Submission No 3

EMBEDDED NETWORKS IN NEW SOUTH WALES

Organisation: Active Utilities Pty Ltd

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Submission:

NSW Legislative Assembly Committee on Law and Safety Inquiry – Embedded Networks in NSW

June 7th, 2022

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7th June 2022

To: Legislative Assembly Committee on Law and Safety

Re: Active Utilities Pty Ltd. (Active) Submission on the NSW Legislative Assembly Committee on Law and Safety Inquiry – Embedded Networks in NSW.

Thank you for the opportunity to comment on the NSW Legislative Assembly Committee on Law and Safety Inquiry – Embedded Networks in NSW, in particular the Terms of Reference that were released with the intent to begin formal stakeholder consultation into a review.

Active provides a broad range of centralised energy solutions to a range of commercial, industrial, retail, and residential customers. A key component of our business is the operations of electrical embedded networks and solutions for buildings with centralised hot water services and centralised air-conditioning.

Active operates nationally but the majority of our clients are located on the east coast of Australia. Our embedded network solutions (or what we refer to as Local Utility Networks) are comprised of consulting to Property Developers, Strata Managers, and owners/managers of buildings, regarding the setup and ongoing operation and management of embedded networks.

As part of this service, we offer an agency service and also act as the AEMO Accredited Embedded Network Manager (ENM) for these customers, ensuring their end customers receive a similar service offering to grid connected network conditions and meet relevant legislative requirements of operating these networks.

Active understand this review stems from the perception of serious community concerns regarding embedded networks, potentially following direct experience or messaging to local MP's. We also understand that the aspects of the review are a continuation of the AEMC review into updating the regulatory frameworks for embedded networks, which was not successfully agreed to by the relevant energy ministers and has not been able to be implemented.

As stated in point c) of the Terms of Reference, the review is in part a response to ongoing concerns that embedded networks pose potential harm to consumers given the way they are set up.

The primary concerns are that customers living in embedded networks may pay higher prices and do not have access to the same level of retail choice, customer protections as those who live outside of embedded networks.

Active notes that the additional consumer harm concerns include health and safety matters that these would only be present in non-compliant networks (to both Federal & State based requirements) and fully supports the removal of these operators from the role.

Active strongly support the:

- > Implementation of a review into embedded networks and the regulatory structures that govern them.
- > Identification of issues with embedded networks and the need to improve customer protections and outcomes for customers living in them.
- > The introduction of metering requirements that fully support retail choice, and
- > Regulatory frameworks that:
 - Place benefits to the building and the end consumer at the centre.
 - Prioritise equitable pricing outcomes and consumer protections.
 - Future-proof the design of the system.
 - Ensure that regulatory framework will enhance the national standards and be taken up at state level.

As we advised in our submission to the AEMC review in 2019, the Victorian Government review in 2021, and the current AER Review of the Retailer Authorisation and Exemption framework, Active believes that there is considerable scope to improve the operations of some embedded networks to enhance the consumer protections, but our concern is that the nature of these reviews seem to result in recommendations penalising all networks for the inappropriate behaviours of a few.

Active agree with the sentiment of implementing increased restrictions on residential embedded networks, but further adds that this should focus on traditional embedded networks in their current format. Active's position is further elaborated in our submission below, particularly in our proposed alternative methodology.

Active understands the core reason for the review is due to some embedded networks and embedded network operators currently still 'cutting corners' by installing sub-standard metering, having financial beneficial arrangements with developers but not passing on financial benefits to the Owner's Corporation or resident/s whilst still charging electricity rates at the maximum price cap in alignment to the DMO/VDO.

Active understands the desired outcomes of the inquiry and therefore assure the Committee that we, as an operator that is focussed on the delivery of the substantial benefits of embedded networks to the buildings that have them, will assist in considering all the issues and concerns that are presented in the issues paper, as well as provide any relevant, non-identifying data that may be relevant.

Active are very willing to contribute to the review as we believe that the potential consequences of the regulatory changes, not yet considered, may include people's livelihoods, closure of small businesses, and major disruption of the embedded network sector as well as other associated industries, including electrical infrastructure, the building and construction industry and the end consumer being negatively impacted financially as explained in the body of this submission.

Active also proposes an alternative approach that reforms the embedded networks framework, ensuring, that the desired outcome minimising harm whilst preparing for a new energy future.

This submission by Active further explores:

- > An alternative approach that fits within the scope of the review.
- > Further elaborates on the negative impacts it will have, including but not limited to:
 - customers
 - people's livelihoods / closure of small businesses
 - major disruptions to a variety of associated industries
- Concerns that regulatory changes will inadvertently create barriers to residential embedded networks or technologies that deliver benefits to customers, and
- > Details of the recent submission on centralised hot water to the NSW Department of Planning Industry and Environment review "Enabling the Transformation of Energy"

Active look forward to continually working closely with the Committee in relation to the Inquiry. If you require any further information in relation to this submission, please do not hesitate to contact me.

Kind Regards,



Andrew McMeekin General Manager Active Utilities Pty Ltd

TERMS OF REFERENCE

EMBEDDED NETWORKS IN NSW

That the Legislative Assembly Committee on Law and Safety inquire into and report on embedded networks in NSW, with particular reference to:

- a) the current legal framework regulating embedded networks
- b) changes to the legal framework proposed by the Australian Energy Market
 Commission in its 2019 review on updating the regulatory frameworks for embedded networks
- c) the effect of embedded networks on NSW residents and businesses, including any health or safety concerns
- d) policy and legal solutions to address the effect of and concerns about embedded networks, including to address any gaps in the regulatory framework or safety concerns raised by NSW residents and businesses
- e) any other related matters.

As stated in our opening letter, Active is supportive of a review of the regulations covering embedded networks to ensure that residents within them are as protected as they would be in the retail market.

We remain concerned the level of community concern may in fact be a generalisation and not necessarily reflective of the actual position in the broader marketplace. As a case in point, we refer to the results of the recent Victorian review to which a negligible number of customers in embedded networks responded and also to the annual reports of the Ombudsman in Victoria and NSW, which show that complaints from customers in embedded networks rate at a much lower percentage in real terms than those complaints received for Authorised Retailers.

As stated in the letter above, Active are completely aware of, and in agreement with, the focus of the review. However, Active believe an alternative methodology will assist all parties with the requirements and desired outcome of this review.

The first step, as detailed in Active's alternative methodology below, is to differentiate between a 'traditional' embedded network in its current format and embedded networks after proposed reforms are implemented.

Active believe the differentiation between these two types of embedded networks will be critical to the success of regulatory changes for 'traditional' embedded networks in new residential buildings.

Active believes the embedded network framework should be elevated to the proposed 2019 AEMC embedded network regulatory framework or similar implemented Victorian embedded network frameworks that elevate embedded networks to the same regulatory framework as retailers under the Victorian Energy Retail Code of Practice.

Therefore, Active proposes the traditional model of embedded networks, being embedded networks that operate under the current regulatory arrangements from the AER for NECF members and in Victoria, be considered non-compliant going forward, as Active feel these are no longer fit for purpose.

ALTERNATIVE METHODOLOGY

Active proposes the updated regulatory framework ensures that the <u>traditional</u> model of embedded networks being embedded networks that operate under the current regulatory arrangements in the NECF and in Victoria are no longer able to be built and that new entrants meet a different structural standard.

Active feel these traditional networks are no longer fit for purpose due to the following potential embedded network harms that we believe the inquiry is most interested in:

- > Lack or retail competition
- Some customers not being able to access competitive on-market prices and potentially paying more than they should.
- > Potential supply quality issues
- > Potential failure to provide hardship assistance
- > Life support registration.

In addition to these points, Active also considers that there are other matters that need to be attended to in order to ensure that the operators of these networks fulfil their responsibilities:

- > Insufficient monitoring and enforcement powers, and
- > Lower grade meter models resulting in inability to access accurate and sustainability data and to future proof embedded network sectors.
- > Operator Contract management Length

Active's proposed alternative methodology is for all jurisdictions to adopt the Australian Energy Market Commission's (AEMC) proposed updated regulatory frameworks for embedded networks or, alternatively, implement a package of law and rule changes that increase the regulatory framework for embedded networks. Active believe that not only will this address current issues in embedded networks, but it will also effectively outlaw the traditional model of embedded networks.

To further enforce this, and as proposed in the AEMC's regulatory reforms, all embedded networks shall either gain a defined embedded network retail license or an authorised retailer license with a special condition to only operate within a defined embedded network site.

Active believe that the issuing of licenses to embedded networks ensures the following regulatory requirements:

- > Increased consumer protections
- > A more enforceable compliance model to provide regulators enforcement powers including the issuing of penalties for non-compliance.
- > A more robust and proven ROLR model,
- > Allows embedded network operators access to government rebates and the ability to pass through on consumer electricity invoices,
- > Consistent interaction with Market (AEMO/MSATS), and
- > Established and proven reporting and compliance requirements by embedded network operators.

By implementing this proposed alternative methodology, the regulatory framework nationally would elevate embedded networks into the most efficient and effective regulatory regime for the energy sector, ensuring embedded network customers benefit in this transition.

The adopted AEMC updated regulatory framework, or a new regime would improve customer protections and access to retail market competition by extending many of the arrangements for on-market customers to embedded networks.

Should the AER recommend a new regime for embedded networks. Active believes aspects of the AEMC's updated regulatory framework should be adopted, including:

- Market and system integration: all meters in new embedded networks will need to be registered with the market operator. This will allow all embedded network customers to be "discoverable" by retailers (i.e., in MSATS), removing a key barrier to competition.
- > Network billing: All new and existing embedded networks will be required to cap network charges at a level no greater than the amount that a customer would have paid had it been directly connected to the local distribution network.
- > **Network regulation and connection:** Embedded Networks will be required to provide customer connection services that mirror those of local distributors.
- > **New consumer protections:** Embedded Networks will now need to meet similar compliance requirements to those of on-market retailers.
- New monitoring and compliance requirements: Embedded Networks (new and legacy) will be subject to a suite of new monitoring and compliance provisions. This includes department monitoring, investigation, and conduct powers, general information gathering powers and reporting requirements.

By a owing the market and system integration and embedded network billing in the embedded network will be established to a distribution standard. This removes issues for on-market retailers in subling energy only offers if retailers agree and commit to a B2B process by receiving network charges from embedded networks. This B2B process could be through established NUOS agreements.

On previous surveying, the AEMC states that Ombudsmen, consumer groups, retailers, and the Australian Energy Regulator (AER) all expressed overall support for the proposed updated regulatory frameworks for embedded networks.

In Active's opinion, this methodology can be adopted by embedded networks and embedded network operators without presenting a large burden or cost and still deliver full consumer protection, as well as financial benefits to the building.

CONSUMERS BENEFIT FROM EMBEDDED NETWORKS

Quite regularly ignored in the discussions around embedded networks is the simple fact that, when operated properly, with all benefits of the electrical infrastructure flowing to the building and not the operator (or Developer), an embedded network provides an alternative that allows for a greater benefit than a grid-connected building.

Embedded networks provide greater capacity to utilise on-site generation from renewable resources, creating greater opportunities for buildings to embrace a carbon neutral future. Solar, energy from waste, co & tri-generation all provide opportunities for small micro-gird solutions, all of which function more efficiently in embedded networks than in grid connected buildings.

EV charging, demand management, energy sharing, and many more current and future technologies will deliver better outcomes in embedded networks because of the flexibility that the private distribution network provides.

Financially, an embedded network allows for the proceeds from on-selling operations to be redistributed to the building where they can be used to reduce residential energy rates or returned to the Owner's Corporation (eg. invest in new sustainable initiatives), a process that ultimately benefits the resident by various means.

Embedded Networks also allow for the following benefits:

- Lower Owners Corporation public light & power pricing than would be available on market.
- > Greater utilisation of renewable energy than is achievable in a grid connected building.
- > Use of network profits to assist in reducing overall building running costs.
- > Better than market rate offers for residents.
- > Reduced price volatility in times of massive increases such as those in market today.

Each of these benefits, and there are others, focuses on reducing the cost burden on owners and residents through reductions in outgoings.

Active acknowledges that the above is not currently an industry standard and that the current regulatory framework may no longer be fit for purpose as it is not ensuring the benefits flow to consumers.

However, if Active's proposed alternative methodology was implemented, embedded networks would have total consumer protections, full power of choice to receive energy from an Authorised Retailer and enforceable compliance obligations monitored by regulators, whilst also ensuring consumers received the benefits outline above.

Properly regulated and managed embedded networks should immediately ensure that customers living in them have access to greater benefits than those in grid connected buildings.

To further elaborate why consumers are better off in embedded networks, Active present the below figures to highlight the differences in costs between an embedded network and the incumbent licenced retailer in the geographical distribution zone.

	Rate ²	2021 RMP	% difference RMP
Peak	0.1237	0.2140	20%
Supp y	1.1309	1.133	6%
Tota annua maximum bi	907.58	1,269.55	29%

Figure I: Active Uti ities (EN) res. rates vs Regu ated Market Price (RMP)

Figure 2: Major Retai er (on market) res. rates³ vs RMP

	Rate	2021 RMP	% Difference RMP
Peak	0.193	0.2140	10%
Supp y	1.020	1.133	10%
Tota annua maximum bi	1,144.30	1,269.55	10%

The above figures highlight that the Active embedded network rates are 29% below the area's regulated market price offer as opposed to the major retailer, as the incumbent licenced retailer who is only 10% below that offer, representing savings of 19% more for the consumer under Active's embedded network model.

² As defined in Active's model embedded network benefit options.

³ Or g n Energy rates comp ed from Or g n Energy E ectr c ty L m ted – Or g n Everyday Rewards (S ng e Rate) energy pr ce fact sheet on 24th February 2021

OUTCOMES OF GOVERNMENT REVIEWS ON EMBEDDED NETWORKS

Active believes that the AER needs to work in step with the other States to ensure that the State based regulatory changes are not in conflict with the Federal requirements, creating greater complexities.

VICTORIA

Active believe that the Victorian Government's review overlapped, and diminished work already completed in the review of the General Exemption Order and the updates made to the Energy Retail Code in Victoria.

In addition, it overlapped with the issues already considered by the AEMC and the reforms proposed by the AEMC that are yet to come into law in NECF jurisdictions.

Active feel the above reviews, plus others conducted, including from DEWLP, were not considered by the Victorian Government prior to a released election commitment and subsequent directive to the Expert Panel to ban new residential embedded networks was made.

AEMC

The AEMC was long and protracted and too much was left in question. The State Energy Ministers failed to support the process and as such the review was shelved, although this has not been publicly acknowledged by the AEMC.

AER

The AER (and ESB) are currently collecting submissions to a review of the Retailer Authorisation and Exemption Framework, building on the work of the AEMC.

NEGATIVE IMPACTS

CUSTOMERS

ELECTRICAL INFRASTRUCTURE

Property developers make all key decisions on design, services, and amenity for their development. However, for developers considering an embedded network enhanced with new energy, there is a process to identify embedded network specialists who are then held responsible to ensure the common and individual electrical infrastructure and energy service (heating, cooling, hot water and cooking services) requirements are adequate to ensure compliance with all relevant technical, safety and operational regulations and standards are met; as well as determining how future residents will engage and be supported by their electrical infrastructure and energy requirements for the next 50+ years.

If new residential embedded networks are restricted, Active believe the default position for most developers will be to not go beyond minimum requirements as required today and not consider the customer or future impacts of electrical infrastructure and operating requirements.

Unless a solution provides short-term value to buyers, a developer is unlikely to invest in it; with many buyers being either investors, or having limited understanding on energy matters, there is no benefit to developers other than meeting the minimum requirements and spending the minimum amount on electrical infrastructure for the market today.

If residential embedded networks were operated under an updated regulatory framework, the incentives could continue to be aligned for the developer and customer.

MAJOR DISRUPTIONS TO A VARIETY OF ASSOCIATED INDUSTRIES

If the new regulations severely restricted the capacity to implement new residential embedded networks, Active believe this would have dire consequences and major disruptions to a variety of associated industries. Active have consulted with several of our third-party stakeholders who have all confirmed that this would cause impact to their businesses, including the reasons of disruption, outlined as follows:

- Embedded Network Operators: All embedded network operators will be affected by a change to regulations on residential embedded networks. The effect on these businesses would be substantial due to amended financial projections and a decrease of customers/clients in the marketplace.
- Distribution and transmission system currently relies on single network providers for specific areas within their geographic locations to ensure reliability and supply of electricity to end consumers
- Electrical contractors: some businesses have become specialised in embedded network electrical works. The banning of embedded networks sees their skills and businesses being made redundant.
- > **Owners Corporations/Strata Management:** Will have a costly transition and will be looking for options to transfer these costs to the end consumer.
- Developers, builders, and construction specialists: Developers and builders have increasingly been looking at establishing embedded networks for their developments as a means of reducing costs to the development and passing on these savings to end consumers. The proposed ban will make it impossible for this to occur, increasing development costs which is likely to result in these costs being transferred to the end consumer.

Through other generic discussions, Active also understand businesses such as technology firms, Real Estate agencies, OC Management firms, consultancy firms and embedded network

manager specialists will also face significant disruptions if dramatic regulatory changes were to occur.

In Active's opinion, embedded networks, and the other associated industries mentioned above will not be adversely impacted if Active's proposed alternative methodology was the recommendation.

ACTIVE'S MODEL

At Active, our focus since inception has been ensuring that we are always acting in the best interests of the owners of the embedded network buildings we service. Embedded Networks are looking for greater control and transparency, that is the Active model.

CONTROL

- > With Active we give the Owners Corporation (OC)/building back control and ownership of the embedded network assets.
- > The OC controls how the revenue is allocated. The OC sets the residents rates which determines the value of the buildings financial return.
- > Active also fund and install new metering hardware to ensure tenants are accurately billed.
- All assets will transfer to the building at the end of the term at zero cost, providing flexibility to choose a new embedded network operator without replacing hardware (removing large buy out costs that other providers may enforce).

TRANSPARENCY

- > With Active the buildings network operations are totally transparent.
- > Active provide an open book pricing and operations model, which means no more guess work.
- Active ensures the embedded network system will generate a new revenue for the Building.

FIXED FEES

- > Active charge management fee for managing/operating the embedded network and do not derive any other financial benefits, as above indicates.
- > The fees are derived from the operations of the embedded network. Active's feasibility models ensure the embedded network can support the payment of fixed fees whilst still benefiting consumers prior to an agreement to operate the embedded network
- No extra fees for managing/operating the embedded network are charged to residents

The fees are subtracted from the return available from the embedded network, either through discount on residential energy rates or returns to the strata as highlighted in the Embedded Network Benefit options on the following page.

EMBEDDED NETWORK BENEFIT OPTIONS

At Active, we a ow the strata to contro the benefits. Active a ow the strata to contro how they want to receive the benefits. The Bui ding can choose to use a proceeds to reduce resident tariffs, take it as a cash return or a combination of both. Active a so provides common area power at our who esa e purchasing price and rep ace a meters at zero cost to the Strata.

Figure 3: Benefit Options⁴

Option 1

42 % Discount on Residential Rates Average Resident Saving \$200 pc

> 2021 Resident Rates (inc GST) \$0.1237 per kWh \$1.1309 per day

Residents wi receive the fu benefit of the embedded network. For 2021 this equates to a 42% discount off the current retai er rates. n this option the Owners Corporation does not receive an ongoing return.

Option 2

Return to Owners Corporation (O/C) Average O/C Return \$30,000 pc

> 2021 Resident Rates (inc GST) \$0.2132 per kWh \$1.1309 per day

n this option, Active wi provide the Owners Corporation a return over the term of the contract. Payments wi be made quarter y. Residentia rates are matched to the current retai er rates and wi be reviewed annua y.

Additional Benefit

Common Area Rates Avg. O/C saving against current retai er

\$7,000 pa

2021 Resident Rates (inc GST) \$0.087 per kWh Pk \$0.057 per kWh Off Pk

Active wi charge the common area power at the gate meter who esa e price. The Owners Corporation wi review and sign off the gate meter contracts as part of Actives open book po icy.

After 5 years

The Owners Corporation benefit increases as the hardware is paid off. The resident discount would rise from **42%** to **59%**. The Owners Corporation cash option would increase to **\$42,000 pa.**³

⁴ These f gures are an examp e of beneft opt ons that are offered to Owners Corporat ons that engage with Active. This example is based off a current site that Active has tendered for. Resident savings rates and Owners Corporation returns are dependent on Active sites bit ty mode and the Owners Corporations current retailer rates. These rates are not applicable to any other sites Owners Corporations or individual customers unless confirmed in writing by Active Utilities Pty Ltd.

TERMS OF REFERENCE RESPONSES

A) THE CURRENT LEGAL FRAMEWORK REGULATING EMBEDDED NETWORKS

The greatest regulatory risk remains in the capacity of the framework to ensure Power of Choice. The Active model detailed above requires metering to the standard of a grid connected building, and the presence of an Accredited Meter Data Provider (MDP). If all embedded networks were built to provide for an MDP to facilitate Power of Choice, the greatest potential consumer harm is removed immediately.

For the exemption framework, one of the most important processes to ensure the interests of lot owners and tenants is consent. Consumers are at risk where consent is denied. Consent is required supply occupants pursuant to an electricity supply agreement.

Active notes that there are clear processes that need to be followed and the documentation used must be compliant.

However, Active feel that some processes could be added or strengthened to ensure the interest of lot owners and tenants. Additional processes could be based around requirements to notify prospective lot owners or tenants, that the interested site they are looking at entering a contract into is part of an Embedded Network. This will then ensure the Lot Owner/Tenant is fully aware of the nature of agreement with full disclosures being made.

Lastly, Active notes that this process is better aligned with Developer, Owners Corporation or Real Estate Agent legislation and therefore may not be a part of this review's core focus.

B) CHANGES TO THE LEGAL FRAMEWORK PROPOSED BY THE AUSTRALIAN ENERGY MARKET COMMISSION IN ITS 2019 REVIEW ON UPDATING THE REGULATORY FRAMEWORKS FOR EMBEDDED NETWORKS

Active wholeheartedly supports the premise of the AEMC Review of 2019. The implementation was clunky and could be improved with the adoption of the Active alternative model discussed earlier.

C) THE EFFECT OF EMBEDDED NETWORKS ON NSW RESIDENTS AND BUSINESSES, INCLUDING ANY HEALTH OR SAFETY CONCERNS

If operators and Authorised Retailers are acting under the rules this should not be a risk. Active believe the most important customer protections for embedded network customers are:

- > Pricing
- > Access to competition
- > Access to rebates and concessions
- > Life support arrangements



- Notification of outages
- > Billing
- > Compliance
- > Access to Dispute Resolution Services
- > Connections
- > Safety

Active believes most protections are extended to embedded network customers through federal and state-based regulations.

However, Active admits, that these customer protection regulations, as they currently are within the current embedded networks framework may no longer fit be entirely for purpose as it has been shown that some customers are not being able to access competitive on-market competitive prices and there is Insufficient monitoring and enforcement power with the regulator.

Therefore, although the customer protections listed above are extended to embedded network customers, a lack of practical access to competition and insufficient monitoring and enforcement powers of these regulation inherently reduce the intent and meaning of the regulations designed to protect customers.

Additionally, customers want concession and rebate queries dealt with quickly and efficiently and for grants to be applied to their accounts sooner than what the current process for embedded networks are taking.

Embedded Network customers are disadvantaged when applying for Government grants and rebates as well. On-market customers grants, and rebates are managed by the authorised retailer, but if an embedded network customer is seeking a grant/rebate the embedded network who on-sell them electricity cannot apply for this on the customers behalf. The onus is on the customer to manage this themselves.

When conducting follow-ups or trying to further assist the customer, Embedded Network Operators do not have access to the department system either to lodge an application on behalf of the customer nor is 'read-only' access provided to an Embedded Network Operator where we could review our customers progress of application to provide updates to the customer.

In Active's experience, customers have relayed they are frustrated in the delay in getting through to the department (either by phone or by email) and applications for a Relief Grant are stretching out for months.

This process is similar in the other states that Active operates in.

D) POLICY AND LEGAL SOLUTIONS TO ADDRESS THE EFFECT OF AND CONCERNS ABOUT EMBEDDED NETWORKS, INCLUDING TO ADDRESS ANY GAPS IN THE REGULATORY FRAMEWORK OR SAFETY CONCERNS RAISED BY NSW RESIDENTS AND BUSINESSES

Create a stronger enforcement framework and actually enforce the rules using financial penalties all the way through to the revocation of authorisations.

If a class of Authorisation were created for embedded networks and these were at risk of revocation based on the rules, the risk of behaviours that put consumers at harm would diminish.

The behaviours exist because the enforcement regime is weak or ineffective, non-existent, or not applied.

E) ANY OTHER RELATED MATTERS

The Department of Planning, Industry & Environment

Promoting innovation for NSW energy customers - Public Consultation Paper

In February of 2022, Active provided a submission to the above consultation paper. Whilst this consultation paper was focussed predominantly on whether the Department should consider changing the embedded network hot water charging model from litres of water to either kJ of gas or kW of electricity, it provided an opportunity for a comparison of the two (2) services:

On-Market Centralised Hot Water billing versus Off-Market Centralised Hot Water billing.

In NSW, centralised hot water (CHW) solutions are very common in multi-tenanted apartments. What is different to the other states is that NSW has a Distributor connection model, mainly through Jemena with gas but also with Ausgrid for electric, where the customer is charged for their hot water on their apartment energy bill.

NSW also now has an increasing number of "Off-Market" or embedded solutions being implemented. In almost all instances, the off-market version is much less expensive for Developers and builders to implement, improving affordability and for customer service reasons, the Distributors also prefer the off-market arrangements.

COSTS ASSOCIATED WITH CHW

In every centralised hot water (CHW) solution, be it embedded or DNSP, the system has attached to it several cost inputs that need to be recovered at some point by someone. The most common cost areas are:

- Energy
- Water
- Plant
- Maintenance

VCTIVE

In the DNSP model, the recovery of the energy used to heat the water is a market solution with no impact on the Owners Corporation.

The DNSP has had the responsibility for the installation of apartment gas and water metering, sub meters the hot water plant for energy and then provides the read data to the market to allow for full retail contestability.

This market model does not consider in any way, the additional costs associated with CHW, which are the water consumed and the installation and supply of the plant. These costs are not borne by users, but form part of the building operating costs which are distributed to Lot Owners on a Lot Entitlement / Lot Liability basis.

This methodology relates only to Lot size and not at all to usage. In the DNSP model it is not possible to access individual lot data to fairly attribute costs based on actual consumption, potentially disadvantaging many lot owners.

COST BENEFIT OF EMBEDDED NETWORK VERSUS DNSP

In the embedded model, where the operations are performed on behalf of, and controlled by, the Owners Corporation (OC) as is the case in the Active model, the OC is better able to manage the distribution of the costs associated with the supply of hot water.

For Lot Owners, this means that costs are substantially reduced and more fairly allocated. Plant installation and maintenance costs are substantially reduced, and plant efficiencies are more likely to be maintained.

Meters are more likely to be accessibly located and better able to be maintained for accuracy.

Wholesale gas purchases are likely to be lower through volume buying, resulting in lower overall supply costs and the ability to pass these savings on to users.

For Residents, this means that the overall cost of supply is most likely to be cheaper than the retail market.

In Active Embedded Network sites for example, this can be 10% or greater under that of the average price in embedded networks, which in turn is much lower than the comparable rate in the DNSP model.

PRICE COMPARISONS

On behalf of a major client, in 2020/21 Active undertook modelling on the DNSP model versus the Embedded Network model customer using market retail pricing for DNSP sites and the average identified pricing of the primary Tier 1 provider of embedded hot water.

The results were startling:

Site	Volume (Decalitres)	MJ	Rate/MJ	Daily Supply c/day	Annual Bill (inc GST)
A - DNSP	8	33.13	0.041558	0.6644	\$745.05
B - EN	8	33.13	0.0201	0	\$586.92

The process was conducted using two (2) different sites and the results were the same in each site, an average of a 21% saving against the standard market retail pricing.

This data applies only in the savings to residents and does not consider the additional savings for the Owners Corporation and Lot Owners in the removal of additional costs for maintenance and other operational elements that they need to pay in the DNSP model.

SUBMISSION RESPONSES

ISSUE 7 CONSULTATION QUESTIONS

QUESTION 7A.

Is it appropriate to require the sale of hot water to be treated as the sale of energy, to allow hot water embedded network customers to be given similar consumer protections as those in traditional common hot water systems?

ACTIVE RESPONSE:

Active sees that there are 2 separate and distinct questions being asked:.

1. Is it appropriate to require the sale of hot water to be treated as the sale of energy?

And

2. Should hot water embedded network customers to be given similar consumer protections as those in traditional common hot water systems?

Q1:

Active's response to the first question would be no, it really is not appropriate to treat the sale of hot water in an embedded network as a sale of energy.

In both the DNSP model and in embedded networks, the base unit of consumption is Litres of water. In the DNSP model, the common factor calculations rely on several factors to perform the conversion to kilojoules / megajoules of gas. These factors are subject to on-site variations in performance that impact on customer pricing.

In the embedded network model, similar conversion models are used to determine the volume of energy required to heat a litre of water, however the subsequent account in litres is more reflective of the cost of the service.

It would appear more customer centric for the billing of the service to be in units that reflect the service being provided. Water is measured in litres. Additionally, whilst the DNSP model allows for retail competition amongst the larger retailers in NSW that provide hot water billing, internal price modelling has shown that the rates provided in embedded network hot water solutions are approximately 20% lower (as per table X above) than the DNSP on comparable usage patterns.

The DNSP model allows for large retail margins to be earned on gas and supply charges making the solution profitable for the retailer. With recent dramatic wholesale price rises in gas in NSW, retail customers are likely less protected from these than those in embedded networks.

Q2:

Yes, customers in hot water embedded networks should be provided with protections similar to those in the traditional market. As shown in your documentation, the Essential Services Commission VIC (ESCV) has provisions for hot water customers in the Energy Retail Code.

Customers in electrical embedded networks are provided with almost identical protections to grid connected customers, so the focus should be more on providing protections than on the nature of the billing unit.

QUESTION 7B.

Do you foresee any unintended consequences of requiring hot water embedded network operators to bill customers for hot water in the underlying energy source (in cents per megajoule or kilowatt hour), rather than as a separate 'hot water' product (in cents per litre)?

ACTIVE RESPONSE:

Yes, there are likely to be major consequences of making this change.

To be able to bill customers in megajoules of gas, the billing entity would be required to hold a gas license from the AER in the NECF, as the deemed exemption status allowing for the billing of unmetered gas appliances would no longer apply. Many of the entities billing for hot water do so on behalf of the Owners Corporation who derive the benefit of the solution. Few of these hold licenses from the AER for gas.

Even the tier 1 retail businesses that operate embedded networks for electricity and hot water traditionally do not operate using their retail licensed entities.

To restrict the market only to licensed operators solely for the purpose of changing the billing unit would potentially impact many buildings for compliance. It is also likely that the move would reduce competitiveness in the industry and progressively limit the operation of hot water networks to a smaller number of larger players who do not necessarily always act in the best interests of the building.

Additionally, many of the embedded network operators are nimbler than the retail market and can assist the Owners Corporation in the recovery of other costs beyond just energy, with recovering water being the most common. This reduces the burden on the Owners Corporation and Owners to pay for additional consumption items through Lot Entitlement.

QUESTION 7C:

Do you consider there to be any barriers that may prevent a hot water embedded network operator from billing customers in the underlying energy source?

ACTIVE RESPONSE:

Yes, there are two main areas of concern for embedded network billing operators.

The first is the requirement to adjust all internal modelling to reflect the DNSP conversion process / common factor calculations on a building-by-building basis. This could result in considerable internal system challenges, billing errors and, most importantly, considerable customer confusion. The change would likely result in bill variations from the previous methodology, in most cases increases from the change in retail gas pricing.

The other area of concern may be the technical capacity of a billing system to provide gas billing solutions. Systems that have been designed for electricity and water billing may not be able to include gas billing with the result being a major increase in operating costs with little defined benefit to the end user.

QUESTION 7D:

Do you consider the AEMO Retail Market Procedures (NSW and ACT) formula for the calculation of energy usage to be appropriate and reasonable for use within hot water embedded networks?

ACTIVE RESPONSE:

No. It is designed for a market system that in and of itself has substantial deficiencies. It is subject to hot water plant efficiency issues in a more substantial manner than the newer embedded network solutions.

Loss factor calculations are arbitrary and there is little capacity for the Customer to have any insight at all into the true way their water is billed.

We see no ongoing technical issue with the retention of the billing in litres in embedded networks.

HOT WATER CONCLUSION

As stated in the response to Question 7a, Active fully supports the introduction of additional consumer protections in the embedded network hot water market. Requiring properly defined protections similar to those provided in the market DNSP solutions, is a sensible solution and one that can be incorporated without making a substantive and unnecessary change to the billing units.

Our analysis indicates that there are substantial issues in the DNSP market in respect of accuracy and the primary DNSP had made a submission to the AER in 2019 to adjust the traditional metering structure to provide cost benefits to the DNSP and end user.

Issues with maintenance and accuracy of metering compounded by access issues, particularly in older buildings, also create substantial customer and retailer service and pricing issues.

The utilisation of the embedded structure creates benefits across the board from the DNSP to the Developer in construction to the Owners Corporation and finally the end user who becomes the primary beneficiary financially.

OVERALL CONCLUSION

In conclusion, although Active agree with an inquiry into the regulations surrounding embedded networks. Active believe this review should focus on traditional embedded networks in their current state, allowing a path forward for residential embedded networks to continue, albeit with regulatory reform that provides consumer protections and further compliance and enforcement powers to regulators among other obligations as currently required by Authorised retailers.

To create a path forward for residential embedded networks with regulatory reform, Active believes strong consideration should be given to our proposed alternative methodology as detailed in this submission.

As detailed in this submission, there are larger impacts on limiting new residential embedded networks as opposed to reforming traditional embedded networks in their current state.

The impacts include:

- > Reinstating barriers that will prevent residential buildings from investing in research, development, and innovation in renewable technologies.
- > Removing financial and other benefits provided to embedded networks.
- > The loss of jobs and closure of embedded network businesses.
- > Major disruptions to a variety of associated industries.

Furthermore, embedded networks reduce the cost to build greenfield residential buildings that in turn reduce the cost for consumers to purchase a property.

Embedded networks also assist the local distributor in site management activities that reduce overhead costs and maintain lower network fees. If residential embedded networks were banned, local distributors would have additional costs in managing these sites. These costs are likely to be recovered from all customers within the distribution zone.

Again, Active believes with the sentiment of regulatory change, however implores that due consideration be given to our proposed alternative methodology that, in summary, consists of removing embedded networks in their **<u>current state</u>**, through regulatory reform.

There are a number of operators that have given the industry a bad reputation and these can be addressed quickly and simply by moving to the model we suggest. Retail competition will quickly resolve pricing and other issues.