**13-6 Response to Draft Decision: Demand Forecasts**

**1. Introduction**

The AER’s Draft Decision did not approve Envestra’s forecast of customer numbers, volume or Maximum Hourly Quantity (MHQ) for the Victorian and Albury networks. In short, the AER accepted the methodology but rejected certain of the input parameters used by Envestra’s consultant, Core Energy, to develop the forecasts. The key changes made by the AER to Envestra’s proposed forecasts related to:

* a change to the approach to adjust actual volume information for the impact of weather (Victoria only);
* a reduction in customer numbers and volume to reflect that the AER did not accept all of Envestra’s proposed network development expenditure (Victoria and Albury); and
* a reduction in customer numbers and demand to reflect that the AER did not accept the extension of the network to Merrifield and several regional towns (Victoria only).

Envestra has accepted the adjustment made for weather but has not accepted the adjustments made in respect of the proposed network development program or extension of the network to Merrifield and one of the proposed new towns. These matters are discussed in the remainder of this attachment.

**2. Weather Standard**

Envestra proposed to apply the approach developed by CSIRO to adjust actual volumes for the impact of weather (referred to as weather normalisation). This was a continuation of the approach adopted by the Essential Services Commission of Victoria (ESCV) to set the demand forecasts for the 2008 to 2012 Access Arrangement period.

The other approach available to the ESCV at the time was that used by VENCorp, whom are now part of the Australian Energy Market Operator (AEMO), who applied a similar approach to that used by AEMO in its 2012 weather standard review. Comparing the CSIRO and VENCorp approaches, the ESCV concluded in its Final Decision:

*“… the Commission is satisfied that the CSIRO analysis, which takes into account explicit modelling of future warming trends, is likely to represent the best estimate made on a reasonable basis. The Commission therefore accepts that the CSIRO estimate of 1321 EDDs as proposed by the distributors provides an appropriate measure of weather for the purposes of forecasting gas used for the third regulatory period.”*

Envestra continues to agree with the ESCV, and holds that the methodology applied by CSIRO to arrive at the EDD baseline and projections remains most likely *“to represent the best estimate made on a reasonable basis”.* This in large part reflects the considerable expertise of the CSIRO Marine and Atmospheric Research Group, which houses Australia’s leading regional climate change modelling research teams.

Importantly, the CSIRO approach to weather normalisation was developed for the specific purposes of preparing demand forecasts under the National Gas Rules (NGR). In contrast, AEMO acknowledge in its scope of works for its weather review states that the forecasts were not intended for use in an Access Arrangement review process (where demand forecasts are primarily used to determine tariffs as opposed to capacity management):

*“The report does not conclude which EDD standards are appropriate for use in Access Arrangement (AA) forecasts.”*

This is most likely to reflect that AEMO is primarily concerned with determining forecasts that are suitable for use in transmission capacity planning, which has as its central focus a need to ensure adequate gas supply into the Victorian Declared Transmission System (and hence are necessarily conservative).

The key concern stated by the AER in its Draft Decision (pg. 316) for not accepting the CSIRO approach to weather normalisation related to a finding by its advisor, ACIL Tasman, that the CSIRO forecasts were based on a projection of weather trends between 2005 and 2011 while the AEMO forecasts were based on actual information:

*“ACIL reviewed Envestra's approach to weather normalisation for the Victorian network by assessing the data used and assumptions made. ACIL noted that the key issue with Envestra's approach related to the assumption about normal weather between 2005 and the 2011. ACIL identified that Envestra's forecasts are based on a projection of EDD between 2005 and 2011. ACIL stated that this approach is unusual and that a more appropriate approach would be to base an assumption about normal weather conditions on historical data. Such historical data was published by AEMO following its 2012 review of weather standards for gas forecasting.”*

The AER accepted the findings of ACIL Tasman, noting in its Draft Decision (pg. 318) that:

*“The AEMO's data for the six years to 2011 are based on actual observations (not on a projection as in the CSIRO's data). The AER considers that the AEMO's series is a reasonable basis and represents the best estimates possible under the circumstances. For this reason, it is appropriate for Envestra to use the current AEMO EDD standard as the basis for weather normalising the historical data. The use of AEMO data to weather normalise historic gas demand will increase Envestra's proposed tariff V demand forecasts by approximately 1.2 per cent. The AER requires Envestra Victoria to amend its demand forecasts as outlined in the revisions section below.”*

Envestra notes that, although the AEMO approach used more recent data, its time series was considerably shorter than that used by CSIRO. Envestra also notes that updating the CSIRO approach for more recent data is likely to have a limited impact on the weather normalisation given the trends are based on a long time series dating back to 1970. However, CSIRO were not able to allocate resources to update its forecasts in the time period available for Envestra to respond to the Draft Decision (i.e. 9 November 2012).

Given this, Envestra considers that in response to the draft decision it is required to use the revised forecasts set out in the AER Draft Decision that incorporate the AEMO weather normalisation approach. Envestra has accepted the revised Albury forecasts that incorporate an additional year of weather information relative to that submitted by Envestra in its initial proposal (noting that the data were not available to Envestra at the time).

**3. Revised Demand Forecasts**

Envestra has therefore accepted as a base (or starting point) the AER Draft Decision forecasts set for Victoria and Albury. Several immaterial adjustments have been made to these forecasts to reflect decisions made by Envestra elsewhere in its response to the Draft Decision, which adjustments are discussed in this section.

**3.1 Victorian Forecasts**

Envestra has adjusted the AER Draft Decision forecasts as follows:

1. Merrifield – Envestra has not accepted the AER Draft Decision to remove the Merrifield development from the demand forecasts for reasons set out in attachment 7.7;
2. Koo Wee Rup – Envestra has included capital expenditure to reticulate the regional town called Koo Wee Rup for the reasons set out in attachment 7.7 (but accepted the AER Draft Decision not to reticulate Lakes Entrance, Orbost and Wy Yung); and
3. Network Development – Envestra has not accepted the AER Draft Decision to remove part of Envestra’s proposed network development program.

All of the above factors lead to higher customer number and demand forecasts relative to that set out in the Draft Decision. Envestra has applied the same general approach as that taken by the AER to exclude these factors from the forecasts set out in the Draft Decision. Envestra has effectively reversed the adjustments made by the AER in the Draft Decision by multiplying the relevant customer numbers (taken from the AER’s capital expenditure model) by forecast average consumption.

The resultant Victorian customer number, volume and MHQ forecasts are set out in tables 1 to 5.

**Table 1: Domestic Customer Number Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Domestic** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 565,938 | 577,776 | 589,722 | 601,384 | 613,288 |
| ***plus* Merrifield** | - | 384 | 537 | 654 | 765 |
| ***plus* Koo Wee Rup** | - | - | - | 92 | 118 |
| ***plus* Network Development** | 45 | 50 | 55 | 60 | 66 |
| **Final Forecast** | 565,983 | 578,210 | 590,315 | 602,189 | 614,237 |

**Table 2: Domestic Volume Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Domestic Tariff V (TJ)** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 26,852 | 26,555 | 26,297 | 26,024 | 25,827 |
| ***plus* Merrifield** | - | 18 | 24 | 28 | 32 |
| ***plus* Koo Wee Rup** | - | - | - | 4 | 5 |
| ***plus* Network Development** | 2 | 2 | 2 | 3 | 3 |
| **Final Forecast** | **26,854** | **26,575** | **26,324** | **26,059** | **25,867** |

**Table 3: Non - Domestic Customer Number Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Non-Domestic** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 22,950 | 23,136 | 23,307 | 23,413 | 23,612 |
| ***plus* Merrifield** |  | 4 | 22 | 38 | 41 |
| ***plus* Koo Wee Rup** |  |  |  | 2 | 2 |
| **Final Forecast** | **22,950** | **23,141** | **23,329** | **23,452** | **23,655** |

**Table 4: Non - Domestic Volume Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Non-Domestic Tariff V (TJ)** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 6,234 | 6,062 | 5,911 | 5,791 | 5,704 |
| ***plus* Merrifield** | - | 1 | 6 | 9 | 10 |
| ***plus* Koo Wee Rup** | - | - | - | 0.5 | 0.5 |
| **Final Forecast** | **6,234** | **6,063** | **5,917** | **5,801** | **5,715** |

**Table 5: Tariff D MHQ Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Tariff D MHQ (GJ)** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 5,721 | 5,420 | 5,176 | 4,983 | 4,808 |
| **Final Forecast** | **5,721** | **5,420** | **5,176** | **4,983** | **4,808** |

**3.2 Albury Forecasts**

The only adjustment required to the AER Draft Decision forecasts for Albury is to account for network development. Envestra has taken the same approach as that taken for Victoria, where the adjustment is based on the additional customer numbers associated with the network development program (taken from the AER capital expenditure model) multiplied by forecast average consumption.

The resultant Albury customer number, volume and MHQ forecasts are set out in tables 6 to 10.

**Table 6: Domestic Customer Number Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Domestic** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 19,700 | 20,022 | 20,348 | 20,680 | 21,018 |
| ***plus* Network Development** | 2 | 2 | 2 | 2 | 2 |
| **Final Forecast** | 19,702 | 20,024 | 20,350 | 20,682 | 21,020 |

**Table 7: Domestic Volume Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Domestic Tariff V (TJ)** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 849 | 847 | 848 | 850 | 853 |
| ***plus* Network Development** | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| **Final Forecast** | **849** | **847** | **848** | **850** | **853** |

**Table 8: Non - Domestic Customer Number Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Non - Domestic** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 889 | 892 | 895 | 897 | 900 |
| **Final Forecast** | **889** | **892** | **895** | **897** | **900** |

**Table 9: Non - Domestic Volume Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Non - Domestic Tariff V (TJ)** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 230 | 223 | 218 | 214 | 211 |
| **Final Forecast** | **230** | **223** | **218** | **214** | **211** |

**Table 10: Tariff D MHQ Forecasts, 2013 to 2017**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Tariff D MHQ (GJ)** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **AER Draft Decision** | 355 | 336 | 321 | 308 | 297 |
| **Final Forecast** | **355** | **336** | **321** | **308** | **297** |