks) must squarely place the onus on the proponent to demonstrate what tangible beneficial consumer outcomes will be realised as a result. This must be accompanied by robust regulation to ensure equivalent consumer rights and protections are also delivered. PIAC supports the Department detailing explicit actions in the NSW embedded network work plan to reflect this.

2.2 NSW work plan

PIAC supports the Department developing and implementing a comprehensive work plan to address the outstanding embedded network responses which have been delayed due to the change of government in early 2023. This includes the recommendations from the parliamentary inquiry, the draft embedded networks work plan and the draft ministerial statement of expectations.

A comprehensive workplan and adoption of better regulation will provide certainty to consumers and businesses. As the scope of IPART's review was limited to pricing, the NSW work plan will need to address other considerations including:

- The comprehensive collection, analysis and publication of data on embedded networks and their residents in NSW.
- Adopting legislation and regulations to ensure only embedded networks providing demonstrable and tangible consumer benefits are allowed in NSW.
- The managed exit of existing embedded network operators and support for the conversion of embedded networks unable to meet improved regulations.
- Ensuring equal consumer protections for customers living in embedded networks. This must include access to payment supports, life support and family violence protections
- Planning for CER embedded networks and assessing how they may be allowed in order to benefit residents.

PIAC has provided the following recent feedback to the NSW Government and regulators on embedded networks that can assist in forming the NSW embedded network work plan:

- 2024 Submission to [IPART on the Draft Report on the Future of Embedded Networks in NSW](#)
- 2024 Submission to the [AER's Review of the Exemption Framework for Embedded Networks](#)
- 2024 Joint Submission to [NSW DCCEEW on EAPA Consultation Paper on Proposed Reforms](#). This includes a section on EAPA provision to customers living in embedded networks which is particularly relevant to this process.
- 2023 Submission to [IPART on the Consultation Paper on the Future of Embedded Networks in NSW](#)
- 2023 Submission to the [AER on Retail Performance and Reporting Procedures and Guidelines Issues Paper](#). This includes a section on the collection of data on embedded networks which is particularly relevant to this process.
- 2023 Submission to the [Draft Ministerial Statement of Expectations: Protecting NSW Customers of Embedded Networks](#)
- 2022 Submission to the [NSW Committee on Law and Safety's Inquiry into Embedded Networks in NSW](#)
- 2021 Submission to the [Department of Customer Service on the Land Lease Community Charging Proposal](#)

2.3 Managed exit of embedded network providers

With the implementation of pricing regulation and broader protections for NSW households living in embedded networks, it is likely that some embedded network operators will no longer wish to

operate, or may otherwise no longer be sustainable in their existing form. This presents challenges in the short-term which will need to be addressed, but the cessation of embedded networks which do not meet necessary standards of consumer outcomes and protections should be accepted and enabled.

The Department will need to consider the role of the government in helping to support the unwinding of embedded networks, and managing and mitigating any potential consumer impacts and in helping to enable the transfer out of embedded networks.

PIAC recommends the Department develop a range of measures, including advice, information and financial assistance to support the conversion of embedded networks. We recommend the support measures developed by Government be provided according to the circumstances of the embedded network. Accordingly, the Department should develop a series of 'archetypes' of embedded network, the issues particular to their circumstances, and assistance and information appropriate to address those circumstances.

Smaller embedded network operators/owners are likely to need assistance to meet the costs of conversion. This could include embedded networks in social housing, caravan parks, small strata buildings etc. These operators are less likely to be able to absorb the costs of transferring out of the embedded networks which could result in poor outcomes for households.

Others larger operators may need connection to distribution networks, access to metering installation services, and other information. PIAC would not support the government providing widespread financial assistance to larger embedded network operators and developers. These businesses are more likely to have benefitted financially from the arrangement and have scope to absorb the costs of transferring out of embedded network service provisions.

Particular attention should be paid to potential issues in embedded networks where the responsibility for conversion will rest with strata management. In some of these circumstances, there may be potential for the significant costs of conversion to exceed the capacity of the strata and residents.

2.4 Transparency, information and data

The detrimental experience of consumers living in embedded networks has been partially facilitated through the opaqueness of the industry. The inadequate data collected on embedded networks and their residents has allowed poor consumer outcomes in the provision of an essential service. At minimum, the Department needs to facilitate the collection of data on:

- how many embedded networks there are in NSW,
- what business structures are in operation,
- what services are provided,
- how many people live within these arrangements, and
- key consumer outcome data points, including disconnection statistics and average/median bills.

These data points are critical to overcoming the ongoing inertia that has prevented reform. Namely that the cost/benefit of reform cannot be established because the exemption framework has no scope to meaningfully determine how many people are impacted, let alone what those impacts are. This is an unacceptable situation that the Government, Department and regulators must seek to resolve. This is further discussed in chapter 4 Compliance and Enforcement Framework.

2.5 Regulatory and Parliamentary reviews

PIAC supports IPART Recommendation 1 that the NSW Government legislate to authorise IPART to determine maximum prices for embedded networks in NSW. Measures to closely monitor outcomes for consumers are needed to ensure the intended impact of these legislative and regulatory changes. PIAC broadly supports IPART Recommendation 4 that IPART review its price setting methodology at regular intervals. Given the current rate of change and reform we do not consider it appropriate for these reviews to be every 5 years. Instead, we recommend:

- IPART conduct an annual review into embedded network pricing to ensure the methodology is fit-for-purpose.
- IPART conduct a full review after two years to ensure desired outcomes, such as incentivising efficiency of systems and improving consumer outcomes, are being achieved.
- The NSW Government and/or IPART schedule a regular inquiry regarding what types of embedded networks are developing and how to regulate these to ensure good outcomes for consumers and the NSW net-zero strategy.

3. IPART's Pricing Approach

PIAC is broadly supportive of IPART's pricing approach recommended in the final report.

PIAC strongly supports IPART Finding 1 that the DMO is not an appropriate maximum price for embedded networks. The DMO is not designed to be an actual protection for consumers. It is not intended as a fair or efficient price and is explicitly designed to encourage 'shopping around' for a fair deal. This is not relevant to most embedded network residents and is not an appropriate or effective pricing protection for people living in embedded networks. PIAC advocates for reform of the DMO and does not exclude the possibility that it could in future serve as a meaningful default price protection, but it is inappropriate in its current form

PIAC supports IPART Final Decision 2 and Recommendations 2 & 6 that the maximum price should be benchmarked, that this benchmarking should be to some of the lowest tariffs available and that the maximum prices should be updated annually.

PIAC supports IPART Final Decision 3 to set maximum unit prices instead of an annual bill cap. We agree that consumers can find it burdensome and confusing to relate a bill cap to their own bill, as demonstrated by persistent confusion market consumers experience relating their bills to the DMO. We do have some reservations as to the implementation of maximum unit prices, including concerns around estimated bills and inefficient provision of energy that is outside of the control of consumers (i.e. an inefficient gas hot water embedded network). We recommend that IPART be directed to review the pricing approach and methodologies after 12 months of implementation to ascertain that no unintended adverse outcomes are arising through the maximum unit price model.

PIAC supports IPART recommendation 3 that the NSW government regulatory arrangements allow embedded network sellers to renegotiate their supply contacts prior to the introduction of maximum prices. We recommend the NSW government limit this to 6 months prior to the implementation of maximum prices to avoid any further delay in improving outcomes for embedded network residents.

PIAC firmly agrees with the Australian Energy Market Commission's (AEMC) conclusion 'that consumer protections should be driven by the needs of customers and not the business model of suppliers'.³ Consumers' equal and consistent access to affordable, dependable, sustainable energy must be the fundamental consideration for the NSW Government when assessing IPART's recommendations and creating the NSW embedded network work plan.

PIAC strongly supports IPART's conclusion that,

It is sufficient for our pricing methodology to ensure that providers can recover the efficient costs of energy alone (including the cost of transporting the energy to the embedded network site). This does not include the costs of installing and maintaining the internal embedded network infrastructure.⁴

PIAC is strongly opposed to the recovery of development capital costs through electricity prices. Capital costs of development are indistinguishable from the development costs of the building itself and are recovered through the cost of the residence, and potentially through ongoing levies. These should be kept clearly separate and have no direct relationship to residents' electricity bills. We also note that the market offers that IPART price regulations will be drawn from have recovery of network costs embedded in them. This includes costs which are analogous to the costs of the embedded network infrastructure.

We categorically reject any contention that lowering capital costs through establishing centralised embedded network systems has any beneficial impact on the price of the housing. The housing market is not linked to the building cost for the dwelling, but driven by supply and demand and market trends. Establishing any consistent causative link is impossible given the number of variables which impact dwelling costs. We consider this argument to be based upon the assumption that the possibility of lower cost automatically flows through to end consumer benefit. An assertion which has been consistently disproved in the housing market. The Department should reject any argument put forward that regulating embedded network pricing will have any direct consequence for housing prices.

The Government's final decision on pricing must ensure that embedded networks have demonstrable consumer benefits, reflecting the lack of choice, limited transparency and fewer protections those residents otherwise experience.

3.1 Pricing Objectives

PIAC supports the framing of IPART's pricing objectives prioritising consumer outcomes, including that pricing:

- not simply be responsive to the costs of supplying customers;
- should not prioritise incentive for consumers to use energy efficiently;
- be transparent;
- be easy to monitor;
- that there be pricing stability for consumers.

³ Australian Energy Market Commission (AEMC), [Updating the Regulatory Frameworks for Embedded Networks, Final Report](#), 2019, i.

⁴ IPART, 2024, [Embedded Networks Final Report](#), p.16

PIAC broadly supports the price setting objectives (Final Decision 1), with specific comments on each objective outlined below.

IPART price setting objectives	PIAC Response
a) Ensures that embedded network customers are not paying more than non-embedded network customers	<p>This objective should be more ambitiously framed to ensure actual equivalence of outcomes for comparative services, recognising that a fair embedded network price should contribute to offsetting other disadvantages currently experienced by embedded network residents.</p> <p>Recommended change:</p> <p><i>Ensure embedded network customers overall bills reflect the consumer detriment resulting from embedded networks residence. Embedded network customers bills should be equal to or less than an equivalent on-market customer.</i></p>
b) Provides price stability for customers	<p>PIAC supports this additional objective with a minor amendment:</p> <p><i>Provide reasonable price stability for customers.</i></p>
c) Is transparent, simple for customers to understand and easy to apply	<p>PIAC supports this objective</p>
d) Ensures that an embedded network seller is able to recover its efficient costs of supply	<p>PIAC does not support this criterion and does not consider it practical or appropriate.</p> <p>See pg. 8 of our response to IPART on the Consultation Paper on the Future of Embedded Networks in NSW for further information</p> <p>Recommended change: Remove this criterion. If retained in any form, it should be further restricted such that a seller is <i>'ONLY able to recover efficient costs of the supply of energy'</i></p>
e) Is responsive to changes in the efficient costs of supplying customers.	<p>This objective should have additional clarity added to ensure it references the costs to supply consumers across the wider market, not only in embedded networks. This is crucial to ensuring equity.</p> <p>Recommended change</p>

	<i>Is responsive to changes in the efficient costs of supplying customers in the wider energy market.</i>
f) Incentivises embedded network sellers to supply energy efficiently and enable the efficient use of energy	PIAC supports this objective
g) Allows for cost-reflective pricing	<p>PIAC broadly agrees with this criterion but notes that this should clearly focus on cost reflective network pricing. Consumers should not be exposed to more cost reflective 'retail' prices unless they have chosen to do so.</p> <p>Recommended change:</p> <p><i>Allow for cost reflective network pricing, while protecting residents' choice of retail pricing structure.</i></p>
h) Encourages sustainable energy solutions and accommodates innovation and investment in the energy sector	<p>PIAC broadly supports the first half of this objective but notes that 'sustainable' can be interpreted differently and as such encouraging zero-carbon energy solutions is clearer in intent. We are concerned that including 'innovation and investment in the energy sector' has the potential to cloud the consumer benefit and enable inflated pricing which does not benefit consumers. Such a concept is better placed in the AER's Network Guideline rather than in IPART's pricing.</p> <p>Recommended change:</p> <p><i>Encourage zero-carbon energy solutions that benefit residents and customers.</i></p>
i) Involves regulatory costs that are proportionate to the problem	<p>Compliance with regulations to ensure strong consumer outcomes is simply a cost of doing business when providing an essential service. In this case it is also considering regulatory cost to restore equality of outcomes (not create a new protection). PIAC recommends an amended version of this objective:</p> <p>Recommended change:</p> <p><i>Ensure the regulatory costs are proportionate to the problem, without compromising equity of consumer outcomes and protections.</i></p>

j) results in prices that are enforceable and capable of being monitored	PIAC supports this objective.

3.2 Electricity and Gas Pricing

PIAC supports IPART Recommendation 6 that pricing for gas and electricity embedded networks be set equal to the median lowest offer from active retailers, with prices adjusted every 12 months. The methodology provides crucial scope to account for the additional detriments experienced by embedded network residents and 'discount' the benchmark accordingly.

Implementing this price methodology will:

- Ensure that NSW residents of embedded networks are paying a fair price for their essential energy needs, with this price reflecting (and helping to offset) the disadvantages and detriments resulting from residing in an embedded network.
- Provide a strong incentive for existing and prospective embedded network operators to only consider operating an embedded network where they can deliver demonstrable price benefits to consumers, or where the structure of an embedded network is key to delivering demonstrated benefits. It should effectively act as a strong deterrent to the creation of new embedded networks intended simply to increase operator or developer returns, while leaving open the scope for embedded networks which can deliver demonstrated benefits to consumers.
- Reflect that embedded network operators have chosen the arrangement which provides a financial (and regulatory) benefit for them. They have capacity (and should be required) to pass that benefit to consumers and can unwind the arrangement where it no longer serves their business model.
- Reflect that accessing an on-market retailer is either difficult or impossible for most embedded network residents.
- Reflect that being in an embedded network comes with a range of actual consumer detriments regarding reduced protections and access to supports.
- Recognise that energy is an essential service and provision of that service outside standard supply arrangements should not facilitate additional revenue for the operator at the expense of the rights of the residents.

3.2.1 Price Methodology for Electricity

Regarding IPART Recommendation 7, PIAC continues to be concerned about time-of-use tariffs in embedded networks and any measures which undermine a consumers right to choose a price structure which suits their needs. All consumers (regardless of whether they are on-market or in an embedded network) should not be exposed to more cost reflective 'retail' prices unless they

have chosen to do so. This is a fundamental aspect of our retail energy market and its basis on consumer choice. Any implementation of a requirement for consumers to face more cost-reflective retail tariffs is not appropriate or acceptable in a choice based-framework and risks increasing vulnerability of residents in embedded networks. Scope to offer time-of use and other more innovative retail products in embedded networks must retain consumer choice, and be supported with appropriate information and assistance to understand and benefit from those products where the resident chooses to use them.

In residential land lease communities where the embedded network seller is also the operator of the community we do not see time-of-use tariffs, demand tariffs, or any other innovative tariff design likely to be appropriate. The meters that measure a resident's usage in these circumstances are rarely sufficiently advanced, and the quality supply often insufficiently consistent to warrant such pricing.

PIAC supports a framework which ensures discounts for low amperage in land lease communities to ensure residents only pay for the services they receive, while providing added incentive to operators to progressively upgrade the quality of supply.

3.2.2 Price Methodology for Gas

PIAC supports using a single consumption charge for gas that reasonably reflects the likely usage of embedded network residents. To achieve tangible benefits for consumers living in embedded networks, the price methodology for gas should incentivise operators/owners of the embedded network to improve the efficiency or electrify the system. PIAC recommends the Department adopt IPART's Draft annual representative consumption of 10,000 MJ instead of the 12,680 MJ in their final Recommendation 8.

PIAC supports the intent behind IPART recommendations 9 and 10 that tenants and land lease community residents in unmetered properties contribute a nominal fee towards their gas service. In principle, PIAC does not support unmetered charging as the outcomes for tenants are often poor. The existing restrictions in legislation on charging tenants and land lease residents for unmetered energy are there to protect tenants. However, if there is a fair way of calculating usage, it is reasonable for tenants to pay. We recommend the department put strict parameters around any unmetered charging that is facilitated through the regulation of embedded network pricing to prevent any potential incentive to adopt unmetered gas and encourage the growth of unfair unmetered charging for tenants.

The methodology proposed by IPART for unmetered gas consumption goes towards achieving acceptable outcomes for tenants, however we recommend setting the annual consumption benchmark at the level of <5% of the lowest users of gas. We do not consider it appropriate that the methodology "ensure that sellers can recover their costs without adding metering costs which may be disproportionate compared to the costs of the service."⁵ The methodology should be designed to improve outcomes for consumers, which in many cases would include being upgraded to individually metered service or being provided with bottled gas service.

⁵ Ibid. p.58

3.3 Hot and Chilled Water Pricing

While PIAC does not support embedded networks in their current form, appropriately regulated embedded networks have the potential to help enable good consumer outcomes. For instance, where space limitations or building density mean that it is more practical and efficient to provide centralised services, i.e. there is not enough space for individual water heaters and/or air conditioning compressors.

Experience to date demonstrates that arrangements which benefit residents will not occur without robust regulation. With no requirement on developers to demonstrate tangible beneficial consumer outcomes through efficiency, the choice of common water heater or chiller has been, in most circumstances, to reduce costs or burdens on the developer to the ongoing detriment of the residents.

PIAC supports IPART recommendations 12 and 23 that the Residential Tenancies Act 2010 be amended to clarify that tenants living in individually metered properties should pay for the supply of hot and chilled water consumed.

3.3.1 Hot water

PIAC supports IPART recommendation 11 that hot water being billed in energy units, which will better allow access to protections afforded to energy consumers.

PIAC supports a pricing methodology that incentivises the efficient electrification of hot water systems. While PIAC broadly supports IPART recommendations 13 & 14, a review will be required to ensure that the hot water pricing methodology is actually encouraging efficient electrification and that the resulting savings are being passed on to consumers.

We disagree with Origin's claim that centralised gas hot water systems are the superior option to electricity-based heat pump systems⁶. Over the lifecycle of the system, gas will have higher ongoing costs, worse greenhouse emissions and poorer health outcomes for residents. We encourage the Government to examine international best practice and rapid developments in the practicality and efficiency of heat-pump deployment for centralized hot water systems.

Linking to the outcomes the Department and Government are trying to achieve through the Consumer Energy Strategy and the Net Zero by 2050 goals, PIAC recommends that the Department consider whether IPART recommendation 15 would disadvantage heat pump hot water embedded networks by benchmarking hot water prices to gas, and whether the common factor safeguards against this.

3.3.2 Chilled water

PIAC broadly supports IPART recommendations 17-21 that detail the pricing methodology for chilled water, including 'chilled water embedded networks' being inclusive of all centralised air-

⁶ IPART, 2024, [Embedded Networks Final Report](#), p.73

conditioning systems. We support increased transparency over the efficiency of air-conditioning systems.

PIAC supports the intent behind IPART recommendation 22 that tenants and land lease community residents in unmetered properties contribute a nominal fee towards their air-conditioning services. In principle, we do not support unmetered as the outcomes for tenants are often poor. However, if there is a fair way of calculating usage, it is reasonable for tenants to pay. We note that the IPART methodology does not account for the inability of tenants to 'opt-out' of the network and install their own infrastructure. Any measure to introduce charging for unmetered services should also retain some incentive to implement metering where it is practical, as well as an incentive to ensure the system is efficient and operating in the best interests of the residents.

4. Compliance and Enforcement Framework

PIAC supports the government making legislative and regulatory changes to ensure compliance and monitoring improvements for embedded networks residents in NSW. It is not appropriate to rely on any potential national action that has been continually delayed or avoided with little prospect of the change NSW residents need. However, a complaints-based system with no licensing or registration framework as recommended by IPART is not fit-for-purpose and would be little more than the appearance of regulation that cannot deliver on its intent to actually prevent poor outcomes.

A crucial first step in achieving effective compliance and enforcement is for the NSW Government to collect fundamental data on embedded networks including:

- how many embedded networks there are,
- what business structures are in operation,
- what services are provided,
- how many people live within these arrangements, and
- key consumer outcome metrics such as disconnection, and average/median bills.

These data points are critical to overcoming the ongoing inertia that has prevented reform. Namely that the cost/benefit of reform cannot be established because the embedded network framework has no scope to meaningfully determine how many people are impacted, let alone what those impacts are. This is an unacceptable situation that the Government, Department and IPART must seek to resolve.

The perceived inability of exempt sellers to comply with requirements is not an appropriate consideration. Complying with regulations is simply a cost of doing business when supplying an essential service. Other services with significant safety implications for consumers (restaurants, medical and retirement facilities, childcare facilities and schools) have basic registration requirements that enable some level of oversight. There is no reason a similar level of data collection cannot be applied to embedded networks which contribute to the two most essential of needs (housing and energy). If embedded network operators are incapable of adhering to regulations that protect consumers, they are welcome to unwind the arrangement where it no longer serves their business model.

While PIAC would prefer a more proactive compliance and enforcement framework, we recognise that IPART has sought to strengthen the complaints-based system through empowering the regulator to investigate potential non-compliance. It is possible this recommendation results from a reticence to make recommendations they regard as beyond their remit (such as the creation of new regulatory frameworks and regulatory bodies). Therefore, if the Department does not pursue a proactive compliance and enforcement framework, we broadly support IPART recommendations 27-37 as reasonable interim measures.

It is important that all people in embedded networks have access to compliance and enforcement mechanisms. More consideration needs to be given in particular to disadvantaged consumers including tenants and residential park residents who have an asymmetrical power relationship with their landlord and/or embedded network operator. These consumers do not make complaints (particularly in the prevailing rental market) for fear of experiencing retaliatory action such as eviction and therefore require additional consumer protections to be in place.

PIAC supports IPART recommendations 31 and 32 that require embedded network operators to publish the prices, addresses and services provided on their own or IPART's websites. We recommend that this be expanded to include the number of connections at each site, further improving the transparency and data provision for the industry. Operators should be required to maintain figures on disconnection, usage and bills as part of measures to improve transparency of consumer outcomes.

Appropriately robust compliance and enforcement will require adequate reporting, monitoring and education. This must include ensuring that consumers in embedded networks know what their rights are, what expectations they should have and how they can seek enforcement.

PIAC broadly supports IPART recommendations 34, 35 and 36 that further detail the recommended penalty mechanisms for breaches of embedded network pricing regulations. PIAC recommends that 34 and 36 be further strengthened by the addition of a top-level sanction to remove the operators authority to operate in NSW. IPART Recommendation 35 can be further strengthened by the addition of consideration of the impact of non-compliance including scope, harm and ongoing/repeated nature of the non-compliance.

PIAC supports EWON being authorised to refer potential pricing breaches to IPART. We note EWON has supplied the Department with a submission on IPART's final report which details some issues that need to be resolved to appropriately resource and enable EWON to carry out this function.

The final decision on the compliance and enforcement framework must ensure that applicable penalties are high enough to be a deterrent, not just a cost of business.

5. Embedded Networks and NSW Net Zero by 2050

PIAC supports IPART Recommendation 5 that the Government consider the arrangements for solar in embedded networks. However, we recommend that the Department expand upon this recommendation and consider the relationship between embedded networks and the NSW Net Zero by 2050 targets and goals.

All energy policy (and other planning, building and tenancy policy) being designed and implemented should be future proofed to align with NSW's Net Zero by 2050 target and The Climate Change (Net Zero Future) Act 2023.

In the coming decade NSW households will need to undergo a process of efficiently electrifying their homes if NSW is to achieve our legislated federal and state emissions reductions targets. The NSW embedded network work plan needs to contribute towards household zero-carbon energy transition by facilitating electrification of all remaining embedded networks.

5.1 Gas embedded networks

PIAC strongly supports prohibiting gas embedded networks in new developments. Banning new gas embedded networks will help to ensure that consumers are not left with the expensive, polluting and increasingly outdated technology. An immediate moratorium on gas embedded networks ensures the challenge of embedded network zero-carbon energy transition is only as big as it is today. This is an important consideration, given the expense and complications that can be involved in retrofitting many gas-embedded network arrangements. It is crucial given the attention being paid to accelerate home construction over the coming years, that those homes are fit for the future and best able to deliver for residents over the long term. Gas embedded networks are fundamentally incompatible with this.

The department will need to create a longer-term plan in collaboration with gas and electricity distribution network service providers to support residents living in gas embedded networks to retrofit or decommission those arrangements in the next decade.

5.2 CER embedded networks

As part of the household zero-carbon energy transition, including NSW's forthcoming Consumer Energy Strategy, installation of solar, batteries, electric vehicles and other CER will increase. If appropriately regulated, CER embedded networks could provide a valuable option for certain NSW households to electrify their home. However, with current lack of protections and poor regulation we are aware of a growing market for CER embedded networks creating poor outcomes for consumers.

Our climate commitments necessitate a fast and fair household zero-carbon energy transition. NSW households need to understand what is required of them in the transition and to trust that the provision of CER will result in emissions reductions, long-term energy affordability and better health outcomes. CER embedded networks established to benefit the developers and/or operators rather than the residents of the embedded network are a risk to achieving NSW climate commitments and an unacceptable poor outcome for NSW residents.

The Department should investigate the growth of CER embedded networks, assess the issues and/or benefits being experienced by residents and consider appropriate regulation to ensure consistent good outcomes for residents. The immediate implementation of broader pricing and consumer protection regulation should go some way towards alleviating the emerging issue and should not be delayed by the investigation into CER networks specifically.

6. Continued engagement

PIAC welcomes the opportunity to meet with the Department, IPART and other stakeholders to discuss these issues in more depth.