

# Energex

## Metering ACS Supporting Information

### Reset RIN Schedule 1 s15

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# Overview

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## Introduction

In response to requirements of the Australian Energy Regulator's (AER) Reset Reporting Regulatory Information Notice (RIN), and specific to the information in Section 15 of Schedule 1, this Supporting Information document has been prepared by Energex with a view to:

- Provide additional information in relation to Section 15 (Metering Alternative Control Services) of Schedule 1,
- Explain the source from which Energex obtained the information provided and
- Explain the methodology Energex applied to provide the required information, including any assumptions Energex made.

This Supporting Information document should be read in conjunction with the information presented in Response to Schedule 1, Section 15.

# 1. Response to Question 15.1

## Direct costs

The direct costs incurred in providing metering alternative control services (ACS) are provided below.

### Direct Costs – Current Regulatory Period

To provide a breakdown of cost allocation between direct materials, direct labour and other costs, the following tables have been populated utilising data obtained from Ellipse financial reporting utilising Activity Code and filtering on Direct Costs and Cost Types.

Direct labour costs include internal and contractor costs. Overheads have been excluded from all values.

**Table 1 - Direct Material Costs (\$)**

|                           | Act 2016         | Act 2017         | Act 2018         | Total             |
|---------------------------|------------------|------------------|------------------|-------------------|
| <b>Capex</b>              |                  |                  |                  |                   |
| Type 6 Metering           | 5,327,235        | 3,948,117        | 2,285,611        | 11,560,963        |
| Meter Replacement Program | 2,676,695        | 1,390,086        | 181,844          | 4,248,625         |
| <b>Total Capex</b>        | <b>8,003,929</b> | <b>5,338,203</b> | <b>2,467,456</b> | <b>15,809,588</b> |
| <b>Opex</b>               |                  |                  |                  |                   |
| Additions and Alterations | 186              |                  | 169              | 355               |
| CT Metering               | 239,153          | 298,562          | 272,599          | 810,313           |
| Meter Investigation       | 21               | 38               | 19               | 78                |
| Meter Maintenance         | 1,620            | 8                |                  | 1,628             |
| Meter Test Program        |                  | 670              |                  | 670               |
| Meter Data Services       | 6,525            |                  |                  | 6,525             |
| <b>Total Opex</b>         | <b>247,505</b>   | <b>299,277</b>   | <b>272,787</b>   | <b>819,569</b>    |
| <b>Total</b>              | <b>8,251,434</b> | <b>5,637,480</b> | <b>2,740,243</b> | <b>16,629,157</b> |

**Table 2 – Direct Labour Costs (\$)**

|                           | Act 2016         | Act 2017         | Act 2018         | Total             |
|---------------------------|------------------|------------------|------------------|-------------------|
| <b>Capex</b>              |                  |                  |                  |                   |
| Type 6 Metering           | 5,588,615        | 6,644,710        | 3,943,483        | 16,176,807        |
| Meter Replacement Program | 1,465,153        | 1,121,096        | 115,690          | 2,701,938         |
| <b>Total Capex</b>        | <b>7,053,767</b> | <b>7,765,805</b> | <b>4,059,173</b> | <b>18,878,745</b> |
| <b>Opex</b>               |                  |                  |                  |                   |
| Meter Investigation       |                  | -5,505           |                  | -5,505            |
| Additions and Alterations | 137,851          | 108,432          | 59,609           | 305,892           |
| CT Metering               | 575,144          | 677,386          | 40,436           | 1,292,965         |

|                       |                   |                   |                   |                   |
|-----------------------|-------------------|-------------------|-------------------|-------------------|
| Meter Investigation   | -5,991            | 8,899             | 6,774             | 9,682             |
| Meter Maintenance     | 1,456,101         | 1,168,105         | 959,854           | 3,584,060         |
| Meter Reconfiguration | 375,608           | 557,963           | 313,950           | 1,247,521         |
| Meter Test Program    | 346,924           | 217,052           | 395,056           | 959,032           |
| Special Read          | 309,869           | 432,212           | 1,104,294         | 1,846,375         |
| Meter Data Services   | 2,853,706         | 3,260,151         | 4,103,541         | 10,217,398        |
| Meter Reading         | 7,417,402         | 7,514,803         | 7,492,112         | 22,424,317        |
| <b>Opex Total</b>     | <b>13,466,614</b> | <b>13,939,497</b> | <b>14,475,626</b> | <b>41,881,737</b> |
| <b>Total</b>          | <b>20,520,381</b> | <b>21,705,303</b> | <b>18,534,799</b> | <b>60,760,482</b> |

**Table 3 – Other Direct Costs (\$)**

|                           | Act 2016      | Act 2017     | Act 2018     | Total         |
|---------------------------|---------------|--------------|--------------|---------------|
| <b>Capex</b>              |               |              |              |               |
| Type 6 Metering           | 12,626        | 5,764        | 3,140        | 21,530        |
| Meter Replacement Program | 1,421         |              |              | 1,421         |
| <b>Opex</b>               |               |              |              |               |
| CT Metering               | 196           | 370          | 272          | 838           |
| Meter Investigation       |               |              | 21           | 21            |
| <b>Total</b>              | <b>14,243</b> | <b>6,134</b> | <b>3,433</b> | <b>23,810</b> |

## Direct Costs – Forthcoming Regulatory Period

To provide a breakdown of cost allocation forecast between direct materials, direct labour and other costs, the following tables have been populated utilising data obtained from Ellipse financial reporting utilising Activity Code and filtering on Direct Costs and Cost Types.

Assumptions made in expenditure forecast incorporate reductions in service types due to known impact of Power of Choice in conjunction with analysis of available data since Power of Choice implementation on 1 December 2017. 2018-19 and 2019-20 financial years included in forecast as actual data not available at time of forecast.

Direct Labour Costs include internal and contractor costs. Overheads have been excluded from all values. Capex and Opex costings have been provided together in the forecast tables below.

### Material Direct Costs - Forecast

Energex does not forecast any Material Direct Cost expenditure relating to Metering ACS activities

**Table 4 – Direct Labour – Forecast (\$2017/18)**

|              | 2018/19           | 2019/20           | 2020/21           | 2021/22           | 2022/23           | 2023/24           | 2024/25           |
|--------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| X42500       | 4,090,416         | 4,381,691         | 3,765,798         | 3,667,007         | 3,576,263         | 3,490,983         | 3,409,427         |
| X43500       | 7,522,699         | 8,057,355         | 7,524,189         | 7,330,136         | 7,154,673         | 6,987,289         | 6,827,337         |
| <b>Total</b> | <b>11,613,115</b> | <b>12,439,046</b> | <b>11,289,987</b> | <b>10,997,143</b> | <b>10,730,936</b> | <b>10,478,272</b> | <b>10,236,764</b> |

## Direct Other - Forecast

Energex does not forecast any Direct other expenditure relating to Metering ACS activities.

## Type of work undertaken, volumes of work and expenditure

### Category Breakdown

The below tables provide a breakdown of Metering Description Metrics, Volumes and Expenditure across the service subcategories utilised within Energex for the current regulatory control period. The information contained within the tables is consistent with previous Annual RIN submissions.

The total volumes and expenditure provided for all categories are actual values. Further details on the methodology and assumptions used for these calculations have been provided in previous Annual RIN Submission Basis of Preparation document relating to Section 4.2 – Metering for the respective submissions.

**Table 5 – Current Regulatory Period - Volumes**

| SERVICE SUBCATEGORY           | METER TYPE   | 2016    | 2017    | 2018    |
|-------------------------------|--------------|---------|---------|---------|
| Meter purchase                | Meter Type 4 |         |         |         |
|                               | Meter Type 5 |         |         |         |
|                               | Meter Type 6 | 88,421  | 44,413  | 17,863  |
| Meter testing                 | Meter Type 4 |         |         |         |
|                               | Meter Type 5 |         |         |         |
|                               | Meter Type 6 | 6,336   | 3,178   | 2,786   |
| Meter investigation           | Meter Type 4 |         |         |         |
|                               | Meter Type 5 |         |         |         |
|                               | Meter Type 6 | 4,794   | 2,558   | 4,194   |
| Scheduled meter reading       | Meter Type 4 |         |         |         |
|                               | Meter Type 5 |         |         |         |
|                               | Meter Type 6 |         |         |         |
| Special meter reading         | Meter Type 4 |         |         |         |
|                               | Meter Type 5 |         |         |         |
|                               | Meter Type 6 | 320,821 | 363,778 | 464,688 |
| New meter installation        | Meter Type 4 |         |         |         |
|                               | Meter Type 5 |         |         |         |
|                               | Meter Type 6 | 52,122  | 51,640  | 24,278  |
| Meter replacement             | Meter Type 4 |         |         |         |
|                               | Meter Type 5 |         |         |         |
|                               | Meter Type 6 | 20,385  | 16,688  | 5,297   |
| Meter maintenance             | Meter Type 4 |         |         |         |
|                               | Meter Type 5 |         |         |         |
|                               | Meter Type 6 | 4,089   | 3,271   | 1,944   |
| Remote meter reading          | Meter Type 4 |         |         |         |
| Remote meter re-configuration | Meter Type 4 |         |         |         |

**Table 6 – Current Regulatory Period – Expenditure (\$)**

| SERVICE SUBCATEGORY           | METER TYPE   | 2016       | 2017       | 2018      |
|-------------------------------|--------------|------------|------------|-----------|
| Meter purchase                | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 | 7,769,563  | 3,449,857  | 1,530,727 |
| Meter testing                 | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 | 982,752    | 976,582    | 422,851   |
| Meter investigation           | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 | 225,197    | 13,071     | 15,492    |
| Scheduled meter reading       | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 |            |            |           |
| Special meter reading         | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 | 2,149,103  | 2,410,513  | 2,985,871 |
| New meter installation        | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 | 11,740,929 | 11,378,732 | 6,677,102 |
| Meter replacement             | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 | 4,359,057  | 2,609,648  | 330,854   |
| Meter maintenance             | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 | 1,419,935  | 1,321,190  | 1,060,639 |
| Remote meter reading          | Meter Type 4 |            |            |           |
| Remote meter re-configuration | Meter Type 4 |            |            |           |
| Other metering                | Meter Type 4 |            |            |           |
|                               | Meter Type 5 |            |            |           |
|                               | Meter Type 6 | 3,522,590  | 4,185,994  | 4,771,309 |
|                               | Meter Type 7 |            |            |           |

**Table 7 – Current Regulatory Period – Metering Descriptor Metrics**

| ASSET CATEGORY | ASSET SUBCATEGORY                              | 2016 | 2017 | 2018 |
|----------------|--|------|------|------|
| Meter Type 4   | Single phase meter population                  |      |      |      |
|                | Multi phase meter population                   |      |      |      |
|                | Current transformer connected meter population |      |      |      |
|                | Direct connect meter population                |      |      |      |
| Meter Type 5   | Single phase meter population                  |      |      |      |
|                | Multi phase meter population                   |      |      |      |
|                | Current transformer connected meter            |      |      |      |

|              |  |           |           |           |
|--------------|--|-----------|-----------|-----------|
|              | population                                     |           |           |           |
|              | Direct connect meter population                |           |           |           |
| Meter Type 6 | Single phase meter population                  | 2,042,077 | 2,007,406 | 1,947,542 |
|              | Multi phase meter population                   | 137,138   | 143,708   | 145,449   |
|              | Current transformer connected meter population | 9,603     | 9,710     | 9,458     |
|              | Direct connect meter population                | 2,169,611 | 2,141,404 | 2,083,532 |

*\*Total number of Type 6 Meters is equal to addition of 'single phase' and 'multi phase' meter phase meter population. This is also equivalent to the summation of 'current transformer' and 'direct' connected meter population.*

## Operating and Maintenance Costs

The below tables provide the total operational costs for the current regulatory control period for Metering ACS activities.

For the current regulatory control period, the data has been derived from Ellipse Financial reporting and filtered for OPEX Metering activity codes.

**Table 8 – Current Regulatory Period – Operational Costs (\$)**

| Opex Category             | 2016      | 2017      | 2018      | Total      |
|---------------------------|-----------|-----------|-----------|------------|
| Meter Investigation       |           | -5,476    |           | -5,476     |
| Additions and Alterations | 141,332   | 111,363   | 61,761    | 314,455    |
| CT Metering               | 886,690   | 1,060,821 | 334,130   | 2,281,641  |
| Meter Investigation       | -6,558    | 9,396     | 7,778     | 10,616     |
| Meter Maintenance         | 1,510,358 | 1,213,502 | 1,006,592 | 3,730,453  |
| Meter Reconfiguration     | 411,496   | 613,327   | 346,157   | 1,370,980  |
| Meter Test Program        | 346,924   | 228,277   | 415,618   | 990,818    |
| Special Read              | 309,869   | 432,241   | 1,104,298 | 1,846,407  |
| Meter Data Services       | 2,860,231 | 3,260,151 | 4,103,541 | 10,223,923 |
| Meter Reading             |           |           |           |            |
| <b>Total</b>              |           |           |           |            |



## 2. Response to Question 15.2

### Volume of services provided, Charge per service and revenue earned by service – Current period

Refer to Appendix 1: Metering revenue service rate.

### Revenue Earned

To report on revenue earned for meter types, the below table provides a breakdown of revenues earned for each financial year against the ACS product types that the revenue was earned. Note that Energex only operates Type 6 Metering and therefore all revenue earned is allocated to Type 6 Metering.

Revenue data has been sourced from Ellipse financial reporting against metering related product codes.

**Table 10 – Metering Revenue Earned – Current Regulatory Periods (\$)**

| Metering ACS Product      | Activity | Act 2016         | Act 2017         | Act 2018         |
|---------------------------|----------|------------------|------------------|------------------|
| Additions and Alterations | X20105   | 333,740          | 306,129          | 191,684          |
| Meter Investigation       | X20105   | 10,803           | 8,917            | 11,869           |
| Meter Reconfiguration     | X20105   | 817,743          | 949,517          | 575,076          |
| Special Read              | X20105   | 437,217          | 619,495          | 1,598,076        |
| CT Metering               | X20105   | 544,155          | 692,806          | 650,233          |
| <b>Total</b>              |          | <b>2,143,658</b> | <b>2,576,863</b> | <b>3,026,939</b> |

# 3. Response to Question 15.3

## Customer Numbers

To report on number of customers in each year of the current regulatory control period and forecast for the forthcoming regulatory control period, the following methodology and assumptions have been applied.

Assumptions:

- Customer refers to national metering identifiers (NMI) where Energex is the current Meter Provider for a Type 6 installation, and
- Reduction of customer volumes calculated based off average meters per customer and expected meter churn rate of 3% forecast.

Methodology:

- Current regulatory period data has been obtained from PEACE. Customer numbers derived by collating total number of active NMIs where Energex is the current MPB.
- Forthcoming regulatory period data has been forecast by applying per annum decrease of 1.96%
  - Meter Population s at 30 June = 2,092,990
  - Avg meter/customer = 1.55
  - Calculated customer reduction rate =  $3/1.58 = 1.93\%$

**Table 9 – Customer Number for current and forthcoming period (Type 6 Meters)**

| Current Period | 2015      | 2016      | 2017      | 2018      |           |           |           |
|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Type 6         | 1,381,374 | 1,392,132 | 1,372,129 | 1,347,123 |           |           |           |
|                |           |           |           |           |           |           |           |
| Forecast       | 2019      | 2020      | 2021      | 2022      | 2023      | 2024      | 2025      |
| Type 6         | 1,321,124 | 1,295,626 | 1,270,620 | 1,246,097 | 1,222,048 | 1,198,462 | 1,175,332 |

**Appendix 1: Metering Revenue Service Rate – Current Regulatory Periods**

| CATEGORY                  | PRODUCT | PRODUCT DESC                          | FY 2017 -2018 |        |              | FY 2016 - 2017 |        |            | FY 2015 – 2016 |        |            |
|---------------------------|---------|---------------------------------------|---------------|--------|--------------|----------------|--------|------------|----------------|--------|------------|
|                           |         |                                       | SERV RATE     | FY VOL | FY REV       | SERV RATE      | FY VOL | FY REV     | SERV RATE      | FY VOL | FY REV     |
| Additions and Alterations | XP066   | A&A Move CT Meter Any Time (519)      | \$ 1,180      | 4      | \$ 4,720     | \$ 1,156       | 4      | \$ 4,623   | \$ 1,132       | 1      | \$ 1,132   |
|                           |         | A&A Move Meter 1ph Any Time (517)     | \$ 191        | 1      | \$ 191       | \$ 187         | 0      | \$ -       | \$ 183         | 0      | \$ -       |
|                           |         | Move Meter - CT (514)                 | \$ 827        | 39     | \$ 32,214    | \$ 810         | 96     | \$ 77,696  | \$ 793         | 110    | \$ 82,968  |
|                           |         | Move Meter - No CT (512)              | \$ 133        | 1133   | \$ 151,020   | \$ 131         | 1556   | \$ 203,262 | \$ 128         | 1821   | \$ 230,832 |
|                           |         | Move meter CT - A/H A/T (515)         | \$ 1,180      | 3      | \$ 3,540     | \$ 1,156       | 16     | \$ 18,491  | \$ 1,132       | 15     | \$ 16,978  |
|                           |         | Move meter No CT - A/H A/T (513)      | \$ 196        | 0      | \$ -         | \$ 187         | 11     | \$ 2,056   | \$ 183         | 10     | \$ 1,830   |
| Total                     |         |                                       |               | 1180   | \$ 191,684   |                | 1683   | \$ 306,129 |                | 1957   | \$ 333,740 |
| Meter Investigation       | XP070   | Meter Insp - Simple (957)             | \$ 94         | 127    | \$ 11,869    | \$ 92          | 90     | \$ 8,235   | \$ 90          | 119    | \$ 10,803  |
|                           |         | Meter Inv Inspect CT B/H (959)        | \$ 357        | 0      | \$ -         | \$ 341         | 2      | \$ 681     | \$ 334         | 0      | \$ -       |
| Total                     |         |                                       |               | 127    | \$ 11,869    |                | 92     | \$ 8,917   |                | 119    | \$ 10,803  |
| Meter Reconfiguration     | XP071   | Change control load - CT (1202)       | \$ 439        | 0      | \$ -         | \$ 430         | 3      | \$ 1,291   | \$ 421         | 0      | \$ -       |
|                           |         | Change control load - No CT (1200)    | \$ 95         | 1056   | \$ 100,561   | \$ 93          | 1210   | \$ 112,982 | \$ 92          | 1274   | \$ 115,819 |
|                           |         | Change Tariff - CT (1206)             | \$ 439        | 8      | \$ 3,514     | \$ 430         | 19     | \$ 8,113   | \$ 421         | 48     | \$ 19,546  |
|                           |         | Change Tariff - No CT (1204)          | \$ 95         | 4881   | \$ 465,098   | \$ 93          | 8810   | \$ 823,952 | \$ 92          | 7428   | \$ 679,822 |
|                           |         | Change Time switch - No CT (1208)     | \$ 128        | 33     | \$ 4,211     | \$ 125         | 21     | \$ 2,626   | \$ 122         | 22     | \$ 2,447   |
|                           |         | Mtr Re/fig Chng Ctrl Ld NonB/H (1212) | \$ 113        | 4      | \$ 451       | \$ 110         | 0      | \$ -       | \$ 108         | 1      | \$ 108     |
|                           |         | Mtr Re/fig Chng Ctrl Load A/T (1220)  | \$ 95         | 11     | \$ 1,241     | \$ 110         | 5      | \$ 552     | \$ 108         | 0      | \$ -       |
| Total                     |         |                                       |               | 5993   | \$ 575,076   |                | 10068  | \$ 949,517 |                | 8773   | \$ 817,743 |
| Special Read              | XP073   | Final Meter Read (402)                | \$ 8          | 16284  | \$ 129,551   | \$ 8           | 19634  | \$ 153,103 | \$ 8           | 17344  | \$ 132,508 |
|                           |         | Meter Check Read (400)                | \$ 8          | 11308  | \$ 89,988    | \$ 8           | 12931  | \$ 100,835 | \$ 8           | 12210  | \$ 93,605  |
|                           |         | Special Read Transfer (404)           | \$ 8          | 173211 | \$ 1,378,537 | \$ 8           | 46885  | \$ 365,557 | \$ 8           | 27525  | \$ 211,103 |
| Total                     |         |                                       |               | 200803 | \$ 1,598,076 |                | 79450  | \$ 619,495 |                | 57079  | \$ 437,217 |
| CT Metering               | XP087   | CT Provision & Testing (539)          | \$ 990        | 657    | \$ 650,233   | \$ 970         | 713    | \$ 691,208 | \$ 950         | 573    | \$ 544,155 |
|                           |         | CT Testing & maintenance (540)        | \$ 181        | 0      | \$ -         | \$ 178         | 9      | \$ 1,598   | \$ 174         | 0      | \$ -       |
| Total                     |         |                                       |               | 657    | \$ 650,233   |                | 722    | \$ 692,806 |                | 573    | \$ 544,155 |