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ADVOCACY CENTRE

**PIAC submission to AEMC Wholesale Demand
Response Draft Rule**

October 2019

About the Public Interest Advocacy Centre

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

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

Energy and Water Consumers' Advocacy Program

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

- NSW Council of Social Service;
- Combined Pensioners and Superannuants Association of NSW;
- Ethnic Communities Council NSW;
- Salvation Army;
- Physical Disability Council NSW;
- St Vincent de Paul NSW;
- Good Shepherd Microfinance;
- Affiliated Residential Park Residents Association NSW;
- Tenants Union;
- Solar Citizens; and
- The Sydney Alliance.

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Introduction

PIAC welcomes the Australian Energy Market Commission's (the Commission/AEMC) draft decision to implement a demand response mechanism into the wholesale energy market. We consider the implementation of wholesale demand response is necessary to unlock the significant benefits of a 2-sided energy market that empowers consumers.

We broadly support the Commission's draft decision, in particular its settlement approach, which ensures the direct costs of participating in wholesale demand response are, as far as possible, borne by those who directly benefit. However, we consider two aspects of the draft decision should be amended: the mechanism should be introduced before July 2022 and all consumers, including households, should be allowed to participate from the outset. It is our view that the long-term interests of all consumers are best served by implementing the new rule before the proposed start date of July 2022, and extending participation to households at that time.

This submission addresses details of the Commission's draft rule and discusses options for introducing the mechanism before 2022 and extending it to all consumers while providing appropriate protections.

Extending WDR to households

Extending the Wholesale Demand Response (WDR) mechanism to households will maximise the pool of demand response (DR) available. This can help deliver a more efficient, lower cost, lower risk system overall and the benefits of this will flow through to all consumers. It also offers households another option to manage their energy bills by incentivising DR actions and providing them a fairer share of the benefit of these actions.

Australia has over 1.1 million household swimming pools and installs around 90,000 pool pumps - with over 200MW of cumulate nameplate demand - every year¹. Battery storage is expected to increase, with an estimated 20,000 systems installed in 2017². If aggregated, these sources of demand response alone could offer considerable value to the market.

Despite these potential benefits, the question of how to provide adequate consumer protections has been a limiting factor in its application to households. The AEMC notes:

Without having holistically considered the appropriate protections, the Commission does not consider that it would be appropriate to allow small customers to participate in the wholesale demand response mechanism at this time.³

While PIAC agrees that there are real and important consumer protection issues to consider, PIAC submits that excluding all households from participation in WDR programs is unnecessary and fails to fully promote the NEO. For instance, the Councils of Social Service have stated in their letter to the AEMC's public hearing that:

¹ Energy Rating, <http://www.energyrating.gov.au/products/swimming-pool-pumps>, 2019.

² Smart Energy Council, [Australian Energy Storage Market Analysis September 2018](#), 2018.

³ AEMC, *Information Sheet – Wholesale Demand Response Mechanism draft rule*, July 2019, 2.

As organisations that advocate on behalf of people experiencing poverty and disadvantage, we are attuned to concerns regarding consumer protections. However, we argue:

- There are household demand response options which have no risk of affecting people's quality of life – such as pool pumps and household batteries - that, if aggregated, could offer a lot of value to the market and households.
- Australian Consumer Law already provides the key consumer protections people need for many demand response contracts - like pool pumps and household batteries. These loads could be part of the demand response market from day one.
- The work on extending existing consumer protection arrangements to deal with more sensitive and complicated loads – such as air conditioners and electric vehicles - should be commenced as soon as possible.
- Further, there is no reason why there can't be comprehensive consultation for adequate protections in this space before the implementation date.⁴

This submission sets out a practical framework to enable households to have the option of participating in wholesale demand response while balancing concerns regarding consumer protections.

Current protections framework

The National Energy Customer Framework (NECF) is intended to work in conjunction with the Australian Consumer Law (ACL) with respect to consumer protections. However, the NECF itself only provides for the energy-specific regulation where there is a sale of electricity or gas to a customer connected to the grid. As a result, the requirements in the National Energy Rules (NER) for retail authorisation and exempt selling arrangements apply only where there is a financial transaction relating to the volumes of energy and has generally revolved around the existence of a metered connection.

This means that providers of many energy related services, with similar potential consumer harms to those where energy is transacted, do not currently have to comply with any energy-specific regulation under the NECF. Instead, they are only bound to the more general consumer protections under the ACL.

In the past, this approach may have been suitable because most energy services required metered transactions. Now, with emerging technologies and business models, it is clear that this approach provides insufficient protections for some consumers.

Limiting protections only to where energy is metered and traded runs the risk of creating loopholes. For example, the provider of a product or service can avoid complying with consumer protections that apply under NECF's retail exemption arrangements, simply by not selling energy on a per kWh basis and so avoiding the need for an exemption.

⁴ *Joint letter from the Councils of Social Service to the AEMC public hearing on the WDR draft determination, August 2019.*

Harm-based protections

PIAC supports a system where the protections offered to consumers are commensurate to the potential harm the consumer may face should they lose that energy product or service – the higher the potential harm, the stronger the protections offered to the customer. This should not depend on the model of provision and reflects the nature of energy as an essential service.

PIAC does not support any delay to the inclusion of household demand response options that carry little or no risk of harm to people's health and wellbeing.

Potential harms from household WDR

The potential harm to households from any particular DR event depends on a number of factors including:

- The type of energy use being affected by the DR event (e.g.: whether it is heating/cooling load or battery storage) and its duration.
- Characteristics of the household itself, such as whether there are medical conditions that make them more sensitive to temperature changes.
- The context of when and where the DR event occurs, such as whether it is on an extreme weather day.

Very broadly, these could be categorised as either:

- Financial harms in terms of choosing an appropriate offer, payment conditions or warranty terms. For instance, if there is information asymmetry between potential DR providers and households regarding the value of the DR load, households may not be well-placed to properly compare competing offers and judge which is most suitable for them.
- Inconvenience from the loss of usage of some appliances during a DR event. For instance, there may be potential impacts to the household's amenity from temporary loss of controlled load hot water.
- Harms to health and wellbeing from the loss of use of some appliances during a DR event. For instance, there may be potential impacts to an individual's health from losing full access to heating or cooling devices during extreme weather events.

The potential financial harms from WDR are similar from the potential harms that currently exist for households in receiving their traditional grid supply and through their own investment in behind the meter technologies such as rooftop PV. In this regard, many of the existing customer protection frameworks provide adequate protections for some DR.

By contrast the potential harms to health and wellbeing from WDR are fundamentally different to those that currently exist for traditional grid supply of energy. In the case of an unplanned outage of the traditional grid supply, the harm is from the loss of all (or at least a significant portion) of the energy supply to their home for an indefinite time until the outage is resolved. In the case of WDR

for households, the harm is from the loss of full usage of one or several specific appliances within a home for a relatively well-defined period until the DR event ends.

There are several important differences here to highlight in the case of WDR: it is inherently controllable; it is only for specific loads not the entire home’s supply; it is not necessarily the full loss of supply of those loads; and it is for a finite time.

Types of energy usage

The types of energy usage for household WDR sit on a spectrum from flexible, having no impact to the household’s health and wellbeing, to inflexible, having the potential to impact the household’s health and wellbeing.

	Flexible loads		Inflexible loads
Examples	<ul style="list-style-type: none"> • Home battery • Pool pump 	<ul style="list-style-type: none"> • Electric hot water systems • Smart appliances • AC on day 1 of a heatwave for typical household • EVs – from, say, 100% to 50% of state of charge 	<ul style="list-style-type: none"> • AC on day 4 of a heatwave for typical household • AC for temperature-sensitive consumers • EVs – last 10% of charge
Potential harms	<ul style="list-style-type: none"> • No impact on health or wellbeing from deferring this energy use • Potential for financial harm 	<ul style="list-style-type: none"> • Inconvenience to household from deferring this energy use but little or no potential impact to their health and wellbeing • Potential for financial harm 	<ul style="list-style-type: none"> • Potential material impact to health and wellbeing from deferring this energy use • Potential for financial harm

Figure 1: Categorisation of potential loads offered for demand response by the potential harm to the households

It is worth noting from Figure 1 that air-conditioning (AC) can sit at various places on the spectrum from flexible to inflexible loads to offer for DR. This depends on a range of factors governing the context of its use including the type of household that is potentially offering it and the time at which it is offered.

For instance, the impact to a household’s health and wellbeing from reducing their AC load for an hour may be negligible on the first day of a heatwave, especially if the house has good thermal insulation and is well sealed, meaning there is only a small and potentially unnoticeable change in indoor temperature during the DR event. However, this may not be the case if it is the fourth day of a heatwave or the house has poor thermal insulation. The potential impact on the health and wellbeing can be quite high if anyone in the household is particularly temperature sensitive, such as those suffering from thermos-regulatory illness, the elderly or young children.

One potential way to address this may be to establish temperature ranges outside of which the indoor temperature is not allowed to deviate for households during a DR event through their AC. In this case, a typical household without thermal sensitivity may have a relatively wide temperature range (for example 15-28°C) within which the impact to their health and wellbeing is minimal. The automated AC can cycle down during a DR event while the indoor temperature remains within this range. During this cycling, if the temperature deviates from this range, the AC will cycle on again to maintain the household's wellbeing. By contrast, the temperature range for households that are temperature sensitive would be much narrower, for example, to a range of just 3-5 degrees. In both cases, the automatic maintenance of temperature within appropriate ranges can be supplemented with an override option for the household to opt-out in the lead-up to or during a planned DR event, for whatever reason.

A framework such as this could allow households to participate in and derive the benefits of WDR whilst balancing consumer protection requirements.

Proposed solution for household WDR

The AEMC's draft determination not to extend WDR to households can be considered as providing protections commensurate to the potential harm to the **category of customer**. Instead, PIAC proposes a tiered approach to consumer protections commensurate to the potential harm from **category of load** being offered for DR.

Category 1 – flexible loads with negligible potential harm

These correspond to the flexible loads described in Figure 1, such as pool pumps and household batteries. For these loads there is no material risk of affecting people's health and wellbeing – in fact most households will not even notice the loss of these loads for the duration of a DR event.

The potential harm, if any, from the loss of these types of loads during a DR event are limited to relatively minor financial impacts. As such, these types of loads can generally be adequately covered by existing, non-energy specific protections such as the ACL. These loads could be included in WDR immediately.

Category 2 – potential inconvenience

These correspond to loads in the middle of the spectrum described in Figure 1 such as hot water systems and smart appliances such as washing machines and clothes dryers. We do not propose to include air conditioning in this category due to the complexity involved in creating a framework that would differentiate between cases where providing DR through AC (such as on day 1 of a heatwave) and when it is more inflexible load and has higher risk to health and wellbeing (day 4 of a heatwave or for those with medical issues).

The loss of these loads during a DR event may cause inconvenience to households but will not cause material risk of harm to health or wellbeing. As such, these would benefit from basic protections, beyond those offered in the ACL but not as prescriptive as those offered in energy-

specific regulations. Therefore, PIAC proposes DRSPs calling on DR loads in this category must be a signatory to the New Energy Technology Consumer Code (NETCC).⁵

The NETCC is a voluntary industry code for providers of behind the meter products and services and outlines a range of minimum standards for customer service levels and obligations. These obligations include: ensuring their advertising is clear and accurate; educating consumers about their rights; providing clear information about product performance and maintenance; taking extra steps to protect vulnerable consumers; and implementing effective complaints handling processes. The draft Code is currently being consulted on by the ACCC as part of its authorisation process.

Category 3 – higher potential harm

The correspond to the inflexible loads described in Figure 1 such as heating or cooling by air-conditioning and EV charging. These have a higher risk of causing harm to household's health and wellbeing from the loss of these loads during a DR event.

These should not be part of the targeted demand response market before appropriate, energy-specific consumer protections have been extended to them as the ACL and voluntary industry code such as the NETCC are inadequate. The work to develop these protections should commence at the earliest opportunity. In PIAC's view, however, an implementation horizon of two years would give sufficient time for the development of fit-for-purpose protections.

⁵ New Energy Technology Consumer Code, <https://www.cleanenergycouncil.org.au/advocacy-initiatives/behind-the-meter-code>.

Mapping the AEMC's draft decision against proponent principles, objectives and requirements

This section of PIAC's submission maps the AEMC's decision against the problem definition, principles, objective and requirements developed by PIAC, TEC and TAI as an input to the AEMC's technical working group process.

These are highlighted

- **Green** where the AEMC's draft decision and analysis is generally consistent with the intent of that principle, objective or requirement
- **Orange** where some aspects of the AEMC's draft decision are consistent with the intent of the principle, objective or requirement, but others are not
- **Red** where the AEMC's decision is generally inconsistent with the intent of that principle, objective or requirement

Problem definition

DR can displace more costly generation capacity and dispatch, and the NEM needs optimal levels of demand response in all its markets for them to be considered efficient and effective.

In PIAC's view, the key problems a demand response mechanism needs to solve are:

- Consumers want access to products and services leveraged by WDR, but have very limited opportunity due to a lack of offerings.
- Third parties are unable to access the wholesale market to offer related products and services to consumers that want them.
- The wholesale energy market lacks efficient levels of demand response
- The market operator cannot transparently deploy DR to meet demand in the same way as generation.

Overarching principles and objectives

From the AEMC's, Reliability Frameworks Review Final Report:

In order to facilitate increased demand response in the wholesale market, and in response to Finkel Panel recommendation 6.7 we consider that:
Demand response aggregators and providers should be able to be recognised on equal footing with generators in the wholesale market and so offer wholesale demand response transparently into the market.

The challenge is to develop a WDRM reform that expediently optimises the uptake of WDR across the NEM, with a design that is robust yet able to be improved as the energy market goes through complex transition including new technologies and business models.

The general principles and objectives that should guide the WDRM reforms can be described in the themes of:

- **Consumer choice**

- Business outcomes
- Competitive neutrality
- Transparency
- Allocation of cost and risk
- Supply chain benefits

These are outlined below, along with some specific principles, objectives and requirements for transitioning to a WDRM, **scheduling and baselining**, and **settlement**.

Consumer choice and protections principles and objectives

- Consumer choice in the provision of energy products and services generally leads to more efficient operational and investment decisions about energy.
- All customers should have the opportunity to participate in demand response, in the manner they prefer and with a provider of their choosing.
- Participation in demand response should not be mandatory for any consumer.
- Consumers' access to DR should not be limited by their providers of other energy services. Retailers may not obstruct their energy customers from participating in DR.
- WDRM design should operationalise consumer preferences for price/reliability trade-offs in the market.
- DR contract terms should be acceptable and practical for participating consumers.
- DR offerings should make commercial sense to participants
- Residential consumers should always have an override or opt-out option for a given demand response event that may affect the quality of life of that consumer.
- Genuine consumer choice and confidence in the market can only occur when consumers can choose their preferred retailer for energy retail services, and their preferred DR provider for WDR services, without compromising one for the other.

PIAC concurs with the commission that in the Australian Energy Council's (AEC) proposal:

...substantial scope is provided to the retailer to determine whether a demand response arrangement was consistent with its business model. This would provide little certainty to the demand response aggregator or consumer that its demand response arrangement would be maintained following a change of retailer.

Good faith negotiation is unlikely to be accessible for most consumers looking to participate in wholesale demand response. The Commission considers that there would be significant information asymmetry between the retailer and the consumer such that there would be little avenue for a consumer to challenge a retailer.⁶

For these reasons, the AEC's proposal fails entirely to meet the consumer choice principles and objectives listed above.

⁶ Ibid, 54.

Consumer protections

PIAC supports the AEMC's position that:

This framework should facilitate consumers accessing the benefits of competitive markets on fair and reasonable terms, while maintaining the right to access energy as an essential service.⁷

... consumers should receive greater value for providing a given level of wholesale demand response under the draft rule when compared to the current arrangements.⁸

In disallowing the participation of households outright, the mechanism's draft decision does not fully deliver on these intentions. The decision to limit household participation limits the accuracy of the following AEMC statement to only apply to large energy users:

The mechanism introduced under the draft rule will increase the level of consumer choice in relation to wholesale demand response. By increasing the ability for consumers to access wholesale demand response through the mechanism, it would have the effect of increasing the level of competition among providers of wholesale demand response services to customers.⁹

PIAC supports deferring household participation in DR that may result in detriment to health or wellbeing, such as AC and EVs, until a review of the NECF has been conducted. More broadly, PIAC supports the development of fit-for-purpose, protections for new energy services, but does not support deferring the inclusion of household DR in the mechanism where there is little risk of harm to health or wellbeing.

The AEMC states:

Consumer protections should be maintained for small customers participating in wholesale demand response.¹⁰

In PIAC's view, 'maintaining consumer protections' is not about making them the same as under an energy retail contract, but making them suitable for the purpose of demand response provided by third parties. To this end, PIAC supports fit-for-purpose, harm-focussed energy specific consumer protections.

PIAC is of the view that household energy users should be able to participate in a competitive wholesale demand response market at the earliest possible opportunity. Consumers are already doing DR with air conditioners and so on, but these relationships are covered by the energy-specific consumer protections in NECF.

Consumers are also already doing DR with batteries under contract with third parties such as Reposit, and the most substantial energy related investments of millions of Australian households

⁷ *Draft Rule Determination on Wholesale Demand Response Mechanism*, AEMC, 2019, 50-51.

⁸ *Ibid*, 52.

⁹ *Ibid*, 52.

¹⁰ *Ibid*, 55.

– solar panels – is provided by businesses often offering no energy-specific consumer protections.

The AEMC notes:

It is important that there is proper consideration of the appropriate consumer protections that should be extended to consumers participating in wholesale demand response, as well as other non-traditional energy services and products¹¹

PIAC agrees, but is of the view that:

- Not all demand response products and services require additional consumer protections additional to what are provided by Australian Consumer Law and the pending New Energy Tech Consumer Code
- The development of consumer protections for other demand response products and services should not be materially delayed by the development of those for ‘other non-traditional energy services and products’.

AEMC notes:

The retail rule change request submitted to the Commission would not allow the Commission to undertake a holistic review of consumer protections.¹²

PIAC disagrees with the premises that:

- It is the task of the retail rule change request to allow the Commission to holistically consider consumer protections for small customers beyond what is specifically required to support wholesale demand response for households and other small energy users.
- The Commission’s capacity or permission to undertake holistic consideration of consumer protections for small customers is limited by this rule change request. PIAC acknowledges that some change of the NERL may be required to implement some protections, but notes that the Commission is still able to:
 - Make a preferable rule, and/or
 - Recommend that a party makes a request to change the rules
- It is the responsibility of the retail rule change proposal to allow the holistic consideration of consumer protections for all customers:
 - Not all demand response products and services require consumer protections additional to what are provided by Australian Consumer Law and the pending New Energy Tech Consumer Code
 - The development of consumer protections for other demand response products and services should not be materially delayed by the development of those for ‘other non-traditional energy services and products’

¹¹ Ibid, 55.

¹² Ibid, 55.

The AEMC notes:

Given the importance the Commission places on the application of the appropriate consumer protections, the draft rule will not permit small consumers to participate in the wholesale demand response mechanism until the related consumer protections issues have been adequately assessed. This may occur before the proposed implementation date of the mechanism.

For the purposes of this draft rule determination, the Commission has determined to not make a draft rule in relation to the retail rules for this request. Instead, the Commission will consider, in a formal review, the application of consumer protections to new energy service providers more generally, including DRSPs. The Commission considers that this approach is preferable given that it allows consumer protections to be considered in a holistic, comprehensive manner so that these can be made fit for purpose, no matter what the future may bring.¹³

PIAC does not support the Commission's decision to not make a draft retail rule and not immediately allow for small customer participation in the mechanism, as:

- There are household demand response options which have no material risk of affecting people's health and wellbeing - such as pool pumps and household batteries - and these should be part of the demand response market from day one. Australian Consumer Law already provides the key consumer protections people need for demand response with these loads. Australia has over 1.1 million household swimming pools and installs around 90,000 pool pumps - with over 200MW of cumulative nameplate demand - every year. Modelling for the 2019 Integrated System Plan suggests household battery capacity is likely to increase by between 77 and 584MW, and potentially by over a gigawatt, between 2021 and 2022. If aggregated, these two sources of demand response could offer considerable value to the market.
- Some demand response options - such as hot water systems and smart appliances - may cause inconvenience, but have no material risk of harm to health or wellbeing. These should be part of the demand response market from day one, subject to DRSPs being signatories to the New Energy Tech Consumer Code (NETCC).
- Some loads with the potential to cause harm to people's health or wellbeing - such as air conditioners and electric vehicles - are currently not covered by energy specific protections, and require higher levels of protection than what is afforded under Australian Consumer Law. These should not be part of the demand response market before appropriate consumer protections have been extended to them, and the work to develop these protections should commence at the earliest opportunity.

As the AEMC notes on page (i):

Evolving technologies are such that more consumers want to and can participate directly in the wholesale market

¹³ Ibid, 56.

PIAC agrees that evolution of technology is one of the main drivers of growth in DR capabilities. Limiting household participation both fails to honour this consumer preference and fails to optimise the energy system by capitalising on the opportunities presented by evolving technology, most of which emerge in volume in the residential product market.

PIAC also notes that households are the main contributor to peak demand, and research by Energy Consumers Australia found around half of household consumers were willing to voluntarily lower their energy use at peak times with a financial incentive. Delaying participation by these households is a missed opportunity.

Business outcomes principles and objectives

- Markets are more likely to be efficient when there are a number of players competing to offer valuable products/services to consumers.
- All providers who are capable of offering demand response should be able to do so.
- Participation in demand response should not be mandatory for any business. Individual retailers should choose whether or not they offer DR.
- Opening existing markets to competition from new providers, rather than intervening with prescriptive rules and regulations for existing participants, is the efficient and fair way to meet consumer preferences for products and services.
- An efficient market will come from allowing DR to be offered by those who are best equipped to provide it and allowing retailers to focus on delivering energy retail services, not compelling them to offer DR services that are not part of their business model.
- DR terms should make commercial sense to businesses offering them.
- No party should be allowed to influence another party's participation in DR when there is no resultant direct, significant and unavoidable cost to the first party.

PIAC notes that the prudential requirements for DRSPs need to be fit for purpose and proportionate to risk.

PIAC concurs with the Commission that in the AEC's proposal:

...substantial scope is provided to the retailer to determine whether a demand response arrangement was consistent with its business model. This would provide little certainty to the demand response aggregator or consumer that its demand response arrangement would be maintained following a change of retailer.

Good faith negotiation is unlikely to be accessible for most consumers looking to participate in wholesale demand response. The Commission considers that there would be significant information asymmetry between the retailer and the consumer such that there would be little avenue for a consumer to challenge a retailer.¹⁴

For these and other reasons, the AEC's proposal fails entirely to meet the Business Outcomes principles and objectives noted above.

¹⁴ Ibid, 54.

Competitive neutrality principles and objectives

- Energy markets operate more efficiently when the demand side participates. Wholesale market efficiency brings about benefits for all energy consumers, particularly through lower prices.
- A more “dispatchable” demand side brings about benefits and efficiencies for system security and reliability.
- Competitive neutrality is needed to provide efficient incentives for participants to innovate and minimise costs over time.
- The WDRM should remove barriers to entry to the wholesale market for DR, allowing businesses and consumers that want to provide DR to do so.
- The WDRM must remove the existing distortion to the market created by the absence of a level playing field between demand response and generation businesses.
- The WDRM should level the playing field between generation and demand response, with DR providers participating in the NEM on equal footing with generators.
- Arrangements and requirements for DR providers should match those for generators as far as practicable.
- The WDRM should facilitate DR in a manner agnostic of any specific business model.
- The WDRM should serve to dilute concentrated wholesale markets, minimising gaming potential and reducing wholesale prices.

PIAC concurs with the commission that in the AEC’s proposal

...substantial scope is provided to the retailer to determine whether a demand response arrangement was consistent with its business model. This would provide little certainty to the demand response aggregator or consumer that its demand response arrangement would be maintained following a change of retailer.

Good faith negotiation is unlikely to be accessible for most consumers looking to participate in wholesale demand response. The Commission considers that there would be significant information asymmetry between the retailer and the consumer such that there would be little avenue for a consumer to challenge a retailer.¹⁵

For these and other reasons, the AEC’s proposal fails entirely to meet the Competitive Neutrality principles and objectives listed above.

Transparency principles and objectives

- Transparency improves market participants’ ability to make efficient operational and investment decisions.
- Wholesale demand response should be provided in a manner that is transparent to the rest of the market.
- Transparency of the demand side’s responsiveness to price improves AEMO’s ability to make efficient decisions about market and system operation
- The WDRM should improve visibility of current and future demand response

¹⁵ Ibid, 54.

PIAC notes that energy retailers have indicated a preference for having access to various data and information.

PIAC supports actions to ensure transparency that promote better market operation and outcomes, but considers that information should be provided on the basis that providing this information

- results in market benefits that are greater than the cost to the market, and/or
- ameliorates or addresses a negative impact on a given retailer in question that:
 - has arisen, or would arise, as a direct result of their customer's demand response activity; and
 - could not be more efficaciously addressed through other means.

In PIAC's view, the AEC's proposal fails to fully meet the Transparency principles and objectives noted above.

Allocation of cost and management of risk principles and objectives

- Risk is most appropriately placed with those most able to manage it, and unnecessary risks should be avoided.
- The WDRM should allow DR providers and participating consumers to together determine how to best manage any risks associated with their participation, particularly with respect to the trade-off between firmness of response and payments to consumers for participation.
- The WDRM design should generally operate on a causer/beneficiary pays and payer benefits basis.
- The expected costs of enabling wholesale demand response should be justified and expressed as incremental to other inevitable costs, including sunk costs.
- The upfront costs of introducing the WDR mechanism should be managed as far as practicable, for example by combining it with other systems changes, such those required for implementing the five-minute settlement and global settlement reforms, both of which involve significant changes to market operations.
- System costs (real or purported) should only be considered with commensurate regard to the potential benefits of DR, to both participating consumers, the market and throughout the supply chain

PIAC supports the AEMC's positions that:

Risk allocation and the accountability for investment and operational decisions should rest with those parties best placed to manage them. Placing inappropriate risks on consumers, who may not be best placed to manage these risks, is likely result in higher prices if these risks cannot be managed and reduced over time.

Conversely, placing risks with market participants (who may be better placed to manage them) will only be passed on to consumers in terms of higher prices where competition permits. Solutions that allocate risks to market participants, such as commercial businesses, who are better able to manage them are preferred, where practicable...

... Generally costs should be attributed to the party who is best able to reduce the extent of the costs over time. However, where costs are imposed in implementation and cannot be mitigated through market mechanisms, these costs should be minimised relative to the benefits of the regulatory changes.

The Commission has assessed the implementation efficiency of the proposals set out in the rule change requests. This is necessary so that the implementation and ongoing costs, ultimately borne by consumers, do not exceed the benefits of introducing a mechanism.¹⁶

In PIAC's view, the AEMC's proposed design of the mechanism supports these intentions.

Energy supply chain principles and objectives

- The NEM can only be considered truly efficient and effective if it has optimal levels of demand response in all its markets and networks.
- DR should be available for day-to-day operation of the NEM, not only for emergency purposes or during summer.
- In-market demand response reduces the need for emergency reliability products like the RERT (the costs of which are borne by all consumers), by incentivising DR to participate in the wholesale market (rather than RERT) and so reducing the need for more expensive emergency interventions.
- The WDRM should build a pool of DR that can also be used for Dx and Tx network, Ancillary Services and system security purposes if and when the need arises.
- The WDRM should support innovation that leverages the uptake of behind the meter technology where it improves efficiency and cost of meeting demand for energy.

Excluding households limits the potential to build a pool of DR that can also be used for Dx and Tx network, Ancillary Services and system security purposes and to support innovation that leverages the uptake of behind the meter technology.

Additionality test

The AEMC says:

DRSPs must not submit dispatch offers to provide wholesale demand response which ... would have been undertaken anyway, even in the absence of a dispatch instruction.¹⁷

An additionality test should prevent double-dipping. For example, spot exposed retail customers should not be paid by a DRSP to reduce load that is also reducing their retail costs.

However, this additionality test may require more nuance to mitigate the unintended consequence of preventing legitimate, efficient, value stacking, which provides a wider benefit to all consumers. This includes reducing load to respond to transmission or distribution peaks that coincide with high wholesale prices, especially when the business case for DR is dependent on the revenue from both value streams.

¹⁶ Ibid, 50.

¹⁷ Ibid, 60.

PIAC recommends the additionality test should more specifically aim to prevent multiple payments for DR responding to wholesale and/or retail price signals.

Transitional model principles, objectives and requirements

- A transitional WDRM market is appropriate to allow consumers to benefit from the WDRM being introduced at the earliest practicable opportunity, while managing the cost impact on retailers (particularly by allowing them to defer any system and metering changes to the same time as those they will make for other significant reforms).
- The resource impact on AEMO should be minimised over the longer term.
- AEMO should have flexibility to undertake market DR trials during the transitional period.
- Retailers should be allowed to settle with both the market and networks on baseline consumption, as distinct from 'split' calculation for settling the wholesale charges on the baseline and network charges on actual consumption.
- For participating large customers during the transition period, any network charge over-recovery that results from this arrangement could be returned to participating consumers by the relevant network business.
- Under a transitional arrangement, retailers should be allowed to undertake manual adjustments to settlement or billing data if required.
- During the transition period, DRSPs could have the option to take on responsibility for meter provision for any participating consumers, thereby avoiding new metering related obligations for the retailer.
- To manage risks to vulnerable consumers, while specific consumer protections are being developed, WDR should be disallowed for consumers on life support.

Baseline and scheduling principles and objectives

From PIAC's response to consultation paper:

An adaptable, robust baselining methodology is critical to the successful implementation of WDR. As ARENA and AEMO and their industry partners learned during the 2017-18 RERT trials, this is not a simple process, and requires refining over time.

We therefore propose a principles-based approach whereby the objectives of baselining would be included in the Rules, with AEMO having responsibility for developing and refining the methodology as the WDR evolves. AEMO should also be able to respond to the potential for inaccurate WDR baselines to cause problems with the NEM dispatch engine (NEMDE), as raised by the AEMC.

The key baselining principles that should be included in the rules include:

- 1) The net error for baselining should sum to near zero:
 - a) Over the long term, for any aggregated group of consumers, with respect to energy flows and financial value of DR¹⁸;

- b) Instantaneously, for all participating consumers in a given region, with respect to energy flow; and
- c) Over the long term, across the NEM and each NEM region, with respect to energy flows and the financial value of DR.

2) The deviation or range of error for aggregated groups of customers should narrow over time as baselining measures are improved.

Importantly, the accuracy of baselining for individual participants within an aggregated group – particularly individual households – is not of critical importance and must not be a barrier to implementation. Under the PIAC, TEC and TAI and SAG proposals, any risk associated with any baselining inaccuracy for any individual home within an aggregated group:

- does not impact the market (if the first principle above is met);
 - is, and should be, carried by the DRSP and/or the participating consumer; and
 - will be reflected in the financial arrangements and terms of the agreement between the DRSP and their customers.
- DR service providers should have symmetrical exposure to positive and negative prices, and consumption above and below the baseline during a DR event.
 - A number of practical measures and metering configurations can support more accurate baselining. These should be used to the full extent that they are practicable and do not limit participation.

Scheduling

PIAC supports the AEMC's decision that:

...without the obligations associated with scheduling, the wholesale demand response would be less certain and would not be able to be relied upon by AEMO for reliability purposes.

Under the draft rule, DRSPs will also be required to provide the relevant information through pre-dispatch, ST-PASA and MT-PASA. This will provide a greater level of information to AEMO and the market, which will further promote more efficient operational and investment decisions by AEMO and market participants.¹⁹

In PIAC's view:

- DRSPs should be only dispatched in the intervals they are providing DR, and will need to meet dispatch targets.
- Over delivery of DR relative to dispatch target should be allowed and settled, but causer-pays charges should reflect any resultant impact on system.
- Flexibility is needed to avoid unnecessarily penalising DRSPs or DR customers, and a dispatch target should be able to be zero in last interval.

¹⁹ Ibid, 52.

- Post event load would be a concern only to the extent that it introduces a new impact on the energy system that would not have occurred in the absence of that DR event, and is not equivalent to the impact of a generator going offline.

PIAC agrees with the AEMC that aligning baselines with NEMDE etc gives AEMO incentive to improve baselining accuracy.

WDRM Settlement objectives and requirements

- The DRSP is paid the wholesale spot price from the market.
- The DRSP pays the participating consumer according to contract terms previously agreed between them.
- The participating consumer still pays the retailer based on what they would have consumed anyway.
- The distributor recovers costs for the use of the network.

PIAC supports the AEMC's proposed settlement approach, which improves on that proposed by PIAC, TEC and TAI and SAG, and better meets these requirements as well as the principles and objectives relating to cost allocation and risk management.

Other matters

This section includes other comments and recommendations from PIAC

Framing

The AEMC notes:

The draft rule promotes the ability for consumers who participate in the mechanism to change their level of consumption in response to the wholesale electricity price.²⁰

PIAC considers that the AEMC should reframe this as the ability for people to change their *demand from the grid*, not their *level of consumption*. Consumers deploying batteries or embedded generation to meet some or all of their own consumption under the mechanism may provide system- or market- wide benefits without altering their on-site consumption.

Guidelines

PIAC supports the Commission's decision for AEMO guidelines rather than capturing excessive detail in the Rules. This is important to ensure flexibility in the operation of the mechanism to support innovation, improved effectiveness and addressing issues in a timely manner.

Lack of retailer DR

The AEMC notes demand response products offered by retailers on page 29 (Box 2). Included are innovative spot price pass-through products offered by a small number of retailers. PIAC is very supportive of the innovative products retailers like Flow, ERM and Amber are bringing to the market, and acknowledges these assist to enable and incentivise DR.

However, PIAC notes that spot price pass through and third party demand response are not one and the same, and consumers are likely to prefer one over another.

- Many consumers who are willing to offer flexible loads to the market, for mutual benefit of themselves and other users, are unlikely to have the required level of engagement, or appetite for risk, of exposure to spot prices 8,760 hours per year. These customers are likely to choose to participate in demand response, but unlikely to enter into a spot-price pass through product.
- Many household consumers who have a flat load profile (relative to the net system load profile) are be better off on a spot price pass through contract, even if they do not undertake demand response, by avoiding paying a contribution to some retail costs that are smeared across the customer base of other retailers and avoiding a risk premium for the retailer to manage spot risk. Further, some consumers opt for Amber's model (charging a flat \$10 fee per month and passing through other costs) as a 'set and forget' contract product. Customers on these products do not need to review their energy contract at the end of every year to determine if the retail margin has increased relative to other offers, which is a standard practice of other energy retailers (commonly referred to as a 'lazy tax').

²⁰ Ibid, 52.

The above points also apply to time of use contracts. In addition:

- the price variation of most TOU contracts is signalled by the underlying network tariff, with a smeared retail/wholesale margin over the top. This sends a less efficient signal than a spot price signal.
- In most cases, a customer would only have to participate in a small number of demand response events to achieve the same value in energy cost reductions as provided for year-round response to the TOU price.

On page 31 the AEMC describes the research project as based on ‘anonymous phone calls’ to retailers. PIAC wishes to make the following corrections to the AEMC’s description of PIAC mystery shopper exercise:

- The enquiries were not anonymous but were made by real consumers using their real identities, including their own residential addresses.
- The contact methods included email, online chat, and multiple phone calls.
- In addition, websites, public announcements and media were examined.

These methods were all important to ensure no legitimate DR offers were missed.

A two-sided market

WDRM is an essential component of a two-sided market, but a two-sided market is not a replacement for a WDRM.

The AEMC says:

With these expanded opportunities, a longer term move to a two-sided market will be essential.²¹

PIAC considers the aspiration for more active and symmetrical participation in the market is a worthy one that is supported by the introduction of a DR mechanism. However, we challenge some of the AEMC’s views with respect to the idealised market, and consider the two-sided market should not be viewed as an energy-retailer-centric one.

In PIAC’s view, a market which optimally balances supply and demand is essential, and the option of a two-sided market should be made available for all consumers. However, most people are not interested in actively engaging with the energy market, and nor should they have to for the purpose of accessing the essential service of the supply of energy.

The AEMC says:

The mechanism will eventually be outgrown because it provides consumers with opportunities to substitute for generation.²²

²¹ Ibid, iii.

²² Ibid, iii.

PIAC disagrees strongly with this view and, insofar as this view informs the Commission's thinking about the design of the WDR mechanism, asks the AEMC to focus on making a rule with a view that it is enduring, not with a view that it will be temporary or transitional.

This view of the DR mechanism as transitional is also inconsistent with the Commission's own view that:

In the long term, this should lead to the least-cost combination of resources on the supply-side to meet demand. This will reduce the costs that are recovered from all consumers.²³

For many energy users who will access wholesale DR, it will not be for the sake of participating in the wholesale market, but as an adjunct of other services, such as transport services (electric vehicles), recreation purposes (pool pumps), some combination of cost savings, emissions reductions and independence (household solar/battery systems) and reducing cost of doing business (for most businesses), for which wholesale DR is controlled by another party and offered to the consumer as lower prices for services or a further income stream.

These consumers are likely to associate value stream payments with reductions in energy costs, but in the case of EVs, for example, with lower transport costs.

Most consumers want to access low-cost energy from the grid from a retailer, and these other services from another provider, and they do not want to compromise one offer for the sake of another. Anecdotally, a prominent Australian battery services provider has advised PIAC that approximately half of the potential customers they seek to recruit that do not enter into a contract with them, decline because they would have to also enter into a specific retail contract to do so.

Access to DRSPs under the mechanism is a key way of preserving that consumer choice, as people will not be required to renegotiate with their retailer – who they see as their provider of essential energy services, not innovative products – to be able to access providers of services that are primarily non-energy services, such as electric vehicles and swimming pools.

A further inconsistency between retailers and DR services is that DR services are associated with capital outlay requiring longer term contracts. The experience of households in the energy market is that longer term retail contracts represent poor value, as retailers offer the best value to new customers at the expense of higher charges (with higher retail margins) for long term customers.

In PIAC's view, DRSPs will always have a role in providing some services, and the AEMC's approach to designing the DR mechanism should reflect this.

The AEMC says:

If all of the demand-side became technologically capable of participating in the mechanism, the supply in the wholesale market would consist of both actual supply (generation) and also demand response (through the mechanism).²⁴

²³ Ibid, 52.

²⁴ Ibid, iii.

Noting the earlier point that most people are not interested in actively engaging with the energy market and should not have to be, PIAC questions the relevance and plausibility of the notion that all of the market could, and would, participate.

If the AEMC's belief is that when the optimal amount of DR participation is reached then the mechanism will not be required, PIAC considers the opposite is true: the mechanism that has enabled that participation will need to remain in place in order to sustain the optimal state of the market.

With respect to baselines, the commission says:

Moving to a two-sided market in the long- run means that there would be no need to determine these artificial benchmarks.

PIAC disagrees with this. There is no way for responding to price signals that requires no type of 'baselining'. Different types of DR just require different parties to carry the risk and determine the value. Baseline accuracy risk, for example, is shared by:

- Consumers in a given NEM region, participating DRSPs and participating consumers, when provided via a DRSP
- The customers of a given retailer, the retailer themselves and participating consumers, when provided via a retailer
- The customer themselves, when responding to spot price signals.

Even in the latter case, the customer still has a 'baseline' as they determine what they are forgoing in return for the value provided by DR.

Nonetheless, PIAC is in firm agreement with the AEMC that:

The draft rule will assist in providing greater opportunities for wholesale demand response and promoting increased consumer engagement. This should subsequently allow for a transition to a two-sided market when technology is mature enough and a clear path has been determined.

The AEMC says on page 36:

The majority of consumers place a high value on consuming electricity, meaning that for the vast majority of pricing intervals the value they place on consumption exceeds the wholesale price, and they would not want to adjust their consumption even if exposed to the wholesale price.

This is true with respect to the temporal nature of energy for an energy user's entire loads, but misses the point that different loads have different values. This is evidenced among more engaged customers by interest in products like electric vehicle charging tariffs that allow retailers to control charging of EV's overnight, and among the broader customer base by the simple fact that people turn things off when they do not need them: in so doing, already 'adjusting their consumption' relative to price signals.