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Independent Pricing and Regulatory Tribunal (**IPART**)
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SYDNEY NSW 2000

By email: ipart@ipart.nsw.gov.au

To whom it may concern

Industry Consultation Paper – energy prices in embedded networks

Energy Locals Pty Ltd (ACN 606 408 879) and its related entity, Energy Trade Pty Ltd (ACN 165 688 568) (**Energy Locals**) welcomes the opportunity to provide a submission to IPART in relation to its review of embedded network prices.

Energy Locals specialises in energy procurement and management, energy generation and the provision of energy efficient technologies for residential, commercial, and industrial projects. We have extensive expertise in the management and implementation of embedded networks, which include electricity, gas, hot water, solar PV, electric vehicle charging, battery storage and telecommunications.

Energy Locals strongly believes the embedded networks present societal, environmental, and economic benefits to residents of these buildings. Residents in Energy Locals' embedded networks have access to competitive energy rates for both occupiers and common areas, centralised services with cost and space savings, access to renewable energy and distributed energy assets (including electric vehicle chargers), quality maintenance and servicing of shared services such as hot water, and potential for higher resale values.

We understand that as part of the NSW Government's Embedded Network Action Plan, IPART has been asked to recommend:

- a method for setting a maximum price for the sale of electricity, gas and hot or chilled water to customers in embedded networks in NSW; and
- whether the NSW Government should prohibit new hot and chilled water embedded networks.

Energy Locals strongly supports the enhancement of protections for embedded network customers but implores IPART to recommend a framework that permits consumers to continue to benefit from smart, more efficient essential services in new homes. Embedded networks, in many cases, provide bundled services that span capital investments (including smart meters, renewable energy, distributed energy assets and centralised hot water) recouped via usage over time. Capping the energy component could unwind this bundling approach, resulting in no investment in centralised hot water (with higher capital investment, a requirement for additional space and operational inefficiencies) and less or no investment in renewable energy or distributed energy assets in new apartments.

Through this submission, Energy Locals aims to emphasise the importance of targeted and relevant measures to ensure that the benefits of embedded networks can be recognised by customers and the community to the fullest extent without impacting opportunity for growth and innovation. These measures include:

a. requiring that all suppliers of electricity or gas in embedded networks hold a full retail licence;
b. the use of the Default Market Offer as a price cap for the sale of electricity to customers in embedded networks, which we deem the simplest and most relevant approach despite a number of concerns which are outlined in this submission;
c. The use of a reference price for hot water that brings greater price transparency to this service; and
d. not requiring customers to be charged for hot water through a conversion factor to electricity or gas usage due to the significant customer confusion this will likely cause.

1. What is the right level of protection?

Energy Locals agrees that embedded network customers should enjoy the consumer protections in line with those in traditional energy supply arrangements, including reasonable electricity, gas and hot or chilled water prices, which are reflective of retailer costs.

Currently, the Default Market Offer (**DMO**) is a maximum price that retailers can charge on-market electricity customers on standing offer contracts. When determining the annual DMO price, the AER must have regard to a range of factors and ensure that retailers can recover the costs they incur to service customers and to ensure there remains headroom beneath the regulated price cap that allows for vibrant retail competition.

IPART states in its consultation paper that embedded network operators (**ENOs**) enjoy potential savings relative to on-market customers such as through bulk retail offers and/or on-site generation such as solar. In many cases this is true. However, on-market retailers and authorised retailers selling into embedded networks incur different costs to serve customers, making it inappropriate to apply a blanket approach by setting maximum prices for embedded network services that are comparable to prices paid by relatively engaged on-market customers (being an amount lower than the DMO).

We have elaborated on this cost to serve disparity below.

a) Infrastructure costs

Authorised retailers selling into embedded networks are often the, or a related entity of, the embedded network owner and operator and seek to recoup capital investment in embedded network infrastructure via customer tariffs. For Energy Locals, this embedded network infrastructure includes occupant meters and other electrical infrastructure.

Setting a maximum price that does not provide retailers with incentives to compete, innovate and invest could actually discourage innovation in this space by raising barriers to entry and innovation on the part of embedded network owners and operators.

b) No control over input prices

A number of major electricity market events occurred in 2022, which have made it increasingly difficult for retailers to manage their exposure to high and volatile wholesale electricity prices. This increases the likelihood of retailer failure, reduced competition, and higher bills for customers.

In the last year, Energy Locals has seen the prudential required by the market operator and hedge counterparties dramatically increase. Smaller operators must reserve or raise this capital, which comes at a substantial cost. Amplifying this, State-based electricity rebate schemes introduced from 1 July 2023 have been structured to place a material cashflow burden on retailers given that rebates must first be paid by retailers to customers, and only then reimbursed by State governments, introducing at least a30 day cashflow deficit at a time of already heightened retailer financial stress.

While customers are protected from more significant price increases in the short term, price caps can have the effect of limiting a retailers' ability to increase prices as underlying costs change, adding to financial pressures on retailers. Embedded network operators face substantially all the same costs as on-market retailers, plus additional sunk capital and operating and maintenance costs associated with capital investments in the embedded networks themselves (meters, electrical equipment, centralised water systems, solar PV, batteries, EV chargers, etc). Application of the DMO as a price cap on embedded networks has the potential to act as a more severe limit on cost recovery. To the extent the DMO binds on embedded network operators, the result would likely be operating insolvencies and reduced competition for embedded network customers.

There is currently no mechanism to change the Default Market Offer during a financial year, as there is for the Victorian Default Offer. We suggest that, if a maximum price is introduced for embedded network customers, a mechanism to adjust that price outside of the annual price review process be introduced to enable better management of changes in cost to supply.

Beyond this, our business has operated with the DMO since its inception. Although there have been times that our wholesale cost has exceeded the level at which the DMO suggests it could have been hedged for, we think the methodology is mature and has been tested over six years, and over a longer timeframe when accounting for IPART's initial development of a retail price regulatory framework in 2006 which set NSW electricity retail price caps, which informed most jurisdictions in the NEM and ultimately the DMO. We therefore support the use of the DMO as a reference price for customers in embedded networks. Should IPART determine that a price cap is required, rather than just a point of comparison, we support the use of the DMO as the cap for embedded network electricity tariffs.

c) *Applicability to exempt sellers*

It is unclear whether the maximum price is proposed to be introduced for embedded network customers of both authorised retailers and exempt sellers. As exempt sellers are not subject to the obligations under the National Energy Retail Rules, their customers are subject to the least protections and benefits of electricity customers. Additionally, due to the cost of administrating these protections, authorised retailers selling into embedded networks have a significantly higher cost to serve, which is more aligned to the cost to serve of on-market retailers. We believe that this disparity between the two types of embedded network sellers must be taken into consideration when determining the methodology for any maximum price. It would be unfortunate if embedded networks that were supported by authorised retailers with all the associated cost overheads and consumer protections were the focus, while exempt sellers were able to operate with lower overheads, less consumer protection, lower or no price caps, and less onerous regulatory reporting.

Our view is that the safest and most consistent way to solve this is to require all electricity sold to embedded network customers to be done via an authorised retailer.

2. What other criteria should we consider when assessing different pricing methodologies?

We have commented on some of the considerations suggested by IPART and proposed additional criteria below.

a) Ensure there is no interruption to energy supply

Setting a maximum price that does not allow for recoupment of the costs associated with sufficient investment in quality infrastructure, as well as ongoing operations and maintenance at the embedded network sites, could lead to interruptions to energy supply, particularly due to equipment failure.

In contrast, setting a maximum price that is over and above what is required for embedded network sellers to recoup their cost to serve, or not applying a maximum price to exempt sellers, could result in an increase in customers not being able to pay their bills and ultimately, being disconnected for non-payment.

We argue that the DMO strikes the correct balance to avoid the abovementioned issues and uses proven methodology for determining appropriate maximum prices.

b) Ensure that an efficient embedded network provider is able to recover its efficient costs of supply

Embedded network providers play a crucial role in investing in energy infrastructure, driving the development and expansion of efficient and sustainable systems. For example, Energy Locals actively seeks opportunities to upgrade and modernise infrastructure, incorporating advanced technologies that enable better monitoring, control, safety, and optimisation of energy flows. Further, these investments support the integration of renewable energy sources, enabling greater flexibility and enable the transition to a low-carbon energy system. By proactively investing in energy infrastructure, we, and other ENOs, contribute to the long-term sustainability and efficiency of the network, while also meeting the evolving energy needs of our consumers and reducing cost pressures on distributors.

This capital investment made by embedded network providers is currently recouped via customer tariffs. If the investment made by embedded network providers is not considered in the cost of supply calculation when determining a maximum price, embedded network providers may be deterred from providing the same level of investment, which could ultimately deprive residents of the benefits set out above. It is also important to note that there is no single approach to capital investment in embedded networks, meaning there may not be a one-size-fits-all methodology when factoring this investment into an embedded network provider's cost of supply a customer.

c) Respond to changes in the costs of supplying customer

If a maximum price is introduced for embedded network customers, such as the DMO, we recommend that a mechanism to adjust that price outside of an annual price review process be introduced to allow the potential changes in cost to supply to be effectively managed.

d) Incentivise customers and embedded network operators to supply and use energy efficiently

ENOs have the ability to select energy efficient infrastructure when supporting the development of a building. This can also happen when taking over an existing embedded network, especially if the

existing equipment is ready to be upgraded or replaced. The extent to which these operators can provide energy infrastructure that will support energy efficiency depends on the amount of capital expenditure that can be recovered via customer tariffs. It is important that IPART is aware that applying a cap to what embedded network retailers can charge their customers will have a direct impact on the contribution that these retailers can make to encouraging efficient energy use. A practical example is with regard to centralised hot water systems. Mature ENOs have strong incentives to offer centralised water services which provide cost savings (relative to occupant self-provision) and non-monetary benefits, primarily more usable internal space in apartments. As a second order issue, currently bulk hot water systems that use electric heat pumps have materially higher capital costs than gas-fired systems. Mature ENOs are well placed to make the longer-term trade off around capital versus operating costs and sustainability commitments. It is less clear that in the context of apartments that body corporate entities could easily opt for centralised water services (as these entities are yet to be formed at time of site development and construction) or, if they did, that they would be able to make the complex investment and operating trade-offs that support investment in electric heat-pumps. Forestalling on the ENO business model would leave something of a vacuum with regard to investment in building services to the detriment of consumers.

e) *Be simple for customers to understand and easy to apply*

Energy Locals has been involved in bringing innovative tariffs to market since 2017 both direct and through its provision of services to organisations such as Tesla, Sonnen, RACV, IO Energy and others. We've learned that while some customers have an appetite for highly differentiated tariff designs, the majority seek something that is comparable to the 'normal' tariffs available in the market, being a daily supply charge and usage rate.

f) *Allow for cost-reflective pricing*

Many ENOs invest, and have invested, substantial capital in energy-related infrastructure which is installed in multi-occupancy buildings. ENOs should be given the opportunity to achieve a reasonable rate of return on these financial commitments, which were made in good faith based on long-held market conditions and rules. Ideally, we would seek that investments made prior to a cutoff date are grandfathered under any new regime consistent with general regulatory best practice. We accept that this request may be difficult in the context of the review, but would urge IPART to consider the negative impact of stranding prior investments made in good faith via price regulation.

g) *Be enforceable*

We believe it is important that all customers in embedded networks are treated equally. With that aim in mind, we strongly recommend that the ability to sell electricity to customers in embedded networks be restricted to authorised retailers or require that exempt sellers meet the same obligations for customers as authorised retailers. This will remove the risk of different levels of consumer protections which the consumer isn't able to control.

h) *Encouraging investment signals*

Network companies plan long-term investment based on a clear regulatory framework. Generators plan long-term capital spend based on a clear set of wholesale market rules. Indeed, the range in which wholesale prices can trade expands every year to the upside but not to the downside. These frameworks are in place to encourage investment in critical infrastructure. We urge IPART to ensure that any change to the embedded network rules will continue to encourage sufficient investment in

efficient hot water plant, electrical infrastructure, and distributed energy generation and storage. This is important not only for infrastructure already installed and committed, but also for emerging projects. The main area of impact regarding these rules is the new build apartment segment, a segment which is currently seen as one of the few solutions to the current rental crisis. Reducing incentives for ENOs to invest in embedded networks will raise costs to developers which can only be recovered via increases in new build apartment costs and/or through reduced services. Unravelling of the ENO business model risks the construction of a vintage of apartment buildings that cost more, offer less usable space to occupants and have a higher carbon footprint.

We hear constant signals from network companies and the market operator that further, urgent investment is required to ensure security of supply. Any move that threatens local energy infrastructure will simply result in claims from network companies that even more local distribution investment is required to cope with peak demand and the flood of solar PV exports at certain times of day. Within the ENs that we operate, we install as much solar PV as possible to cater for daytime load and increasingly we install battery storage too. This 'flattens' the load shape of these buildings in order to reduce the impact these customers have on the grid relative to the same number of 'on market' customers.

i) Consideration of network costs

In certain cases, an authorised retailer selling to embedded network customers may not also be the embedded network owner and operator. Usually in these circumstances, customers are invoiced a separate supply charge by the embedded network operator. The retailer has no control over this supply charge as it is a pass-through of the network charge for the applicable meter type from the local network service provider. When determining a maximum price for retailers, IPART should consider the potential for two sellers to be billing a consumer for a service; one for the wholesale and ancillary charges such as environmental charges, and one for use of the network.

3. How should maximum prices be set?

As already discussed in this submission, and as recognised by IPART in the consultation paper, a number of factors will need to be considered by IPART when recommending an appropriate price methodology. If only one methodology is to be adopted for embedded network prices it will need to be appropriate for a large number of sites, with different metering arrangements, combinations of services and capital investment requirements and, we recommend, apply to customers in embedded networks who are serviced by both exempt sellers and authorised retailers.

a) Is the DMO the appropriate maximum price?

Yes. We do not believe the costs of a stand-alone price regulatory regime are justified. We believe the separate treatment of Victorian customers under the VDO is inefficient and not justified when they could be covered by the DMO framework. Introducing a separate regime just for EN customers in NSW would be even more inefficient. Therefore, using the annual DMO standing offer price caps, by region, would be a more efficient outcome.

b) Should different metering arrangements be taken into account?

Where possible, customer services should be metered separately to record energy consumption of individual customers, ensuring that they only pay for what they use. This avoids unfairly penalising

customers that use energy more efficiently. We have set out optimal metering arrangement for each service below.

- Electricity

  Supply of electricity to customers in embedded networks should be individually metered so that those customers only pay for the electricity they use. These individual meters should also meet regulated compliance standards that that customers can be assured that their usage is being accurately recorded.

- Hot water

  Supply of hot water to customers in embedded networks should also be separately metered so that customers only pay for the hot water that they use. Although a customer receiving hot water may use a different fuel to heat the water (gas or electricity), the commonplace approach is to measure usage based on litres of hot water. This is easily measurable by both customers and ENOs and provides transparency.

  If we charged customers based on the energy used to heat the hot water, we would need to determine this in one of the following ways:

  - by applying a conversion factor from litres of hot water to electricity or gas usage. However, we do not believe that applying a conversion factor achieves the aim of fair and transparent customer pricing. Conversion factors will be difficult to understand. We discuss this further in section 3(d); or
  - through the use of decentralised hot water systems. We have discussed this with developers many times and the option is often quickly discarded due to the additional customer costs at the point of property purchase, the need for ongoing individual maintenance, and the requirement for additional space, which can often reduce apartment sizes considerably in inner-city residences.

- Unmetered gas

  Unmetered gas is often provided in embedded networks with a centralised gas hot water plant. The cost of unmetered gas is typically less than $0.50 per day. Introducing gas metering would cause customers to incur additional supply charge costs to recover the fixed, ongoing cost of a separate meter and associated reads, data processing and safety checks.

- Cooktop gas

  Where the cost to individually meter a service outweighs the benefit and adds unnecessary cost to a customer, alternate arrangements should be considered. This is the case with cooktop gas, where the cost of metering could double the current fixed daily charge.

- Chilled water

  In our experience, chilled water is not commonly charged by ENOs. Where this service is being charged by an ENO, we would argue that it should be separately metered. Chilled water raises the same issues around unit of charge and site-specific heterogeneity of costs as hot water. Any revised treatment of water services should be consistent across hot and chilled water services.

c) *Should prices be set differently for different types of customers, and different types of embedded networks?*

Yes, the load shapes of residential and commercial customers are normally very different. Small business customers often attract demand charges too, and due to the total load of many commercial customers, a different and more expensive metering arrangement may be required.

Commercial & industrial customers (as defined based on annual usage or metering type in the NERL) should be excluded from any price cap. These customers have highly differentiated requirements and don't fit into the normal pricing frameworks.

We don't believe it's necessary to set electricity prices differently for different types of embedded network, as long as residential and commercial can be treated differently.

d) *Are there any issues or systems constraints on using the common factor to calculate the units of energy for heating and chilling water?*

- Calculation of a common factor

  The calculation of a common factor for energy input is only possible if a centralised hot or chilled water system has a dedicated water meter or gas or electricity meter. [redacted] of centralised hot water systems owned and operated by Energy Locals have a dedicated gas meter, which we believe is similar to the EN industry more broadly, and this means that we would be unable to calculate a common factor for the energy input. Our initial analysis has demonstrated that the installation of dedicated meters would require additional capital investment and disruption to supply. This would ultimately be detrimental to customers due to additional cost pass-throughs.

  Due to our inability to calculate a site-specific common factor for the energy input at the majority of our embedded network sites, we have considered the possibility of the use of a general conversion factor provided by the IPART. Again, we foresee challenges with this approach as a general conversion factor would likely not consider that embedded networks sites are different sizes and the hot water plants are different models and ages. For example, embedded networks that we manage range from just [redacted], hot water systems that we have installed range in cost from [redacted] and plants under our management could be gas-only, electric, electric heat pump, or solar-powered with supplementary electric or gas heating. In addition, the local environment, including the ambient air and water temperatures and quality of building insulation, impacts on efficiency of the hot water plant and applicable conversion factor for heating water.

  The proposed approach may be more acceptable if a suitable metering solution allowed for individual hot water usage to be measured at a customer level. This is not currently the case. The use of conversion factors in lieu of such a metering solution results in customers potentially having the perception of vague or inaccurate billing or being unwilling to cover the cost of hot water usage until their own usage can be proven – which it can't.

- Transparency for customers

  We urge IPART to consider the experience of consumers when contemplating the use of conversion factors. For example, a customer will use 100 litres of hot water and will then later get a bill which charges 6 kWh of electricity (in the case of an electricity-based centralised hot water

system). We anticipate that many customers will query how this was derived. Our response would be to explain that it is based on a common conversion factor. Responses that we would expect from customers at this point include statements such as:

- "But I used 100 litres of water, not electricity."
- "What's a conversion factor?"
- "How have you calculated the conversion factor?"
- "So, the conversion factor is based on litres in the first place?"
- "Why are you charging me in kWh (or MJ) when I checked my usage on the water meter outside my apartment, which counts litres?"

We would naturally do our very best to explain this (just as we try to explain demand charges to on market electricity customers). However, a likely outcome in many cases is that the customer will escalate this to the ombudsman (**EWON**) which will add cost and frustration to the process given the conversion factor cannot be objectively proven for an individual site. We note that the conversion factor approach was originally proposed by EWON.

- Alternatives

  The implementation of a DMO-style comparison for hot water, including the publishing of price plans similar to those for gas and electricity, would enable customers to compare hot water costs and benchmark their ENO.

  We also support going a step further and having IPART include a reference price which embedded network hot water tariffs could be compared to. We expect that IPART would choose to structure this based on the type, size and age of the hot water system but would urge the usage of per litre-based reference points to avoid the customer confusion issues outlined above.

  The alternative to setting a common factor on a building-specific level or more generally across sites, is to benchmark costs for centralised water services against the opportunity cost of self-provision. If a common factor approach leads to price capping of water services below the cost of efficient provision, the likely outcome is centralised services will not be built (or continue to be maintained) and developers will need to install decentralised systems and/or customers will need to retrofit existing apartments. As such, estimating the full cost (on a long run marginal costs basis) of installing, operating and maintaining a decentralised hot or chilled water system may provide a more generally applicable cost benchmark for the purpose of price monitoring or price regulation. Any approach to benchmarking should account for the impact on consumers of losing internal apartment space. Any approach to benchmarking should also reflect market prices for gas and electricity used to provide the service.

e) *How can the maximum price for hot and chilled water be set to provide incentives for energy efficiency?*

Establishing an upper price limit that allows embedded network operators to recover their investment costs in higher-priced yet more efficient assets will promote enhanced energy efficiency. There are a number of hot and chilled water asset options available for installation in embedded networks. As you will see below, these options vary in cost and energy efficiency:

- Individual instantaneous hot water units

Individual hot water units can be installed in each apartment at a cost of approximately [redacted] Electricity for these units is usually charged at the applicable retail rates and are best suited to smaller households as they are generally only able to supply hot water to a limited number of outlets.

- Central gas hot water systems

  Central gas hot water systems range in cost from [redacted] depending on the size of the system and require additional investment in ancillary infrastructure, such as storage tanks and pumps. These systems generally have lower running costs than individual hot water units.

- Centralised heat pumps

  Centralised heat pumps are regarded as the most efficient hot water system in the market but also require the highest upfront investment ranging from [redacted] depending on the size of the system. Again, centralised heat pumps also require additional investment in ancillary infrastructure, such as storage tanks and pumps.

  Centralised heat pumps can still be commercially viable over the life of the system, due to lower running costs. However, developers and embedded network owners will not be incentivised to invest in the most efficient option if they are not able to factor their investment into their customer prices and will look for more cost-effective, yet less efficient hot water solutions.

As such, if a significant aim of IPART's maximum price for hot and chilled water is to provide incentives for energy efficiency, any maximum price will have to allow for the recoupment of the upfront investment in this efficient, yet more expensive, infrastructure. Any application of price caps should apply to new projects only enabling contributors to current projects to recoup their investment.

In additional to investment costs, and despite the current elevated wholesale gas prices, we find that customer hot water rates are still lower through the installation of bulk gas hot water systems rather than ones heated through via electric methods and much cheaper than via electric heat pumps. Just as environmental schemes have been used to encourage investment in more environmentally efficient forms of power generation, we strongly recommend incentives be set up to encourage investment in electric heat pump hot water production. This will not only provide the required investment signal but will help keep customer rates lower than would otherwise be the case.

f) Hot water does not fit within the electricity and gas regulatory framework

We wish to note that we do not agree with the approach of mandating water services be charged in energy units to allow the service to be regulated under existing energy price regulatory powers. The provision of centralised water services is fundamentally different to provision of electricity, gas or mains water. Our preference is that if policy makers see a need to regulate such services, that fit for purpose enabling legislation and regulation be developed, consulted on and implemented. Shoehorning the service into existing regimes by mandating a change of charging unit is not consistent with regulatory best practice.

g) How can the maximum prices provide incentives for low emissions energy generation?

If IPART uses the DMO as a price cap for Embedded Networks, ENOs will have a natural incentive to invest in, install, and manage distributed energy assets (**DER**), such as solar PV, battery storage and electric vehicle chargers. This is due to the long-term cost certainty offered by investment in DER,

even though the actual price of generation from solar PV or output from battery storage may not always be under the DMO wholesale cost allowance.

Energy Locals has actively invested in these assets as they align closely with our strategy to make renewable energy more accessible by installing DER closer to where people use power, which in turn counteracts requirements to upgrade transmission and distribution infrastructure. Further, we find that these assets are increasingly valued by the customers who occupy homes or commercial premises in the embedded networks that we manage. While, as at the date of this submission, the cost of generation from solar PV is below the forward ASX electricity wholesale prices for FY25, we note that a significant portion of embedded networks do not have the infrastructure or roof space to enable current solar PV technology to deliver a majority of the total electricity required by that site. This may change as technology evolves, but at present we don't think it is material enough to warrant being considered as a change to the DMO methodology.

h) *How should maximum prices be enforced?*

Enforcing maximum energy prices is essential to ensure a fair and competitive energy market while protecting consumers from excessive costs. While we believe that regulators play a crucial role in monitoring and enforcing these maximum prices, we argue that transparency for consumers is key in ensuring enforcement and holding sellers of energy and hot and chilled water accountable.

When the DMO was introduced in 2019 and retailers were required to show the price of their offer in comparison to the DMO or reference price, consumers experienced an increase in transparency and accountability of retailers. Learning from this, we believe that requiring that all embedded network prices, including those offered by exempt sellers, be compared to the IPART-set reference price will foster trust, enhance consumer confidence, and promote a fair and competitive marketplace. It will also reduce the onerous on the regulators and consumers will be empowered to hold sellers of energy and hot and chilled water accountable.

We recommend that all suppliers of electricity or gas to Embedded Networks be required to hold a retail licence. If this recommendation is adopted then enforcement can occur via the retail licence with regard to EN customers served under the licence. If IPART doesn't follow this recommendation, then there will be a need to introduce a new enforcement regime to cover exempt sellers.

4. Should new hot and chilled water embedded networks be banned?

Energy Locals is aware that recently there has been attention on hot water services in embedded networks and welcomes the introduction of a more targeted legislative framework. However, we strongly disagree with the notion that the prohibition of the establishment of new hot and chilled water embedded networks is the answer to the issues raised during the NSW embedded networks inquiry.

Hot water services in embedded networks provide a number of benefits to residents or tenants in buildings with shared supply. In particular, shared supply pipework and hot water plant results in reduced build cost and saves space as it negates the requirement for individual electronic hot water systems. Individual systems require additional space, including in many cases space for gas meters, and specific airflow requirements in certain circumstances. Additionally, gas pressure available to the building may not be sufficient to run all individual hot water systems at maximum demand.

Centralised hot water plants also provide decarbonisation benefits by reducing the number of plants required to meet to the demand of the a site. For example, if a residential building contains 110

individual lots, those 110 individual hot water systems could be replaced with 12 hot water burners reducing the requirement for gas and emissions produced from the building.

Prohibiting these centralised services would lock in inefficient building design, reduced usable space for residents, systematically higher carbon emissions from many less efficient systems. The result will be higher cost apartments with less usable space and greater associated carbon emissions.

5. Information from embedded network operators and authorised retailers

We have set out further information about our operations below. Please note that this entire paragraph 5 should be considered confidential.

a) How many customers do you have by site and by embedded network type?

Energy Locals currently owns and operates [redacted]. The breakdown of these sites by service provided is as follows:

- [redacted]

b) What are your prices?

- Electricity

  We currently have [redacted] which cover a multitude of network regions as well as options for [redacted] in most areas. [redacted]

- Hot water

  [redacted]

- Gas appliance fees

  [redacted]

c) Do you generate, extract or store energy on site? If so, please provide details.

[redacted]

[redacted]

d) *What are your costs and how do you recover these?*

- Embedded network infrastructure

  Energy Locals invests a significant amount of money in embedded network infrastructure. This infrastructure includes electricity meters, hot water meters, hot water plants, and, depending on the project, solar panels, electric vehicle charging stations and onsite battery storage. The size of this investment varies between projects and type of equipment. For example, the cost of hot water plants can range from approximately [redacted] for a gas-powered plant for a small apartment building to in excess of [redacted] for an electric heat pump for a larger building. In total, the investment for an individual site can range from around [redacted] for small projects to in excess of [redacted] for large, complex projects or ones that include a significant amount of solar PV and battery storage.

  Energy Locals also maintains the equipment and covers any repair costs and all costs associated with this infrastructure are recovered over the life of the contract with the Owners' Corporation or building owner via usage charges for the services related to the infrastructure.

- Operations overheads

  In addition to the infrastructure costs, we also incur the operating costs associated with retail services. This includes costs related to customer service, billing, credit and collections and related overheads, such as IT costs, rent and professional services fees such as legal and compliance.

  These costs are recovered via ongoing supply and usage charges.

- Wholesale costs

  Energy Locals incurs the cost of procuring and supplying the services, including wholesale, network and environmental costs and these costs are recovered via ongoing supply and usage charges. Energy Locals pursues a conservative wholesale risk management policy and fully hedges all customer loads. The cost of these hedges is passed through. This approach ensured that Energy Locals survived the price volatility of 2022 and other high volatility market price periods in the past.

e) *Please describe your chilled water service, including the energy sources used, the network configuration, and the relevant metering arrangements.*

We interpret this question to cover both hot and chilled water recovery services for the water that used for the supply of hot water services. [redacted] With regard to hot water, Energy Locals measures the customer usage of hot water by individual hot water meters located at the exit point from the centralised hot water circulation loop near or in the customer tenancy.

In a very small number of sites, we support the owners' corporation by recovering the cost of the chilled water that is consumed by the hot water plant and reimburse this to the owners' corporation.

f) *How are the short- and long-term interests of consumers considered when designing an embedded network?*

In many instances, ENOs are only involved towards the end of the building design process. This can limit our ability to influence the type of infrastructure incorporated into the design. We would support the introduction of further regulations over building design to ensure that important consumer interests are considered earlier. For example, in some cases where hydraulic design is not properly considered by the developer, wait time for hot water in embedded networks can be over 2 minutes. When we are engaged in the design phases of a building, we review the hydraulic design to ensure that the length and volume of the pipe from the exit point of the circulating hot water system is kept to a minimum, keeping wait time for hot water under 30 seconds. We would welcome the opportunity to discuss with the New South Wales Building Commissioner if helpful.

Where developers contact us earlier in the design process we can have a greater impact on addressing the short and long-term interests of the residents in those buildings. Considering the resident's short-term interests, we work to strike a balance between affordability (i.e., competitive energy prices), reliability and uninterrupted access to power and user-friendly systems and clear billing practices.

When considering the long-term interests of the residents and the community in which the building is located, we look to implement energy-efficient technologies and renewable energy in the network that can lead to long term cost savings and reduced environmental impact. One example is the incorporation of smart electricity meters and hot water meters in our embedded networks, which provide residents with the ability to monitor their energy usage and make informed changes to this usage to reduce their cost of living. We also consider the ability to incorporate technological advances into the network in the future and design it with resilience in mind to ensure that is can withstand and recover from unforeseen challenges.

g) *Do you offer "energy-only" offers to customers in embedded networks?*

[redacted]

h) *Do you charge customers on "energy-only" offers with another provider for their use of the network?*

Yes, where a customer within our embedded networks elects to go 'on-market', Energy Locals continues to recoup the costs of network charges by passing on the applicable published rate from the local network service provider based on the customer meter type and energy usage.

The current rules do not require the incoming retailer to accept these network charges from the embedded network operator meaning that the customer may continue to receive an invoice for the network component and an invoice from the retailer for energy usage. In our experience, this can lead to customer confusion when they receive two invoices. We believe that retailers should be required to accept network charges from the embedded network operator to increase simplicity and transparency for the customer.

We would like to take this opportunity to thank IPART for the opportunity to provide this submission. I would be pleased to support IPART's review as required and look forward to the IPART's recommendations.

Yours faithfully,

Adrian Merrick
Chief Executive Officer
Energy Locals Pty Ltd