Monitoring the Retail Electricity and Gas Markets in NSW

15 August 2024

IPART has commenced its 2023-24 monitoring report on the retail electricity and gas markets in NSW. Each year, we are required to monitor and report on certain matters including prices, competitive dynamics and the participation of households and small businesses in the retail electricity and gas markets.

This year, we would also like to report on how different electricity pricing structures, including time of use and demand tariffs, are impacting customers in NSW and the virtual power plant programs offered. We provide further detail on these topics on pages 4 to 6.

To inform our report, we are seeking submissions until **Friday 20 September 2024** on:

- how we should consider prices, competitive dynamics and consumer participation in our report
- how consumers are impacted by and responding to changing pricing structures, including time of use and demand tariffs
- information on virtual power plant programs in NSW and how consumers are engaging with them
- other emerging issues that we could investigate as part of our 2023-24 report.

We are required to submit our report to the Minister for Energy by 30 November 2024. Our timeline for the 2023-24 Energy Market Monitoring report is below.

Timeline for IPART's 2023-24 Retail Energy Market Monitoring report

Consultation paper published. Submissions open.
15 August 2024

Submissions are due.
20 September 2024

Market Monitoring report provided to the Minister.
November 2024

Market Monitoring report published on the IPART website.
December 2024

IPART acknowledges the Traditional Custodians of the lands where we work and live. We pay respect to Elders both past and present. We recognise the unique cultural and spiritual relationship and celebrate the contributions of First Nations peoples.

What we want to hear about from you

1. For the matters we are required to report on (see **Table 1** below), are there additional metrics that we should consider for our 2023-24 report?
2. How are changing electricity pricing structures, including time of use and demand tariffs, impacting households and small businesses? What datasets are available to assist us in understanding the impact of these pricing structures on consumers?
3. What additional information would assist household and small business customers in engaging with and responding to changing tariff structures, including time of use and demand tariffs?
4. Are new tariff structures, including time of use and demand tariffs, creating barriers for customers switching electricity plans or retailers? If so, what are the barriers?
5. What information is available to help IPART understanding virtual power plant programs in NSW including:
   a. which retailers are offering virtual power plant programs
   b. customer numbers in virtual power plant programs
   c. the benefits of participating in virtual power plant programs
   d. eligibility criteria for virtual power plan programs
6. What has been the experience of households and small businesses who have joined or participated in virtual power plant programs?
7. Are there emerging issues in the NSW retail electricity and gas markets that IPART should explore as part of our Energy Market Monitoring report?

Hearing views from a wide range of stakeholders is very important to us. It helps us better understand the issues consumers and retailers are facing and enables us to focus on the most relevant issues.

If you have questions regarding making a submission, please contact Jonathan Gawthorne by email: Jonathan.Gawthorne@IPART.nsw.gov.au or phone: +61 2 9019 1910.

Have your say

Your input is critical to our review process.

You can get involved by making a submission by 20 September 2024.

Submit feedback »

Matters we must report and how we will do this

The *National Energy Retail Law* (NSW) specifies the matters we must report on each year and the information we can use. We detail the matters we must report on and how we propose to do this in Table 1.

We are interested in your views on whether there are additional metrics or analysis that could be undertaken to assist in analysing and reporting on each matter we are required to report on.

Table 1 The metrics that we will use to report on the specified matters

Matters we must report on	Metrics we use to report on these matters
Participation of small customers in each market	• percentage of customers on market offers and standing offers • number of customers switching retailers or plans • customers intentions to switch and actual switching rates • potential dollar benefits of switching and challenges in switching • customers' views on the ease of comparing market offers and of switching retailer or plan • customers' satisfaction with their current plans, or their decisions to switch retailer or plan • number of customer complaints and reasons for the complaints • customer outcomes for vulnerable customers • rollout of smart meters
Barriers to entry into, exit from or expansion in each market	• changes in the structure of the market • number of retailers in the market • number of retailers entering and exiting the market • market share of the retailers • number of offers available in the market • whether regulatory or non-regulatory costs are acting as barriers to entry or expansion
Price of electricity and gas for small customers in regional areas	• total bill comparison based on offers available in the Essential Energy network and regional gas networks compared to other networks • report on bill data for rebate customers, which includes postcode level data (if available)
Whether price movements, price and product diversity in each market are consistent with a competitive market.	• retail price movements • levels of fees and charges • changes in cost components, including network and wholesale price movements • the number of offers in the market by network • the number of offers with demand charges • innovation in products, services, and price structures • price differences across retailers and by tariff type
Extent to which retailers are competing to attract and retain small customers	• a combination of all the above factors
Whether there is a need for a detailed review of retail prices and profit margins	• whether other regulators are sufficiently investigating and reporting on this • if not, whether price movements reflect changes in underling costs, recognising that retailers use a variety of strategies for procuring wholesale electricity

The *National Energy Retail Law* (NSW) specifies the information we can consider when conducting our review. We are only able to consider:

- information provided by the Australian Energy Market Commission and the Australian Energy Regulator.
- information provided by energy retailers on prices and customer numbers, and
- publicly available information.

This requirement to only consider certain information may limit the additional analysis we can undertake on certain matters stakeholders suggest or the exploration of other emerging issues.

Time of use and demand tariffs

Distribution Network Service Providers (DNSPs), including Ausgrid, Endeavour Energy and Essential Energy who operate in NSW, charge network tariffs to retailers. Network tariffs pay for the cost of DNSPs to build, operate and maintain the poles and wires that transport electricity.[1] Retailers then recover these costs from their customers through retail electricity prices.

DNSPs are required to gradually make their network tariffs more cost reflective.[2] As a result, DNSPs tariffs charge time of use tariffs and demand tariffs, in addition to flat rate tariffs.

Time of use tariffs typically charge lower prices during off-peak periods (when the demand for electricity is lower) and higher prices during peak periods (when demand is higher and there is greater strain on the network). They often also have different prices depending on the time of the year (for example, summer or winter prices).

Demand tariffs generally include a fixed daily supply charge, a variable usage charge and an extra demand charge. The demand tariffs charged by each of the three DNSPs in NSW are very similar. They each charge for demand by measuring consumption over a 30-minute window and charge customers a monthly fee based on their highest demand during peak periods in a given month. The peak periods generally occur in the afternoons or evenings on business days and can vary by the time of year.[3]

These tariffs represent a large shift from the flat rate structures many customers have historically paid. They are intended to encourage more efficient use of the electricity network which will help reduce the need for additional investment and result in lower ongoing costs to maintain the distribution infrastructure. Over time, this will help ensure that network costs for all customers are lower than they otherwise would be.[4]

In many cases, retailers have designed their electricity plans to closely reflect the pricing of network tariffs. This has meant a rising number of consumers are moving to more complex electricity pricing structures. As of 30 June 2023, 21% of households and 32% of small businesses in NSW were on electricity plans with time of use or demand tariffs.[5]

The number of customers on time of use and demand tariffs is expected to grow with the increasing roll out of smart meters.[a] This is because customers who have a smart meter installed are generally automatically moved onto time of use tariffs.

In our 2022-23 Market Monitoring report, we discussed the impact of demand tariffs on customer bills is unclear and found that regulators need additional information to monitor the range of customer outcomes for different tariff types.[6]

This year, we are seeking to further understand how different tariffs affect customer bills and whether customers are effectively responding to these price signals by changing their energy consumption. We want to hear:

- How changing electricity pricing structures, including time of use and demand tariffs, are impacting households and small businesses?

[a] A smart meter is a device with a digital two-way communication system that measures when you use electricity and how much. It records your energy use in at least 30-minute intervals and transmits the information to your retailer daily. Your retailer can read the meter remotely. In contrast, a traditional, manual read meter only records your total electricity use.

- What datasets are available to assist us in understanding these pricing structures on customers?
- What additional information would assist households and small business customers in understanding and responding to changing tariff structures?
- Are changing tariff structures creating barriers for customers switching electricity plans or retailers? If so, what are the barriers?

Virtual power plants

The NSW Government has recently announced incentives for households and businesses with rooftop solar to install batteries and connect to a virtual power plant.[7]

From 1 November 2024, eligible households and business can access incentives between:

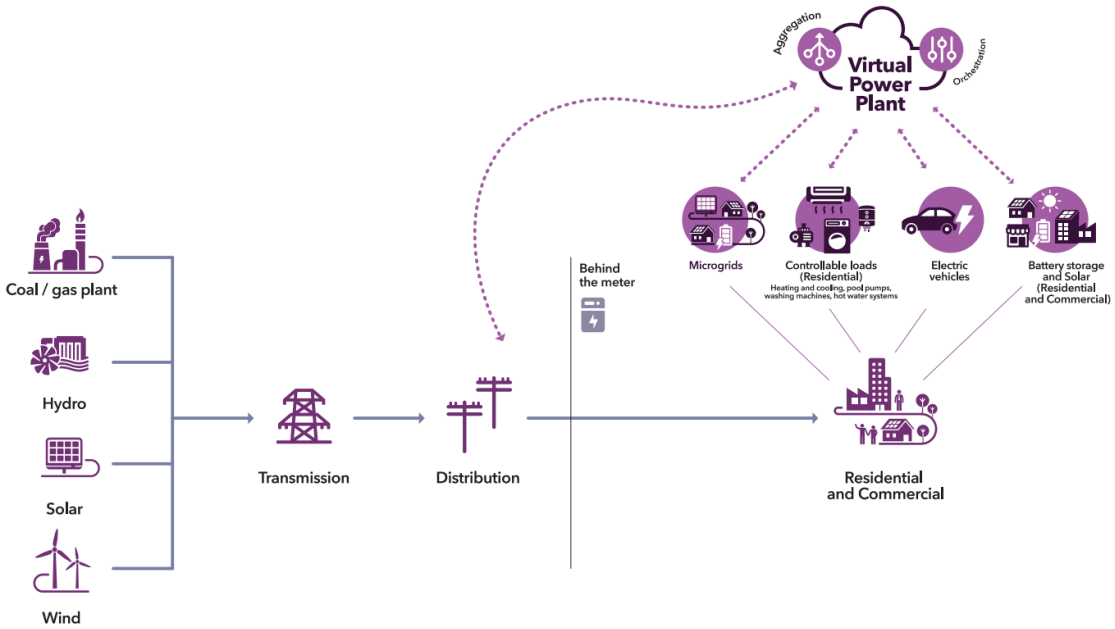
- $1,600 to $2,400 off the upfront cost of a battery, depending on its size
- $250 and $400 for connecting a battery to a virtual power plant.[8]

Virtual power plants are networks of connected consumer energy resources, such as roof-top solar, batteries, electric vehicles and other smart devices (such as hot water systems or air conditioning) that are managed by a central operator or 'aggregator'. The aggregator uses software to coordinate these resources to manage when energy is consumed, stored and supplied to the grid. This coordination is designed to minimise the cost of electricity for customers in the virtual power plant and to generate additional revenue streams. This could be through charging batteries at times when electricity prices are low, feeding stored power back into the energy grid when prices are high or coordinating batteries to provide frequency control services.[b]

Figure 1 below shows an example of a virtual power plant. In this example the aggregator coordinates a range of consumer energy resources owned by residential and commercial customers. The energy that is generated and stored through the consumer energy resources can be supplied to other consumers in the virtual power plant or provided back to the energy grid.

[b] The Australian Energy Market Commission is consulting on a draft rule to allow aggregated consumer energy resources to be scheduled and dispatchable in the National Electricity Market. This draft rule introduced a framework known as 'dispatch mode' which will allow virtual power plans, community batteries, flexible large loads and other price-responsive small resources to compete with large scale generators and storage.
For further information, see Australian Energy Market Commission, Information sheet: Integrating price-responsive resources into the NEM, 25 July 2024.

Figure 1 Example of a virtual power plant aggregating and coordinating consumer energy resources



Source: Australian Energy Market Operator, AEMO NEM Virtual Power Plant Demonstrations: Knowledge Sharing Report #4, September 2021, p 17

While virtual power plants in the National Electricity Market are currently operating at a relatively small scale, the Australian Energy Market Operator has noted that virtual power plant trials are demonstrating both the potential value to the grid if deployed at scale, and the value to participating consumers.[9] The Australian Energy Market Operator has also estimated that without the effective coordination of consumer energy resources (through virtual power plants), around $4.1 billion of additional grid-scale investment would be needed.[10]

We want to hear from retailers about the virtual power plant programs they have on offer, the number of customers who are a part of the program, the eligibility criteria to participate and the benefits of doing so.

We also want to hear from customers about their experience participating in virtual power plant programs or trials, including the benefits received.

Context for our 2023-24 report

As Australia moves toward net zero emissions by 2050, our energy markets are undergoing a profound transformation. The National Electricity Market is moving from a centralised system of fossil generation toward a system of smaller scale and widely dispersed wind and solar generators, hydroelectric generation, grid-scale batteries, virtual power plants and flexible demand response mechanisms.[11] This transformation will take many years and is having material impact on all elements of the energy supply chain - from generators to transmission and distribution networks and retailers.

Currently, Australians are also facing a cost-of-living crisis as persistently high inflation, rising interest rates and other factors have meant many households and small business face challenges in paying for essentials services,[12] including electricity and gas. While wholesale electricity prices have abated over the past 12 months, they remain high following a period of rapidly rising and volatile prices, driven by several factors including elevated international coal and gas prices following Russia's invasion of Ukraine, energy generation outages and more volatile weather.[13]

Box 1 Key findings from our 2022-23 energy market monitoring report

Last year we found that the retail prices for electricity and gas increased by around 20% in 2022-23 due to a surge in the wholesale costs of supplying energy. The increase was due to a combination of higher international prices for coal and gas, an unusually cold start to winter and energy generation outages.

We found that the level of competition in the market was similar to previous years. The high and sudden wholesale price rises saw the number of electricity retailers active in the market fall from 35 to 25. The fall in active retailers did not materially change market shares across retailers, as those who exited the market had relatively small customer numbers. The number of gas retailers did not change.

We also found evidence that suggested not all live offers on Energy Made Easy are made available to customers. We considered that this could undermine consumer trust in the service as an accurate information source and present another barrier to customer switching. We recommended that Energy Made Easy should disclose upfront key conditions and restrictions on offers so that customers can make informed decisions.

Note: Energy made Easy is a comparator website provided by the Australian Energy Regulator that can be used to find and compare home and small business electricity and gas plans.

Source: IPART, Energy Market Monitoring report 2022-23, November 2023

1 Australian Energy Regulator, What is network tariff reform, accessed 15 July 2024
2 Australian Energy Regulator, What is network tariff reform, accessed 15 July 2024
3 IPART, Energy Market Monitoring report 2022-23, 30 November 2023, p 23
4 Australian Energy Regulator, What is network tariff reform, accessed 15 July 2024
5 Australian Competition and Consumer Commission, Inquiry into the National Electricity Market report – June 2024, Appendix E, Tab: Chapter 3, Supplementary Table 3.19a and 3.19b
6 IPART, Energy Market Monitoring report 2022-23, 30 November 2023, p 23-24
7 NSW Government, Incentives for residential batteries, accessed 26 July 2024.
8 NSW Government, Incentives for residential batteries, accessed 26 July 2024.
9 Australian Energy Market Operator, Integrated System Plan – 2023 Inputs, Assumptions and Scenarios Report, July 2023, accessed 16 July 2024, p 70
10 Australian Energy Market Operator, Integrated System Plan 2024, 26 June 2024, accessed 16 July 2024, p 17
11 Australian Energy Regulator, State of the Energy Market Report, September 2022, p 6
12 For further information, see Reserve Bank of Australia, Developments in Income and Consumption Across Household Groups, January 2024
13 Australian Energy Regulator, State of the Energy Market Report, October 2023, p 226