

# **Jemena Electricity Networks (Vic) Ltd**

## **2016-2020 Electricity Distribution Price Review Regulatory Proposal**

### **Revocation and substitution submission**

Attachment 7-7 Forecast customer numbers

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## ABBREVIATIONS

AER	Australian Energy Regulator
AMI	Advanced Metering Infrastructure
GSP	Gross State Product
JEN	Jemena Electricity Networks (Vic) Ltd
LGA	Local Government Authority
LV	Low Voltage
NEO	National Electricity Objective
NMI	National Metering Identifier
Optimal NEO Position	The position which contributes to the achievement of the NEO to the greatest degree and best promotes the long term interests of consumers of electricity
RIN	Regulatory Information Notice
VIF	Victoria In Future report

## OVERVIEW

**Key messages**

- The forecast customer numbers drives the required efficient allowances for Jemena Electricity Networks (Vic) Ltd (**JEN**) to safely, timely and efficiently connect new customers.
- The preliminary decision has used inconsistent customer numbers. The preliminary decision replaces JEN's customer numbers forecasts for the purposes of the opex rate of change, but has separately approved our customer numbers forecasts for the post tax revenue model and input for connections capex. This is inconsistent
- In replacing our forecast customer numbers for the opex rate of change, the Australian Energy Regulator (**AER**) considers an assumption of a one-to-one link between residential customer numbers and households does not hold. However, evidence supports maintaining this link.
- The preliminary decision method when replacing our customer numbers forecast, which is to apply historical growth rates to forecast residential customers, is flawed because it:
  - Uses an inconsistent approach to forecasting across the customer categories. By singling out and replacing residential customers without reconciling to total customer numbers, this leads to an artificially low forecast
  - Uses historical customer number estimates rather than actuals
  - Inappropriately excludes available 2006 data from the data set
  - Does not consider updated Victorian Government population forecasts that now predict accelerated growth—this makes the AER cross check to population growth incapable of supporting the preliminary decision growth forecast figure of 0.8 per cent per year.
- We have updated our forecast with the latest available information, which provides an annual average growth rate of 1.89 per cent.
- By using a robust forecasting method based on actual historical data and the most recent available information, JEN's customer numbers forecast will best promote the **Optimal NEO Position**<sup>1</sup> by ensuring efficient allowances for JEN to safely, timely and efficiently connect new customers.

1. Table OV–1 provides a snapshot of JEN's response to the preliminary decision on maximum demand.

**Table OV–1: Overview of our response to preliminary decision on customer numbers**

	Our response to AER PD
Customer numbers forecast	

<sup>1</sup> The position which contributes to the achievement of the National Electricity Objective (**NEO**) to the greatest degree and best promotes the long term interests of consumers of electricity

# 1. INTRODUCTION

## 1.1 PURPOSE

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2. The purpose of this attachment is to outline JEN's customer numbers forecasts undertaken for the 2016 regulatory period. The customer numbers forecast is a key driver of our network growth.
3. In this response we set out:
  - An outline of JEN's approach to forecasting customer numbers in the April 2015 proposal (Section 5)
  - An outline of the preliminary decision on our customer numbers forecast (Section 3.1)
  - Where we consider the AER's customer numbers forecasting approach, in the preliminary decision, is lacking (Section 3.2)
  - The principles that should not be compromised in forming a customer number forecast (Section 3.3)
  - Our proposed approach and updated customer numbers forecast for the 2016 regulatory period (Section 4).
4. This attachment refers to the following documents that contain additional detailed analysis and supporting information:
  - Revised ACIL Allen customer numbers report (Attachment 7-9)
  - ACIL Allen customer numbers model (Attachment 7-10).
5. JEN's April 2015 proposal details our customer numbers forecasting method and our April 2015 forecast. JEN engaged ACIL Allen Consulting to produce its customer numbers forecasts. For the purposes of explaining that method and forecast our April 2015 proposal (and all supporting evidence and other material contained, or referred to, in it) is incorporated into, and forms part of, this submission.

## 2. JEN'S APRIL 2015 PROPOSAL

6. JEN engaged ACIL Allen to produce its customer numbers forecast for our April 2015 proposal. ACIL Allen's approach and our initial customer numbers forecast was set out in ACIL Allen's energy consumption forecast report.<sup>2</sup> This report sets out a separate method for forecasting residential and non-residential customer numbers. Forecasts are developed for all of JEN's five tariff classes.<sup>3</sup>

### 2.1 FORECASTING RESIDENTIAL CUSTOMER NUMBERS

7. ACIL Allen generates its residential customer number forecast based on Local Government Authority (**LGA**) population growth, the number of individuals per household and the proportion of each LGA that falls within JEN's network.
8. JEN's network spans nine LGA's.<sup>4</sup> ACIL Allen's method to forecast customer numbers consisted of:<sup>5</sup>
1. Obtaining population growth for each of these LGAs from the Victorian Department of Planning and Community Development for each year of the 2016 regulatory period—this has since been revised (see Section 4)
  2. Converting that population growth per LGA into a number of households based on an average number of individuals per household for each LGA from the 2011 census
  3. Applying a weighting to the number of the households in each LGA based on the proportion of that LGA that fell within JEN's distribution area and aggregating the results across all LGAs
  4. Calculating the annual growth in households based on those in step 3
  5. Taking JEN's 2013 residential customer numbers<sup>6</sup> and applying the calculated annual growth rates established in step 4—this has since been updated to launch off 2014 data (see Section 4).

ACIL Allen obtained an average number of individuals per household for each LGA from the 2011 census.

### 2.2 FORECASTING NON-RESIDENTIAL CUSTOMER NUMBERS

9. ACIL Allen forecast non-residential customers independently for each tariff class.
10. Broadly, the number of small business and Large low voltage (**LV**) customers were forecast using regression models which fit customer numbers to Victorian gross state product. Large business high voltage and large business sub-transmission customers were forecast based on historical values adjusted for known closures.

<sup>2</sup> JEN, *2016-2020 Electricity Distribution Price Review Regulatory Proposal, Attachment 3-3 Electricity consumption forecasts*, 30 April 2015, p 49-55

<sup>3</sup> JEN's tariff classes are residential, small business, large business - low voltage, large business – high voltage and large business – sub-transmission.

<sup>4</sup> The LGA's are Banyule, Brimbank, Darebin, Hobsons Bay, Hume, Maribyrnong, Melton, Moore Valley, and Morland.

<sup>5</sup> JEN, *2016-2020 Electricity Distribution Price Review Regulatory Proposal, Attachment 3-3 Electricity consumption forecasts*, 30 April 2015, p 49-55

<sup>6</sup> Sourced from JEN's annual regulation information notice (**RIN**)

11. The modelling approaches for each were detailed in the December 2015 report.<sup>7</sup>

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<sup>7</sup> JEN, *2016-2020 Electricity Distribution Price Review Regulatory Proposal, Attachment 3-3 Electricity consumption forecasts*, 30 April 2015, p 49-55.



## 3. ASSESSMENT OF PRELIMINARY DECISION

### 3.1 PRELIMINARY DECISION

12. The preliminary decision adopted an inconsistent approach to customer numbers. JEN's customer numbers forecast was used consistently across its April 2015 proposal. However, the AER:
- Approved JEN's customer number forecast used as an input in the post tax revenue model (for distribution and metering)<sup>8</sup>
  - Approved JEN's customer numbers forecast in the capex model, which uses our customer number forecast as an input for connections capex<sup>9</sup>
  - Replaced JEN's customer numbers forecast in the opex model for the purposes of calculating the opex rate of change.<sup>10</sup>
13. An inconsistent approach does not promote the Optimal NEO Position. When referring to the customer numbers forecast preliminary decision, the remainder of this attachment is referring to the AER replacement of the forecast for the purposes of opex rate of change in the opex model.
14. The AER concern in relation to the opex rate of change is with the forecast for residential customers. The AER considered that ACIL Allen's assumption of a one-to-one relationship between residential customer numbers and households does not hold for the 2016 regulatory period.
15. The AER states:<sup>11</sup>
- However, these assumptions may not necessarily hold. For example, some apartment blocks, with multiple households, are embedded networks that Jemena would treat as a single customer" without making any reference to supporting information.*
16. The AER tested the assumptions by:<sup>12</sup>
- Assuming that if historical and forecast population growth are close, then it is sufficient to assume historical and forecast customer numbers growth should be the same
  - Looking at the Victorian Department of Planning and Community Development's forecast of population growth from the 2012 Victoria in Future (VIF) report and concluding this is the same as historical growth rates<sup>13</sup>

<sup>8</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Post tax revenue model*, October 2015

<sup>9</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Capex model*, October 2015

<sup>10</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating Expenditure*, October 2015, p 7-56

<sup>11</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating Expenditure*, October 2015, p 7-55

<sup>12</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating Expenditure*, October 2015, p 7-55 to 7-56

<sup>13</sup> The AER has relied upon the Victorian Government Department of Planning and Community Development's published the VIF report in 2012. Note that, due to name changes, subsequent VIF reports for 2014 and 2015 are published under the Department of Environment, Land, Water and Planning and available via the Department of Transport, Planning and Local Infrastructure website: <http://www.dtpli.vic.gov.au/data-and-research/population/census-2011/victoria-in-future-2015>.

- Calculating a historical average customer number growth rate of 0.8 per cent and deeming this appropriate to use to forecast JEN's customer numbers.
17. The preliminary decision for opex rate of change therefore replaced JEN's forecast of customer numbers with its own forecast<sup>14</sup> based on the 0.8 per cent annual growth.
  18. The AER's calculation of the 0.8 per cent annual growth rate was based on historical customer numbers sourced from JEN's 2014 economic benchmarking RIN.
  19. The economic benchmarking RIN required JEN to split its customer numbers into 6 customer categories:
    - Residential customer numbers
    - Non-residential customers not on demand tariff customer numbers
    - Low voltage demand tariff customer numbers
    - High voltage demand tariff customer numbers
    - Unmetered Customer Numbers
    - Other Customer Numbers.
  20. The preliminary decision provides for an average annual growth rate in customer numbers of 0.8 per cent.<sup>15</sup> The AER calculated this by:
    - Using estimated residential customer numbers data sourced from JEN's 2014 economic benchmarking RIN submitted to the AER in April 2014, which included data back to 2006
    - Averaging annual residential customer numbers growth from 2007 to 2014 and applying this growth rate (0.78 per cent) to obtain 2015 to 2020 residential customer numbers forecast—the AER chose to omit data from 2006 due to movement between categories of customers<sup>16</sup>
    - Adopting JEN's reset RIN forecasts of all other customer categories
    - Summing all customer categories forecasts to obtain the total customer number forecast—this results in the annual growth factor of 0.8 per cent between years 2016 to 2020.

### 3.2 DEFICIENCIES IN AER ASSESSMENT

21. ACIL Allen has provided a response to the AER's review of its approach and assessed the AER's replacement forecast in its updated report (Attachment 7-9).
22. JEN has reviewed ACIL Allen's assessment and considers there are significant weaknesses in the AER's assessment and method, including:
  - The evidence does not support rejecting JEN's method and assumptions for forecasting residential customer numbers

<sup>14</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating Expenditure*, October 2015, p 7-24

<sup>15</sup> *Ibid*, p 7-56

<sup>16</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating Expenditure*, October 2015, p 7-56

- The AER's forecast method incorrectly represents the customer numbers growth rate for our network, presenting growth as artificially low.

23. We discuss these further below.

### 3.2.1 EVIDENCE DOES NOT SUPPORT REPLACING JEN'S METHOD FOR FORECASTING CUSTOMER NUMBERS

24. It is not reasonable to replace JEN's forecast with one based on historical data given:

- Evidence supports a one-to-one relationship between customer numbers and households
- The AER has previously accepted ACIL Allen's method for AusNet's gas distribution network, which overlaps the majority of JEN's network.

#### 3.2.1.1 Evidence supports a one-to-one relationship between customer numbers and households

25. To assess the AER assertion that ACIL Allen's assumption of a one-to-one relationship between customer numbers and households may not hold, we reviewed the customer connections from 2010 to 2015. For this assumption to not hold, there would need to be substantial households in apartment blocks connected to the grid as embedded networks.

26. However, we found that the AER claim is unsubstantiated. On average, only 4 embedded network connections occur per year in JEN's distribution area. These networks have on average 58 apartments per site, meaning only 232 customers per year connect to our network as part of an embedded network. This is only 0.08 per cent of our residential customer base and is immaterial. Further, only one embedded network, containing 27 apartments/customers in the block, has connected so far in 2015. This represents only 0.009 per cent of our current residential customer base.

27. As ACIL Allen outlines in its updated report, this level of embedded network connections is less than two per cent of new connections. This is insufficient to break the link between customer numbers and households. ACIL Allen sets out that, at most, the ratio could be substituted with a one to 0.98 assumption.<sup>17</sup> This could not account for the significant difference between our April 2015 forecast growth rates and the AER's preliminary decision.

#### 3.2.1.2 Inconsistent with gas decision

28. AusNet Services gas distribution network overlaps with the majority of JEN's network area.<sup>18</sup> ACIL Allen also provided the method and customer numbers forecasts the AER approved for AusNet's gas distribution network for 2013-17.<sup>19</sup> The method used for that forecast was the same the ACIL Allen has used for JEN.

### 3.2.2 AER METHOD IS FLAWED

29. The AER's forecast incorrectly represents the customer numbers growth rate for our network, presenting growth as artificially low, given the AER has not used the best available data and its method is inconsistent for different customer categories.

30. The AER has not used the best available data:

<sup>17</sup> Attachment 7-9 'Customer numbers report, ACIL Allen', p 15

<sup>18</sup> From a comparison of AusNet Services gas distribution network map here: <http://www.ausnetservices.com.au/About+Us.html>

<sup>19</sup> Attachment 7-9 'Customer numbers report, ACIL Allen', p 17

- For residential customers due to:
    - Reliance on 2014 economic benchmarking RIN data
    - Excluding the 2006 data point
    - Not incorporating the latest Government forecast of population growth
  - For non-residential customers due to not using JEN's proposed forecast.
31. In addition, the preliminary decision cross check to population growth is overly simplistic and incapable of supporting the AER's forecast now that the Victorian Government has revised its population forecast.<sup>20</sup>
32. Further, the preliminary decision method and resulting forecast is inconsistent with the much higher growth rate it approved for gas distribution customers for all intent and purposes aligned to the same area as JEN, as noted in Section 3.2.1.2.

### 3.2.2.1 Residential customer forecast—2014 economic benchmarking RIN data not best data source

33. The AER has relied upon the historical customer numbers within the 2014 economic benchmarking RIN submitted in April 2014. This presents two issues—the AER is using estimates when actual data is available and its residential customers growth rate forecast does not reconcile to total customer numbers growth rate from the same data source.
34. First, as described in the basis of preparation,<sup>21</sup> the economic benchmarking RIN customer numbers are estimates due to:
- Requiring a breakdown by the customer categories listed in Section 2.1. However these do not match JEN's tariff classes used for billing—this means they include certain assumptions to map into the required categories
  - An assumption to evenly distribute the number of de-energised NMIs according to the same proportion as active National Metering Identifiers (**NMIs**).
35. In addition, the 2014 economic benchmarking RIN customer number estimates do not include corrections following the rollout of Advanced Metering Infrastructure (**AMI**) meters.<sup>22</sup>
36. The customer numbers in the 2014 economic benchmarking RIN are, therefore, not the best available information to base forecasts. The AER itself has indicated a lack of confidence in the 2014 economic benchmarking data given it excluded the 2006 data.
37. Secondly, if we were to adopt the same approach for 2014 economic benchmarking RIN total customer numbers as the AER applied to residential customer numbers,<sup>23</sup> this would result in a growth rate higher than, and irreconcilable with, the preliminary decision 0.8 per cent figure.

<sup>20</sup> The update is the 2015 VIF that is published under the Department of Environment, Land, Water and Planning and available via the Department of Transport, Planning and Local Infrastructure website: <http://www.dtpli.vic.gov.au/data-and-research/population/census-2011/victoria-in-future-2015>.

<sup>21</sup> JEN, *Response to the economic benchmarking Regulatory Information Notice for the 2006-13 regulatory years, Annexure 3, Basis of Preparation*, 30 April 2014

<sup>22</sup> In undertaking the AMI rollout, we identified services that had long standing disconnections and individually assessed these for service removal. As a consequence a large number of service abolishment's were initiated instead of replacing the legacy meter with an AMI meter.

<sup>23</sup> That is, to calculate the average historical growth rate for total customers in the 2014 economic benchmarking RIN.

38. By singling out and replacing the residential customer numbers forecast with a lower figure based on a different and inconsistent source, this artificially reduces the total customer number forecast, compromising its integrity.
39. While our submission uses the ACIL Allen forecasts that do not rely on historical customer numbers data, we consider our annual RINs provide the best source of historical customer numbers data.<sup>24</sup> This is because the annual RINs provide audited 'actual' historical customer numbers used for billing and annual pricing proposals.<sup>25</sup> These are categorised into JEN's tariff classes and provide a closer reflection of the net growth on the network and, therefore, a better indicator for the cost of the network for the purposes of forecasts of customer number growth.

### 3.2.2.2 Residential customer forecast—excluding the 2006 data point

40. The AER excluded the 2006 data point when calculating the historical residential customer numbers growth rate from the economic benchmarking RIN, stating:<sup>26</sup>

*We did not use the data for 2006 provided by Jemena because there appears to be a transfer of non-residential customers not on demand tariffs to residential customers in 2007.*

41. By excluding 2006 data from the residential customer number forecast, the AER obtains a growth rate of 0.78 for residential customers. This directly leads to the total growth rates not reconciling and compromises the integrity of the forecast. This is because the 2006 to 2007 decrease in customer numbers for 'non-residential customers not on a demand tariff', which offsets the increase in 2006-07 residential customer numbers are not accounted for anywhere else. In effect, the AER has made these customers disappear for the purposes of its calculation.
42. By including 2006 data and ensuring the total customer numbers reconciles, the annual average growth rate for residential customers would be more reflective of the actual customer growth experienced on JEN' network.<sup>27</sup>

### 3.2.2.3 Residential customer forecast—needs to incorporate the latest Government forecast of population growth.

43. It is not clear that the AER considered (or were able to consider) the August 2015 Victorian Government updated population growth forecasts. The Government now predicts accelerated population growth that results in a 10 per cent increase in the number of households in JEN's network area compared to their previous forecasts.<sup>28</sup>
44. In light of the more recent forecasts for accelerated growth, it would not be reasonable to use historical population growth as a driver of residential customer forecasts and the customer numbers growth rate should be higher than that provided in the preliminary decision. This makes the AER's cross check—as the basis for substituting in its own customer number forecast—incapable of justifying the preliminary decision growth rate.

<sup>24</sup> Specifically, billed customer numbers can be found by tariff type in row R of the 'Actual t-2 Distr Tariff' tab of the annual RINs.

<sup>25</sup> Annual RIN customer numbers are provided as actuals, audited as actuals, and used (and accepted by the AER) for JEN's annual pricing proposals and audited distribution revenue in the annual RINs.

<sup>26</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating Expenditure*, October 2015, p 7-56, footnote 79

<sup>27</sup> If the AER wishes to avoid the issue of the apparent 2006 transfer between customer categories, then the correct approach to estimate the forecast of residential customer numbers forecast, if the economic benchmarking data is to be used, would be to:

- Apply the total customer growth rate to extend the total customer forecast for each year from 2015 to 2020
- In each year, obtain the residential customer numbers forecast, by subtracting the sum of all customer categories (other than residential) from the total forecast.

For the avoidance of doubt, JEN does not endorse the use of economic benchmarking data for the reasons outlined in Section 3.2.2.

<sup>28</sup> Attachment 7-9 'Customer numbers report, ACIL Allen', p 17

#### 3.2.2.4 Non-residential customer forecasts—AER did not use JEN's forecast

45. The AER states it has approved our forecasts for all non-residential customer categories.<sup>29</sup> However, it has incorrectly considered that our reset RIN forecasts for non-residential customers were our forecasts. JEN provided its proposed customer number forecast as part of our April 2015 proposal. These were the forecasts produced by ACIL Allen and was included in their reports and models.<sup>30</sup> These two forecasts differ due to:
- The inclusion of unmetered customers in the reset RIN
  - The timing of the customer numbers 'launch point' for the forecast.
46. JEN's revised forecast at Section 4 will also differ to the reset RIN due to the reasons above and the use of updated information.

### 3.3 PRINCIPLES FOR FORECASTING CUSTOMER NUMBERS

47. JEN does not consider that using historical 2014 economic benchmarking RIN customer number estimates are the best data to produce robust forecasts. However, should the AER choose to use this data again, it is important that its method is accurate and does not compromise the integrity of the forecast.
48. We consider that to ensure accuracy, consistency and robust results that support the Optimal NEO Position, the following principles should hold when undertaking any customer numbers forecast:
- Where available, the most recently available actual data should be used before relying on estimates
  - Forecasts for each individual customer category should, when summed across all customer categories, reconcile to a forecast based on the historical total customer numbers.
49. JEN considers that the best customer numbers forecast uses ACIL Allen's method (see Section 2) as this:
- Is based on historical billed customer numbers data as provided in JEN's annual RINs
  - Takes adequate and reasonable consideration of population growth and number of households in JEN's area.
50. This results in the updated forecast as outlined in Section 4.

<sup>29</sup> AER, *Preliminary Decision, Jemena distribution determination 2016 to 2020, Attachment 7 – Operating Expenditure*, October 2015, p 7-56.

<sup>30</sup> JEN, *2016-2020 Electricity Distribution Price Review Regulatory Proposal, Attachment 3-3 Electricity consumption forecasts*, 30 April 2015 and JEN, *2016-2020 Electricity Distribution Price Review Regulatory Proposal, Attachment 3-4 Electricity consumption model*, 30 April 2015.

## 4. OUR CUSTOMER NUMBERS FORECAST

51. ACIL Allen has updated its customer numbers forecasts (Attachment 7-9) and model (Attachment 7-10) and JEN has used these for this submission.

### 4.1 JEN'S REVISED CUSTOMER NUMER FORECAST

52. JEN's customer numbers forecasting approach is to use the method outlined in Section 2 and detailed in ACIL Allen's report (Attachment 7-9). JEN retains this method from our April 2016 proposal, but uses updated input data to obtain our submission forecasts. We consider this approach best achieves the Optimal NEO Position.
53. JEN's forecast is independent of historical customer numbers growth rates. It only uses the most recent (2014) actual customer numbers value to 'step off'. This data point is sourced from JEN's audited annual RINs and also used and accepted by the AER as the relevant t-2 data in JEN's 2016 previous annual pricing proposal.
54. JEN has updated its customer numbers forecast in line with using the most up to date information as required in the AER principles for demand forecasting.<sup>31</sup> Our forecast has been updated for:
- The most recent population growth forecast from the 2015 VIF, published in August 2015<sup>32</sup>—this shows that population growth in JEN's network is now forecast to grow faster than expected in the Government's previous forecast
  - Inclusion of actual 2014 customer numbers to 'step off'
  - Inclusion of AEMO Victorian gross state product (**GSP**) forecasts for non-residential customers.<sup>33</sup>
55. This provides for the customer numbers forecast set out in Table OV–1 and a resulting growth rate of 1.89 per cent. This figure is lower than customer number growth rates approved for the gas network JEN overlaps with (see Section 3.2.1.2).

**Table 4–1: JEN's customer numbers forecast**

Tariff class	2015	2016	2017	2018	2019	2020
Residential	295,608	301,983	307,992	314,136	320,319	326,354
Small business	26,236	26,486	26,741	27,000	27,261	27,524
Large business – low voltage	1,388	1,434	1,483	1,533	1,585	1,640
Large business – high voltage	76	76	76	76	76	76
Large business – sub-transmission	3	3	3	3	3	3
<b>Total</b>	<b>323,311</b>	<b>329,982</b>	<b>336,295</b>	<b>342,748</b>	<b>349,244</b>	<b>355,597</b>

(1) JEN's customer numbers forecast for rate of growth excludes unmetered customer numbers as these do not drive growth.

<sup>31</sup> AER, *Better Regulation, Explanatory Statement, Expenditure Forecast Assessment Guideline*, November 2013

<sup>32</sup> The 2015 VIF is published under the Department of Environment, Land, Water and Planning and available via the Department of Transport, Planning and Local Infrastructure website: <http://www.dtpli.vic.gov.au/data-and-research/population/census-2011/victoria-in-future-2015>.

<sup>33</sup> This is for consistency for a change made to JEN's demand forecast to take into account AEMO's most recent forecasts (see Attachment 7-4). JEN's demand forecast previously used the Victorian Government GSP forecasts.

56. While our forecast excludes unmetered customers, we have also mapped this into the customer categories the AER has used in its preliminary decision (Table 4–2), which includes the addition of the unmetered customers.

**Table 4–2: JEN’s customer numbers forecast mapped to AER categories (with unmetered customer numbers added)**

Customer category	2015	2016	2017	2018	2019	2020
Residential customer numbers	295,608	301,983	307,992	314,136	320,319	326,354
Non-residential customers not on demand tariff customer numbers	25,543	25,787	26,035	26,287	26,541	26,797
Low voltage demand tariff customer numbers	2,081	2,133	2,189	2,246	2,305	2,367
High voltage demand tariff customer numbers	79	79	79	79	79	79
<b>Total customer numbers (excl. unmetered)</b>	<b>323,311</b>	<b>329,982</b>	<b>336,295</b>	<b>342,748</b>	<b>349,244</b>	<b>355,597</b>
Unmetered Customer Numbers	5617	5617	5617	5617	5617	5617
Other Customer Numbers	0	0	0	0	0	0
<b>Total customer numbers (incl. unmetered)</b>	<b>328,928</b>	<b>335,599</b>	<b>341,912</b>	<b>348,365</b>	<b>354,861</b>	<b>361,214</b>