

Metering ACS Supporting Information (Reset RIN Schedule 1 s15)



Section 15

2020-25

January 2019



Introduction

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

- Provide additional information in relation to Section 15 of Schedule 1, Metering ACS
- explain the source from which Ergon Energy obtained the information provided, and
- Explain the methodology Ergon Energy applied to provide the required information, including any assumptions Ergon Energy made.

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

1. Response to Question 15.1

Direct costs

Direct material and labour costs incurred in providing metering alternative control services 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

	2016	2017	2018
Capex			
Metering construction	4,111,214	4,457,387	2,281,032
Metering replacement		2,255,363	327,733
Total capex	4,111,214	6,712,749	2,608,766
Opex			
Meter maintenance	66,379	74,333	56,802
Meter investigation	320,153	196,091	250,514
Scheduled meter reading	31,399	30,192	7,998
Special meter reading	241,528	112,432	24,692
Non-standard work request	836	580	
Total opex	660,296	413,629	340,007
Grand Total	4,771,510	7,126,379	2,948,772

Table 2 – Direct Labour Costs

	2016	2017	2018
Capex			
Metering Constructed	875,711	865,491	574,207
Metering Replacement	13,001	1,986,205	761,843
Total capex	888,712	2,851,695	1,336,050
Opex			
	2016	2017	2018
Preventative Maint (52130)	1,449,612	1,638,637	1,341,203
Corrective Maint (53130)	752,667	729,628	972,881
Schedule Meter Reading (56020)	7,742,788	8,469,937	9,508,749
Market Transaction ACS (56100)		2,166,426	1,546,813
Customer Install Serv ACS (56000)	8,318,294	8,279,334	7,098,757
ACS – General (56200)	92,281	123,309	
Total opex	18,355,642	21,407,271	20,468,403

	2016	2017	2018
Grand Total	19,244,354	24,258,967	21,804,454

Table 3 – Other Direct Costs

	2016	2017	2018
Capex			
Metering construction	90,201	76,034	56,140
Metering replacement		551,544	63,716
Total capex	90,201	627,578	119,856
Opex	2016	2017	2018
Meter maintenance	441,585	439,385	358,440
Meter investigation	109,768	133,932	180,569
Scheduled meter reading	65,279	61,816	60,007
Special meter reading	1,286,302	1,166,412	748,424
Non-standard work request	35,398	53,100	145
Total opex	1,938,331	1,854,646	1,347,585
Grand Total	2,028,532	2,482,224	1,467,441

Direct Costs – Forthcoming Regulatory Period

To provide a breakdown of expenditure forecast for default type 6 metering services 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. Expenditure for fee based services is not included however direct material cost being for the meter purchase is expected to be around \$40.5K in average for each year in the forthcoming regulatory control period. The meter cost is driven by suppliers/manufacturers from external market and equally set by contractual agreement, average cost was considered best estimate. Meter volumes are reported in Wbk 1 RegDet 4.3 Fee based services.

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 and all values are 2017-2018 dollars. Capex and Opex costings have been provided together in the forecast tables below.

Table 4 – Direct Material Costs – Forecast

Activity	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25
Preventative Maint (N52130)	4,428	0	8877	11842	6289	5766	5308
Corrective Maint (N53130)	366669	356276	311876	284171	262957	241105	221954
Customer Install Services (N56000)	14855	14287	12514	11408	10349	9489	8735
Schedule Meter Reading (N56020)	3468	3420	3071	2858	2652	2432	2239
Total	389420	373,983	336,338	310280	282247	258793	238236

Table 5 – Direct Labour - Forecast

Activity	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25
Preventative Maint (N52130)	1570581	1997760	2043767	1731115	1528768	1403231	1291775
Corrective Maint (N53130)	1797330	1739877	1526157	1387101	1284483	1179006	1085360
Customer Install Services (N56000)	3734098	3579872	3127727	2831417	2561517	2351174	2164425
Schedule Meter Reading (N56020)	9608412	9443754	8457721	7823332	7236945	6642677	6115063
Meter Data Services (N56110)	1266838	1245130	1115126	1031487	954174	875821	806256
Total	17977259	18006393	16270497	14804451	13565887	12451909	11462879

Table 6 – Direct Other - Forecast

Activity	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25
Preventative Maint (N52130)	46968	36647	74310	80839	54410	49942	45975
Corrective Maint (N53130)	106638	103306	90649	82419	76452	70174	64600
Customer Install Services (N56000)	363	348	305	277	252	231	213
Schedule Meter Reading (N56020)	436	428	386	358	332	305	281
Total	154405	140729	165650	163894	131446	120652	111069

Total – Direct Costs Forecast

Activity	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25
Total	18521084	18521104	16772485	15278625	13979579	12831354	11812184

Type of work undertaken, volumes of work and expenditure

Category Breakdown – Current Regulatory Period

The below tables provide a breakdown of Metering Description Metrics, Volumes and Expenditure across the service subcategories utilised within Ergon Energy 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 most categories are actual values with the exception of the expenditure for the below categories:

- New Meter Installation, and
- Other Metering

New Meter Installation expenditure has been estimated as there is no direct expenditure mapping available for this category. The methodology used is to calculate the average installation price based upon all meter installations divided by the total expenditure. The average unit price is then multiplied by the number of New Meter Installations to provide an estimated expenditure.

Other Metering is also an estimated expenditure value as portions of the total expenditure for all meter installations are allocated to this category with the exception of the estimated New Meter Installation and actual Meter Replacement expenditure values.

Further details on the methodology and assumptions used for these calculations has been provided in previous Annual RIN Submission Basis of Preparation documents relating to Category Analysis RIN Section 4.2 – Metering for the respective submissions.

Table 7 – Current Regulatory Period - Volumes

SERVICE SUBCATEGORY	METER TYPE	2016	2017	2018
Meter purchase	Meter Type 4			
	Meter Type 5			
	Meter Type 6	18,820	60,098	3,137
Meter testing	Meter Type 4			
	Meter Type 5			
	Meter Type 6	2,868	2,887	2,786
Meter investigation	Meter Type 4			
	Meter Type 5			
	Meter Type 6	15,818	17,725	14,585
Scheduled meter reading	Meter Type 4			
	Meter Type 5			
	Meter Type 6	3,098,196	3,131,585	3,105,992
Special meter reading	Meter Type 4			
	Meter Type 5			
	Meter Type 6	11,145	4,489	127,061
New meter installation	Meter Type 4			
	Meter Type 5			
	Meter Type 6	9,675	7,517	3,672
Meter replacement	Meter Type 4			
	Meter Type 5			
	Meter Type 6	4,701	21,326	4,502
Meter maintenance	Meter Type 4			
	Meter Type 5			
	Meter Type 6	5,041	4,125	9,538
Remote meter reading	Meter Type 4			
Remote meter re-configuration	Meter Type 4			

Table 8 – Current Regulatory Period – Expenditure (\$)

SERVICE SUBCATEGORY	METER TYPE	2016	2017	2018
Meter purchase	Meter Type 4			
	Meter Type 5			
	Meter Type 6	2,526,470	7,105,654	639,033
Meter testing	Meter Type 4			
	Meter Type 5			
	Meter Type 6	1,938,225	1,889,797	1,717,732
Meter investigation	Meter Type 4			
	Meter Type 5			
	Meter Type 6	976,895	1,378,036	1,385,378

SERVICE SUBCATEGORY	METER TYPE	2016	2017	2018
Scheduled meter reading	Meter Type 4			
	Meter Type 5			
	Meter Type 6	7,871,294	8,640,169	9,649,887
Special meter reading	Meter Type 4			
	Meter Type 5			
	Meter Type 6	433,908	175,385	2,461,774
New meter installation	Meter Type 4			
	Meter Type 5			
	Meter Type 6	2,530,883	1,983,950	1,005,501
Meter replacement	Meter Type 4			
	Meter Type 5			
	Meter Type 6	2,493,622	5,931,414	1,300,418
Meter maintenance	Meter Type 4			
	Meter Type 5			
	Meter Type 6	2,433,967	1,775,715	3,401,608
Remote meter reading	Meter Type 4			
Remote meter re-configuration	Meter Type 4			
Other metering	Meter Type 4			
	Meter Type 5			
	Meter Type 6	23,719,716	26,087,114	16,395,078
	Meter Type 7			

Table 9 – 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	1,115,855	1,107,005	1,072,926
	Multi phase meter population	73,586	75,335	75,533
	Current transformer connected meter population	9,169	9,102	9,330
	Direct connect meter population	1,180,272	1,173,238	1,139,129

**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 10 – Current Regulatory Period – Operational Costs (\$)

Activity Description	2016	2017	2018
Preventive Reg Meters ACS	2,486,149	2,787,298	2,241,197
Corrective Reg Meters ACS	1,383,711	1,334,534	1,739,242
Meter Reading Mass Market	7,904,152	8,640,169	9,649,887
Market Transaction Centre - ACS		2,166,426	1,546,813
Customer Installation Services ACS	11,552,695	11,166,370	8,963,567
Alternative Control Services - General	166,834	228,904	145
Total	23,493,541	26,323,701	24,140,852

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 Ergon Energy 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 11 – Metering Revenue Earned – Current Regulatory Period (\$)

Metering ACS Product	Activity	Act 2016	Act 2017	Act 2018
Meter inspect & invest on request	N10130	3,674	10,995	13,768
Metering Alteration	N10130	552,773	692,403	611,981
Exchange meter	N10130	9,477		2,514
Type 5 to 7 non-standard metering serv	N10130	40,712	-	
Removal of a meter (Type 5 & 6)	N10130	45,575	126,134	116,438
Meter re-seal	N10130	6,601	594	86
Install additional metering	N10130	30,224	55,420	197
Change time switch	N10130	710	993	1,274
Change tariff	N10130	2,338	8,042	22,269
Removal of load control device	N10130	1,062	5,313	8,169
Change load control relay channel	N10130	13,231	48,619	24,324
Special Meter Read	N10130	65,228	248,719	155,909
Meter Test	N10130	1,970	3,795	3,411
Replace - 5 & 6 - Single Phase - U/SR	N10130	-	1,349	
Replace - 5 & 6 - Dual Element - U/SR	N10130	-	847	422
Replace - 5&6 - Polyphase - U/SR	N10130	-	3,113	
Replacement - CT - U/SR	N10130	-	3,321	2,519
Replacement Meter - Single Phase	N10130	2,006	-	
New Meter - Single Phase - Primary	N10130	1,237,038	118,377	
New Met - Single Phase - Primary + Solar	N10130	745,772	177,496	
NM - Dual - Primary + Controlled Load	N10130	1,018,847	66,302	
NM - Dual - Primary + Cont Load + Solar	N10130	920,245	184,197	
New Meter - PolyPhase - Primary	N10130	806,610	64,920	
New Meter - PolyPhase - Primary + Solar	N10130	454,459	116,867	
Add'tl Sing Phase for Controlled Load	N10130	298,390	14,284	

Metering ACS Product	Activity	Act 2016	Act 2017	Act 2018
Add'tl PolyPhase for Controlled Load	N10130	16,458	579	
Add'tl Sing Phase to accom other Tariff	N10130	2,006	-	
New - 5&6 - Single Phase - Primary	N10130	-	716,956	236,252
New - 5&6 - Single Ph - Primary +Emb Gen	N10130	-	1,198,160	786,232
New - 5&6 - Dual Elem -Prim+Control Load	N10130	-	356,421	104,408
New - 5&6 - Dual Elem - Primary +Emb Gen	N10130	-	1,666,734	1,303,306
New - 5&6 - Polyphase - Primary	N10130	-	422,827	179,729
New -5&6 - PolyPhase - Prim + Embed Gen	N10130	-	973,784	751,430
New - CT - Primary	N10130	-	406,619	295,728
New - CT - Primary + Embed Gen	N10130	-	389,979	380,009
Addl - 5&6 - Single Phase + Control Load	N10130	-	233,364	114,249
Addl - 5&6 - Polyphase + Control Load	N10130	-	10,336	3,181
Addl - 5&6 - Single Phase + Other Tariff	N10130	-	1,691	1,033
Addl - 5&6 - Polyphase + Other Tariff	N10130	-	2,082	1,060
New - 5&6 - Single Phase + Embed Gen	N10130	-	671	
New - CT + Embed Gen	N10130	-		5,038
Replace - 5&6 - Polyphase - LR	N10130	-	1,477	
Total		6,275,405	8,333,777	5,124,936

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 Ergon Energy 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 8% forecast.

Methodology:

- Current regulatory control period data has been obtained from PEACE. Customer numbers derived by collating total number of active NMIs where Ergon Energy is the current MPB.
- Forthcoming regulatory control period data has been forecast by applying per annum decrease of 5.06%
 - Meter Population s at 30 June = 1,148,459
 - Avg meter/customer = 1.58
 - Calculated customer reduction rate = $8/1.58 = 5.06\%$

Table 12 – Customer Numbers Current and Forthcoming Period

Current Period	2015	2016	2017	2018			
Type 6	727,761*	735,466	737,970	727,492			
Forecast	2019	2020	2021	2022	2023	2024	2025
Type 6	690,681	655,732	622,552	591,051	561,144	532,750	505,793

Appendix 1: Metering Revenue Service Rate – Current Regulatory Period

Category	Product	ACS Product	FY 2017 -2018			FY 2016 - 2017			FY 2015 - 2016		
			Serv Rate (Ave)	FY Vol	FY Rev	Serv Rate (Ave)	FY Vol	FY Rev	Serv Rate (Ave)	FY Vol	FY Rev
Uneconomical Services	N8080	Special Meter Read	\$33.78	4,615	\$155,909.00	\$34.67	7,173	\$248,718.90	UNAVAIL	UNAVAIL	\$65,228.00
Uneconomical Services	N8081	Meter Test	\$16.88	202	\$3,410.70	\$17.57	216	\$3,795.10	UNAVAIL	UNAVAIL	\$1,969.80
Type 6 Metering	N8082	Meter inspect & invest on request	\$128.67	107	\$13,768.15	\$130.90	84	\$10,995.29	UNAVAIL	UNAVAIL	\$3,673.76
Type 6 Metering	N8083	Metering Alteration	\$453.32	1,350	\$611,981.22	\$429.53	1,612	\$692,403.41	UNAVAIL	UNAVAIL	\$552,772.52
Type 6 Metering	N8084	Exchange meter	UNAVAIL	UNAVAIL	\$2,514.18	\$0.00	-	\$0.00	UNAVAIL	UNAVAIL	\$9,476.68
Type 6 Metering	N8085	Type 5 to 7 non-standard metering serv	\$0.00	-	\$0.00	\$0.00	-	\$0.00	UNAVAIL	UNAVAIL	\$40,712.17
Type 6 Metering	N8086	Removal of a meter (Type 5 & 6)	\$97.85	1,190	\$116,438.49	\$91.40	1,380	\$126,133.96	UNAVAIL	UNAVAIL	\$45,575.43
Type 6 Metering	N8087	Meter re-seal	\$86.36	1	\$86.36	\$594.29	1	\$594.29	UNAVAIL	UNAVAIL	\$6,600.98
Type 6 Metering	N8088	Install additional metering	UNAVAIL	UNAVAIL	\$197.27	UNAVAIL	UNAVAIL	\$55,419.66	UNAVAIL	UNAVAIL	\$30,224.32
Type 6 Metering	N8089	Change time switch	UNAVAIL	UNAVAIL	\$1,273.63	UNAVAIL	UNAVAIL	\$992.61	UNAVAIL	UNAVAIL	\$710.00
Type 6 Metering	N8090	Change tariff	\$71.15	313	\$22,268.74	\$146.22	55	\$8,042.00	UNAVAIL	UNAVAIL	\$2,338.19
Type 6 Metering	N8093	Removal of load control device	\$47.77	171	\$8,168.56	\$51.58	103	\$5,312.82	UNAVAIL	UNAVAIL	\$1,061.86
Type 6 Metering	N8094	Change load control relay channel	\$155.92	156	\$24,323.75	\$143.84	338	\$48,618.99	UNAVAIL	UNAVAIL	\$13,230.55
Uneconomical Services	N8126	Replacement Meter - Single Phase	\$0.00	-	\$0.00	\$0.00	-	\$0.00	UNAVAIL	UNAVAIL	\$2,006.40

Uneconomical Services	N8160	New Meter - Single Phase - Primary	\$0.00	-	\$0.00	\$390.68	303	\$118,376.60	UNAVAIL	UNAVAIL	\$1,237,038.00
Uneconomical Services	N8161	New Met - Single Phase - Primary + Solar	\$0.00	-	\$0.00	\$397.97	446	\$177,496.02	UNAVAIL	UNAVAIL	\$745,771.90
Uneconomical Services	N8162	NM - Dual - Primary + Controlled Load	\$0.00	-	\$0.00	\$480.45	138	\$66,301.50	UNAVAIL	UNAVAIL	\$1,018,846.86
Uneconomical Services	N8163	NM - Dual - Primary + Cont Load + Solar	\$0.00	-	\$0.00	\$434.43	424	\$184,197.45	UNAVAIL	UNAVAIL	\$920,245.46
Uneconomical Services	N8164	New Meter - PolyPhase - Primary	\$0.00	-	\$0.00	\$477.35	136	\$64,920.21	UNAVAIL	UNAVAIL	\$806,609.50
Uneconomical Services	N8165	New Meter - PolyPhase - Primary + Solar	\$0.00	-	\$0.00	\$467.47	250	\$116,867.01	UNAVAIL	UNAVAIL	\$454,458.62
Uneconomical Services	N8166	Add'tl Sing Phase for Controlled Load	\$0.00	-	\$0.00	\$408.12	35	\$14,284.08	UNAVAIL	UNAVAIL	\$298,389.53
Uneconomical Services	N8167	Add'tl PolyPhase for Controlled Load	\$0.00	-	\$0.00	\$578.80	1	\$578.80	UNAVAIL	UNAVAIL	\$16,458.32
Uneconomical Services	N8168	Add'tl Sing Phase to accom other Tariff	\$0.00	-	\$0.00	\$0.00	-	\$0.00	UNAVAIL	UNAVAIL	\$2,006.40
Uneconomical Services	N8172	New - 5&6 - Single Phase - Primary	\$347.94	679	\$236,252.10	\$331.00	2,166	\$716,955.74	-	-	\$0.00
Uneconomical Services	N8173	New - 5&6 - Single Ph - Primary +Emb Gen	\$346.66	2,268	\$786,231.89	\$330.80	3,622	\$1,198,159.85	-	-	\$0.00
Uneconomical Services	N8174	New - 5&6 - Dual Elem -Prim+Control Load	\$438.69	238	\$104,407.85	\$410.62	868	\$356,420.61	-	-	\$0.00
Uneconomical Services	N8175	New - 5&6 - Dual Elem - Primary +Emb Gen	\$425.92	3,060	\$1,303,305.93	\$402.69	4,139	\$1,666,733.90	-	-	\$0.00
Uneconomical Services	N8176	New - 5&6 - Polyphase - Primary	\$558.16	322	\$179,728.64	\$539.32	784	\$422,826.51	-	-	\$0.00
Uneconomical Services	N8177	New -5&6 - PolyPhase - Prim + Embed Gen	\$529.18	1,420	\$751,429.87	\$510.10	1,909	\$973,784.21	-	-	\$0.00
Uneconomical Services	N8178	New - CT - Primary	\$2,617.06	113	\$295,727.81	\$2,494.59	163	\$406,618.73	-	-	\$0.00

Uneconomical Services	N8179	New - CT - Primary + Embed Gen	\$2,467.59	154	\$380,009.05	\$2,515.99	155	\$389,979.18	-	-	\$0.00
Uneconomical Services	N8180	Addl - 5&6 - Single Phase + Control Load	\$396.70	288	\$114,249.26	\$382.56	610	\$233,363.89	-	-	\$0.00
Uneconomical Services	N8181	Addl - 5&6 - Polyphase + Control Load	\$397.65	8	\$3,181.20	\$574.22	18	\$10,336.00	-	-	\$0.00
Uneconomical Services	N8183	Addl - 5&6 - Single Phase + Other Tariff	\$344.40	3	\$1,033.20	\$338.10	5	\$1,690.50	-	-	\$0.00
Uneconomical Services	N8184	Addl - 5&6 - Polyphase + Other Tariff	\$265.10	4	\$1,060.40	\$231.33	9	\$2,082.00	-	-	\$0.00
Uneconomical Services	N8186	New - 5&6 - Single Phase + Embed Gen	\$0.00	-	\$0.00	\$335.60	2	\$671.20	-	-	\$0.00
Uneconomical Services	N8188	New - CT + Embed Gen	\$1,679.40	3	\$5,038.20	\$0.00	-	\$0.00	-	-	\$0.00
ACS Capital Contribution	N8193	Replace - 5 & 6 - Single Phase - U/SR	\$0.00	-	\$0.00	\$337.15	4	\$1,348.60	-	-	\$0.00
ACS Capital Contribution	N8197	Replace - 5 & 6 - Dual Element - U/SR	\$421.80	1	\$421.80	\$846.58	1	\$846.58	-	-	\$0.00
ACS Capital Contribution	N8201	Replace - 5&6 - Polyphase - U/SR	\$0.00	-	\$0.00	\$622.56	5	\$3,112.80	-	-	\$0.00
Uneconomical Services	N8203	Replace - 5&6 - Polyphase - LR	\$0.00	-	\$0.00	\$1,476.52	1	\$1,476.52	-	-	\$0.00
ACS Capital Contribution	N8205	Replacement - CT - U/SR	\$2,519.10	1	\$2,519.10	\$3,321.43	1	\$3,321.43	-	-	\$0.00