evoenergy

Attachment 2: Demand

Revised access arrangement information

ACT and Queanbeyan-Palerang gas network access arrangement 2026–31

Submission to the Australian Energy Regulator

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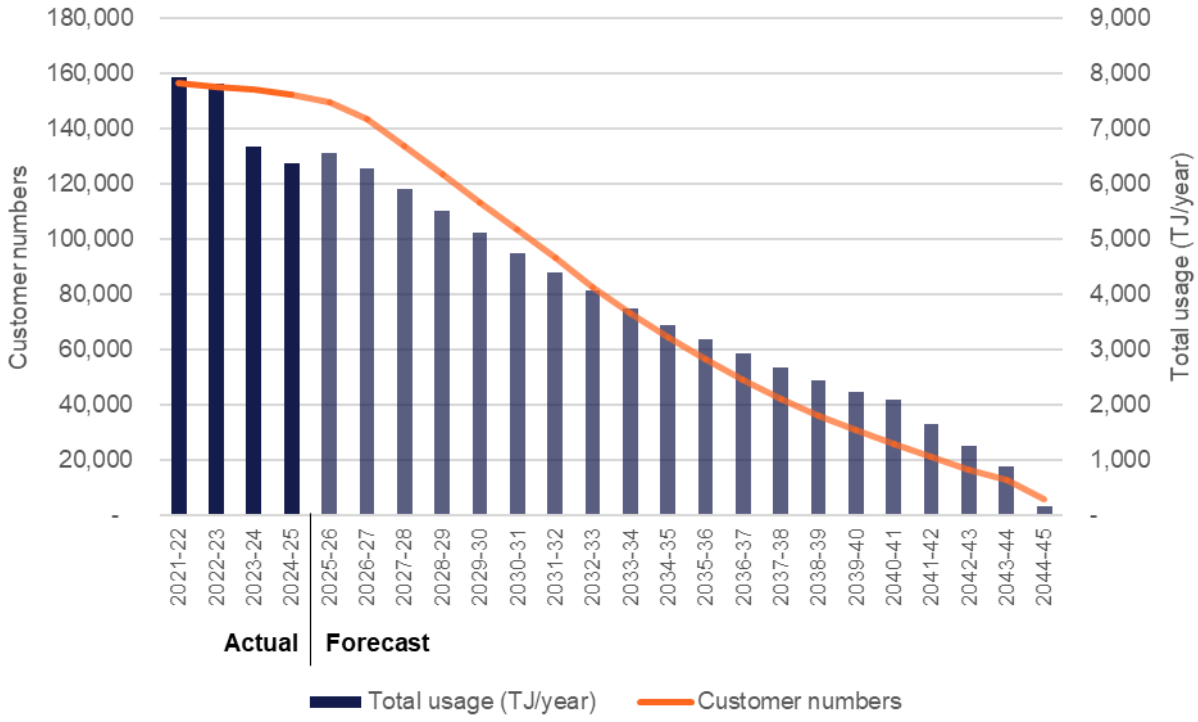
1. Overview of our initial demand forecast

Evoenergy engaged the Centre for International Economics (CIE) to develop an innovative, ACT-specific approach to demand forecasting for our 2026–31 access arrangement. CIE's approach integrated a traditional econometric model with robust customer research focussed on the stock and age of gas appliances and the future electrification intentions of Evoenergy's customers. The approach enabled us to quantify the pace and shape of the electrification transition in the ACT region in a way that aligns with customer choices and government policy.[1]

The results from CIE's forecast showed usage on Evoenergy's gas network declining by 28 per cent over the 2026–31 period and customer numbers declining by 31 per cent, as shown in Figure 1.

Figure 1 Evoenergy's initial forecast gas demand and customers



We considered that this approach provided the best estimate of future demand because it explicitly modelled the decision-making processes of customers in response to policy incentives, prices, current appliance stock and age, and planned timing for appliance replacement – rather than assuming future behaviour would mirror historical trends.

[1] Evoenergy (2025). Attachment 2: Demand forecast, ACT and Queanbeyan-Palerang gas network access arrangement 2026–31, June.

2. The AER's draft decision on our demand forecast

In its draft decision, the AER did not accept our proposed demand forecast. The AER expressed concerns that our forecast decline in customer numbers and consumption was too rapid and not sufficiently supported by historical data. The AER's decision relied heavily on a review commissioned from Frontier Economics, which cited a number of concerns with CIE's modelling, including:

- Methodological concerns with CIE's weather normalisation approach and the handling of effective degree days (EDD).
- Concerns that the customer research suffered from self-selection bias (over-representing customers planning to switch) and hypothetical bias (respondents overstating their likelihood to switch).
- Input errors relating to the application of gas prices and sampling weights in the initial model.

Consequently, the AER did not accept our proposed demand forecast for volume tariff customers.[2] However, the AER did accept our proposed forecast for demand tariff customers,[3] which was based on a 'bottom-up' approach incorporating known information about the future demand of each individual customer.

The AER substituted our forecast for volume tariff customers with a 'placeholder' forecast developed by Frontier Economics. This alternative forecast relied largely on linear extrapolations of historical trends using a more conventional forecasting method. The result was a significantly more optimistic outlook for gas demand, projecting a slower rate of disconnections and decline in consumption compared to Evoenergy's proposal.

In adopting a placeholder demand forecast, the AER noted it would review Evoenergy's revised proposal to consider updated forecasts for its final decision.

The key differences in assumptions between our demand forecast and the AER's draft decision are set out in Table 1. The results of the different forecasting approaches are shown in Table 2.

[2] The volume tariffs include the Volume Individual (VI) and Volume Boundary (VB) tariffs, which apply to approximately 152,000 residential and commercial customers.

[3] The demand tariffs include the Demand Capacity (DC) and Demand Throughput (DT) tariffs, which apply to approximately 43 of Evoenergy's largest commercial customers.

Table 1 Key differences in demand forecast assumptions

Assumption	Evoenergy's proposed demand forecast assumption	AER's draft decision demand forecast assumption
Primary forecasting approach	Bottom-up approach (customer research): relies on a combination of historical econometric analysis and in-depth customer research using "choice modelling" to capture customers' future intentions. Assumes impacts of ACT energy transition and future customer behaviour cannot be predicted solely using historical data.	Top-down approach (historical trends): relies on regression analysis of historical time series data. Assumes future demand will largely follow established trends, with minor post-model adjustments to capture impacts of price on heating loads, improvements in home energy efficiency, and partial disconnection.
Forecasting customer numbers	Customer choice modelling survey: uses choice modelling data on customer preferences and future intentions, combined with the stock and age of customers' appliances, to forecast rate of disconnections. Models the recursive relationship between gas demand and network prices through a feedback loop influencing rate of disconnections.	Linear trend extrapolation: Projects customer numbers based on linear trends of historical connections. Does not account for impact of gas prices on disconnection decisions, nor the stock and age of gas appliances on Evoenergy's network.
Forecasting consumption per customer	Econometric model capturing longer-term trend in declining consumption since year 2000 and a log-linear model for weather normalisation. Consumption is forecast using a regression model for each tariff block and aggregated to form total consumption.	Econometric model capturing short-term trends (most recent two years) and a linear model for weather normalisation. Total consumption is pro-rated into tariff blocks based on historical relationships.
Impact of ACT energy policy	Explicitly models policy impacts including the ACT's Sustainable Household Scheme, and an assumed future ban on new gas appliances from 2030. Customers' responses to policy context captured through choice modelling research.	Assumes all policy impacts are already embedded in historical data and does not explicitly adjust for future policy changes or customers' future intentions.
Tariff VB demand	Assumed to decline at same rate as Tariff VI demand.	Assumed to remain constant over the forecast period.

Table 2 AER's draft decision on Evoenergy's demand forecast 2026–31

		Evoenergy's forecast decline over 2026–31	AER's draft decision forecast decline over 2026–31
Volume market	Connections (fixed charges)	46,131 (31%)	24,196 (17%)
	Total usage (TJ)	1,594 (29%)	1,167 (21%)
Demand market	Connections (fixed charges)	4 (8%)	4 (8%)
	Total usage (TJ)	215 (20%)	215 (20%)
	Total chargeable demand (GJ per day)	1,108 (20%)	1,108 (20%)

3. Our response to the AER's draft decision

Evoenergy has reviewed the AER's draft decision and the accompanying technical report from Frontier Economics. To support our response, we commissioned CIE to update their demand forecast and review the Frontier Economics forecast (Appendices 2.1, 2.2 and 2.3). We also engaged Baringa to provide an independent evaluation of the two forecasting methodologies (Appendix 2.4).

While we accept several technical corrections identified by Frontier Economics, we disagree with the AER's reliance on a forecast derived primarily from historical linear trends. We have also identified a number of methodological issues with Frontier Economics' forecasting approach.

We further consider it unreasonable to disregard the forward-looking findings of CIE's research, which is underpinned by a survey of nearly 2,000 Evoenergy customers. By rejecting the only element of the forecast that explicitly captures customers' future switching decisions, the draft decision effectively ignores the most important driver of gas demand during the 2026–31 and the extensive customer engagement that shaped our proposal.

Gas demand in the ACT is undergoing fundamental changes driven by nation-leading policy to transition away from gas by 2045 and our customers' willingness and ability to accelerate their transition. Over just the past two financial years, gas volumes on Evoenergy's network fell by an unprecedented 19 per cent. Further reductions are expected as our customers' gas appliances reach end-of-life, and the ACT Government has signalled the introduction of additional policy measures to encourage electrification (likely, following the 2027 IEP midpoint review). In this context, the past is not a reliable predictor of the future.

The AER, in its draft decision, has disregarded CIE's research evidence that customer preferences and intentions are changing during the ACT's energy transition, and the logical corollary that historical trends are not predictive of future demand. CIE's findings are far from isolated, and are reinforced by a growing body of evidence from other research. For example,

customer research by Sagacity (commissioned by Evoenergy) identified a 78 per cent increase between 2020 and 2024 in the proportion of residential customers likely to switch from gas to electric appliances in the next five years.[4] Similarly, a 2024 study by Energy Consumers Australia found that 65 per cent of ACT homeowners are planning to cancel their gas supply within the next ten years (clearly, well above historical trends).[5]

The AER's disregard of customer evidence, in favour of historical trends, also appears to contradict its own reasoning in the draft decision on depreciation. There, the AER acknowledges that 'the actual speed of gas demand reduction will depend on future developments in government policy, and evolving customer sentiment and behaviour towards electrification'.[6] That is, the AER's own assessment of demand uncertainty relies on the premise that future demand will *not* follow historical trends.

Rule 74(2)(b) of the National Gas Rules requires that a forecast represents the best estimate possible in the circumstances. We maintain that the draft decision forecast, derived exclusively from historical linear trends, cannot satisfy this requirement in the context of the ACT's unprecedented energy transition. CIE's choice modelling research provides the only evidentiary basis for how our customers actually intend to act during the 2026–31 period in response to policy, the prices they face, and the timing of switching decisions as gas appliances reach end-of-life. Consequently, we consider that any methodology which omits direct evidence of future customer intentions cannot constitute the best forecast possible in the circumstances.

The remainder of this section describes updates to CIE's forecast in response to the AER's draft decision, and our concerns with using the Frontier Economics forecast on a standalone basis.

3.1 Updates to the CIE forecast

We commissioned CIE to update its forecast for more recent available data and to address the valid technical critiques raised by the AER and Frontier Economics. A detailed explanation of the update, and CIE's response to the AER's draft decision, is contained in CIE's report (Appendix 2.1).

The revised CIE forecast incorporates a number of updates including:

- **New data:** the forecast incorporates actual billing data up to July 2025, capturing the most recent consumption trends, and showing gas volumes falling by 5.4 per cent in 2024–25 (following a decline of 14.8 per cent in 2023–24).
- **Policy updates:** the model now reflects the most recent policy settings, including the removal of the zero-interest component of the Sustainable Household Scheme (now a low-interest loan), and the introduction of connection charges for NSW customers.
- **Weather normalisation:** CIE has updated the regression models to include an EDD-time interaction, acknowledging Frontier Economics' observation that the relationship between weather and consumption is changing over time.
- **Correction of inputs:** the retail gas price inputs have been corrected, and sampling weights have been updated to ensure the forecast better represents the population.

[4] Sagacity (2024). Demand for natural gas: understanding future demand, April, p. 7.

[5] Energy Consumers Australia (2025). How households use gas and their attitudes towards electrification, p. 9.

[6] AER (2025). Draft Decision – Evoenergy (ACT) access arrangement 2026–31 – Attachment 1 – Capital base, Regulatory depreciation and Corporate income tax, November, pp. 17, 44.

CIE's updates have also been independently reviewed by Baringa (Appendix 2.4), which concludes that the updates to weather normalisation better reflect gas usage, and that CIE has adequately addressed concerns of self-selection bias in the survey results.[7]

CIE's forecast for demand tariff customers retains the same approach as the initial forecast but has been updated for actual billing data for 2024–25.

The revised CIE forecast continues to show a decline in demand (Table 3) that is similar to the initial forecast, and steeper than the AER's placeholder forecast. This confirms that the driver of the decline is not modelling inputs or errors, but the underlying intent of Evoenergy's customers to electrify, coupled with the aging stock of gas appliances, as captured by the choice modelling research.

Table 3 Updated CIE forecast 2026–31

	2026–27	2027–28	2028–29	2029–30	2030–31
Volume tariff customers					
Connections (fixed charges)	144,923	134,565	123,529	112,264	101,505
Total usage (TJ)	5,340	4,997	4,651	4,297	3,957
Demand tariff customers					
Connections (fixed charges)	43	42	42	40	39
Total usage (TJ)	933	887	851	811	779
Total chargeable demand (GJ per day)	5,547	5,303	5,098	4,856	4,688

3.2 Response to AER concerns with customer research

The AER, relying on advice from Frontier Economics, rejected the use of CIE's choice modelling data, citing concerns that the survey results were affected by hypothetical bias (respondents overstating their likelihood to switch) and self-selection bias (the sample skewing towards engaged customers already predisposed to electrification).

While Evoenergy accepts that customer-research based forecasting, like other forms of forecasting, carries uncertainty, we consider the AER's dismissal of this data in its entirety to be unreasonable.

In its dismissal of CIE's research, the AER has failed to acknowledge the specific mitigation measures CIE employed to address potential biases, nor has it provided empirical evidence that

[7] Appendix 2.4: Baringa-Review of Evoenergy gas demand forecasts-January 2026, pp. 15-16.

such a bias exists to a degree that invalidates the clear preferences expressed by Evoenergy's customers in the research results.

The measures employed by CIE to address potential bias include:

- The application of several techniques supported by academic literature to mitigate hypothetical bias. These included providing respondents information about the complex practical steps involved in electrification, a 'cheap talk' script warning respondents about hypothetical bias, and survey questions explicitly noting differences between intended and actual timing of past home modifications.
- A five-point certainty scale presented to respondents in the choice modelling scenarios. CIE adopted a highly conservative approach of treating only a response of "I definitely would switch" as a decision to electrify. Responses of "I probably would switch" were treated as a decision to continue using gas appliances.
- A dual sampling methodology was adopted where a share of the sample was recruited through an online panel provider and others through an Evoenergy email campaign. Respondents recruited through the online panel were unaware of the survey topic until after they commenced the questions and were therefore unaffected by self-selection bias. Analysis of survey results shows that respondents recruited through the panel are likely to disconnect more quickly than respondents recruited via email. There is no evidence that the potential self-selection bias in the email sample has resulted in over-estimation of disconnections.

Moreover, the AER's draft decision and Frontier Economics' report implicitly assume that any bias inevitably leads to overstating disconnections. However, even if bias does exist, the direction of bias is not determinate. That is, there is no evidence of asymmetric bias, where customers predisposed to disconnect are more likely to complete the survey and vice versa.

For example, it is plausible that customers planning to disconnect from gas could self-select out of the survey because they don't see an ongoing relationship with the gas network. Similarly, it is possible that customers planning to continue using gas could self-select into the survey to encourage Evoenergy or the ACT Government to continue providing gas in the ACT. If this were the case, the forecast would understate the expected rate of disconnection

Frontier Economics provides no compelling evidence to prove that bias would work solely in favour of higher disconnections. In its independent review, Baringa concluded that there was no clear evidence of bias in the survey results and commented that Frontier Economics has not provided sufficient evidence for its assumed direction of bias.[8]

As an overall finding, Baringa concludes that 'stated preference (SP) surveys, such as those used by the CIE, have value in being used in environments where there is likely to be significant change in the status quo'.[9] Baringa identifies that this view was also expressed by the AER's consultant, ACIL Allen, in its review of Jemena Gas Networks' demand forecast for the 2025–30 access arrangement, where ACIL Allen explicitly recommended using customer research (such as stated preferences or choice modelling) to forecast disconnections.[10]

[8] Appendix 2.4: Baringa-Review of Evoenergy gas demand forecasts-January 2026, pp. 16-17.

[9] Appendix 2.4: Baringa-Review of Evoenergy gas demand forecasts-January 2026, p. 34.

[10] Appendix 2.4: Baringa-Review of Evoenergy gas demand forecasts-January 2026, p. 26.

3.3 Assessment of the Frontier Economics forecast

We consider that the Frontier Economics forecast, and by extension the AER's draft decision, is likely to overstate future gas demand. By disregarding forward-looking expectations of customer decisions and ACT Government policy, the Frontier Economics approach effectively assumes that future demand will mirror historical trends. In the context of the ACT's energy transition, this assumption is fundamentally flawed.

Detailed reviews by both CIE and Baringa have identified a number of deficiencies in the Frontier Economics methodology, ranging from the conceptual failure to recognise changing customer behaviour to technical errors relating to trend estimation. The detailed findings from CIE and Baringa are presented in Appendix 2.2 and Appendix 2.4, respectively, with some key concerns including:

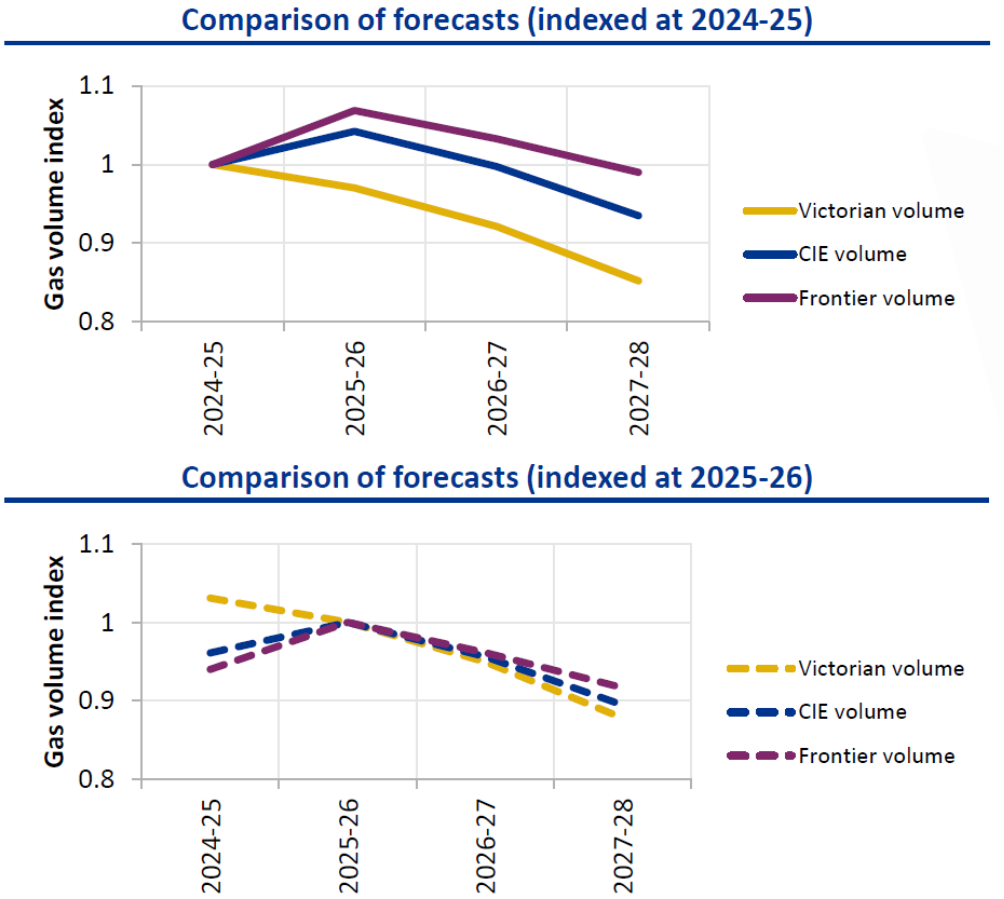
- The trend-based approach assumes that historical drivers of gas demand will continue unchanged. This ignores the impact of the ACT Government's Integrated Energy Plan (released in mid-2024), the likelihood of additional policy to accelerate the transition, and that customers' future decisions are expected to differ from past behaviours (as evidenced by CIE's customer research). The trend based approach also fails to account for the ageing stock of gas appliances on Evoenergy's network which is expected to accelerate replacement decisions during the 2026–31 period.
- Frontier Economics' forecast does not account for the historical downward trend in average consumption per customer, and implicitly assumes that the decline will cease, with no rationale provided. Frontier Economics limits the use of historical data to the most recent two years, which creates significant statistical uncertainty by forecasting over a period (6 years) that is triple the length of the historical period (2 years) over which the model is developed.
- The forecast is highly sensitive to the selection of historical periods over which trends are constructed, which differ across data categories. Baringa's report identifies that shifting Frontier Economics' chosen historical trend by just one year results in a materially higher forecast for the rate of disconnections.[11]

In its review, Baringa benchmarked the CIE and Frontier Economics' forecasts against the AER's final decisions for Victorian gas distributors (2023–28 access arrangements). While both forecasts imply flatter declines than the Victorian demand forecasts, Baringa found that CIE's forecast more closely aligns to the Victorian forecasts approved by the AER (Figure 2).

Baringa's findings could be a consequence of Frontier Economics' failing to consider impacts of government policy, noting both Victoria and the ACT have strong policy settings to accelerate electrification. The analysis also suggests that CIE's forecast may be conservative noting that, in comparison to Victoria and at the time of the AER's final decision, the ACT has a strong policy setting to phase out gas by 2045.

[11] Appendix 2.4: Baringa-Review of Evoenergy gas demand forecasts-January 2026, p. 31.

Figure 2 Comparison with AER demand forecasts for Victorian gas distributors



Source: Appendix 2.4: Baringa-Review of Evoenergy gas demand forecasts-January 2026, p. 28.

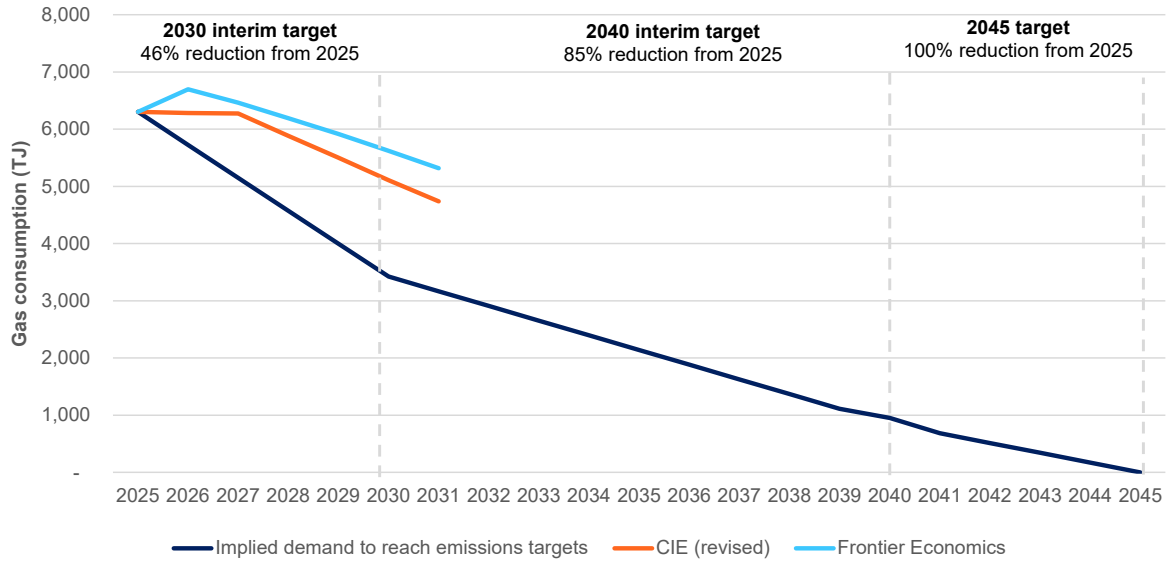
To further illustrate that Frontier Economics' trend-based approach does not adequately account for policy impacts, Figure 3 presents the CIE and Frontier Economics forecasts overlaid against the implied demand necessary to reach the ACT's legislated emissions reduction targets.

While this analysis shows that demand under both CIE's and Frontier Economics' forecasts will not achieve the declines implied by the ACT's 2030 interim emissions reduction target, CIE's forecast is materially closer to the targets.

We consider that CIE's demand forecast is likely to be conservative. Figure 3 illustrates the risk that CIE's forecast may overstate future demand based on legislated interim emission reduction targets, and due to the likelihood of additional ACT Government policies to accelerate electrification to meet emissions reduction targets, as indicated in the IEP.[12]

[12] ACT Government (2024). The Integrated Energy Plan 2024–2030: Our pathway to electrification, pp. 18 and 27.

Figure 3 Illustrative comparison of forecasts to ACT emissions reduction targets



Source: *Climate Change and Greenhouse Gas Reduction (Interim Targets) Determination 2018*, made under the *Climate Change and Greenhouse Gas Reduction Act 2010* (ACT). Legislated targets are specified relative to 1990 levels and have been recalculated by Evoenergy relative to 2025 emissions using data from the *ACT Government's ACT Greenhouse Gas Inventory for 2024-25*

4. Our revised proposal

Evoenergy maintains that while customer research is not free from uncertainty, it provides the only forward-looking evidence of our customers' intentions and their responses to the ACT's unique policy environment. To disregard these findings entirely in favour of historical trends is to ignore the most critical driver of demand in the 2026-31 period, and to ignore the voice of our customers in this access arrangement period. The CIE's research provides the only direct evidence for the future intentions of Evoenergy's customers, which cannot be deduced from historical trends alone.

We also, however, recognise that forecasting the speed of the energy transition involves inherent uncertainty. There is limited empirical precedent to inform the shape and pace of customers' appliance replacement decisions in a jurisdiction undergoing rapid electrification, and conventional forecasting approaches are not suited to such challenges. Baringa's independent review concludes that, while CIE's forecast has fewer potential issues overall, there are aspects of both the CIE and Frontier Economics forecasts that could misstate actual demand.[13]

To balance the need for a realistic reflection of the ACT's energy transition with the need for caution in response to uncertainty, our revised proposal adopts a blended forecasting approach. This involves combining the revised CIE forecast with the Frontier Economics forecast used in the AER's draft decision for volume tariff customers.

Specifically,

- **Volume tariff customers:** we have taken the simple average of gas usage and customer numbers from the CIE and Frontier Economics forecasts.

[13] Appendix 2.4: Baringa-Review of Evoenergy gas demand forecasts-January 2026, p. 34.

- **Demand tariff customers:** the AER's draft decision accepted Evoenergy's original forecasting methodology and, accordingly, we have not applied a blended approach. We have retained the methodology accepted by the AER, updating the forecasts solely to incorporate the most recent actual billing data for 2024–25.

4.1 Managing forecasting risk

Our revised proposal for a blended forecast recognises that, at this critical point in the ACT's energy transition, there is a heightened risk that demand forecasts may be wrong. We initially proposed a revenue cap tariff variation mechanism (TVM) to ensure customers and Evoenergy did not bear forecasting risk during this uncertain period, and to achieve economic efficiency. However, as the AER's draft decision rejected Evoenergy's proposed revenue cap TVM and instead requires a hybrid TVM, Evoenergy and its customers will bear the risk of the demand forecast being wrong.

Consequently, managing demand and revenue risk falls on the accuracy of the demand forecast itself. If the forecast is set too low, prices will be set at inefficiently high levels, and if the forecast is too high, prices will be inefficiently low. This was a key concern of our Community Forum members (Attachment 1: Revised plan engagement report).

In this specific context, we recognise the AER may find it acceptable to use multiple forecasting methodologies to diversify forecasting risk, rather than relying on a single approach. Our proposed approach to averaging the forecasts could help reduce model-specific risks while, importantly, ensuring that weight is still placed on the forward-looking research from CIE's forecast. We consider that averaging of the forecasts is likely to result in less forecasting error than the AER's draft decision to completely disregard the outcomes of the customer research.

Notwithstanding our proposal for a blended approach, we consider this results in an optimistic outlook for gas demand that is more likely to overstate demand than understate it. Averaging of the forecasts gives proportionally more weight to historical trends, which are a feature of both the Frontier Economics forecast (to a dominant extent) and the CIE forecast (to a lesser extent, relative to customer research). As described above, meeting the ACT's emissions reduction targets requires demand to decline faster than historical trends, and the ACT Government has signalled further policy to accelerate the transition.

The asymmetric demand risk in our revised proposal has implications for the overall risk profile of Evoenergy's access arrangement, including Evoenergy's reasonable opportunity to recover costs. This is a key reason why a narrow hybrid TVM design is required, as described in Attachment 7: Transportation (including metering) reference tariffs.

4.2 Our revised demand forecast

Table 4 and Table 5 present our revised proposal demand forecasts for volume market and demand market customers, respectively. The demand forecast reflects a 23 per cent reduction in gas consumption and 25 per cent reduction in connections over the 2026–31 access arrangement period.

Table 4 Revised volume market forecast 2026–31

	2026–27	2027–28	2028–29	2029–30	2030–31
Connections (fixed charges)	143,478	136,118	128,180	119,887	111,606
Total usage (TJ per annum)	5,400	5,116	4,826	4,525	4,220

Table 5 Revised demand market forecast 2026–31

	2026–27	2027–28	2028–29	2029–30	2030–31
Connections (fixed charges)	43	42	42	40	39
Total usage (TJ per annum)	933	887	851	811	779
Total chargeable demand (GJ per day)	5,547	5,303	5,098	4,856	4,688

Glossary

Term or acronym	Definition
AA	Evoenergy's access arrangement
ACT	Australian Capital Territory
ACTG	ACT Government
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
EDD	Effective degree days
GJ	Gigajoule – unit of measurement of energy consumption
IEP	ACT Government's Integrated Energy Plan
NSW	New South Wales
TJ	Terajoule – unit of measurement of energy consumption
The Rules or Rules	National Gas Rules
TVM	Tariff Variation Mechanism
VB	Volume Boundary tariff
VI	Volume Individual tariff