Appendix 27 : Avoidable and stand alone cost assessment by reference tariff class

1.1 Avoidable costs

The avoidable cost of providing a particular reference service is the cost that would not be incurred if the service were no longer provided. ATCO Gas Australia has calculated total avoidable costs by considering avoidable operating expenditure, avoidable unaccounted for gas (UAFG) costs and avoidable capital expenditure. The method is discussed below.

1.1.1 Avoidable operating expenditure

ATCO Gas Australia reviewed its operating budgets and identified a proportion of operational expenditure that might be avoided if the reference service was no longer provided. This included kilometres of pipe laid, extent of the network, number of connections, and new connections.

Summing the results across all cost centres provides the forecast of total avoidable operating cost by tariff class excluding UAFG.

Table 1: Avoidable operational costs (excluding UAFG) 2014 to 2019

Tariff class $ million real at 30 June 2014	July to Dec. 2014	2015	2016	2017	2018	2019
A1	0.3	0.7	0.8	0.8	0.8	0.9
A2	0.2	0.4	0.4	0.4	0.4	0.4
B1	0.2	0.4	0.4	0.6	0.5	0.5
B2	0.2	0.4	0.4	0.6	0.5	0.5
B3	2.6	5.2	5.5	5.6	5.8	6.0

1.1.2 Avoidable UAFG costs

To estimate the avoidable UAFG, ATCO Gas Australia reviewed:

- The number of end-users in each tariff class
- The volume of gas delivered to end-users in each tariff class
- An allowance for measurement errors at gate stations
- Measurement errors associated with interval meters
- Temperature correction for measurements made by non-interval meters

ATCO Gas Australia has allocated the forecast total cost of UAFG to each tariff class. The business would expect not to incur the UAFG cost allocated to any of the tariff classes if the corresponding reference service was not provided. The avoidable costs of UAFG are shown in Table 2.

Table 2: Avoidable unaccounted for gas costs 2014 to 2019

Tariff class $ million real at 30 June 2014	July to Dec. 2014	2015	2016	2017	2018	2019
A1	0.3	0.6	0.6	0.6	0.7	0.7
A2	0.1	0.1	0.1	0.1	0.1	0.1
B1	0.8	1.4	1.4	1.4	1.5	1.5
B2	0.6	1.0	1.0	1.0	1.0	1.0
B3	5.1	8.6	8.8	9.0	9.1	9.3

1.1.3 Avoidable capital expenditure

ATCO Gas Australia considered capital expenditure that might be avoided if a reference service was not provided. Avoidable costs are based on the return on and of (depreciation) the capital expenditure that could be avoided in future regulatory periods.

Forecast capital expenditure on high pressure mains was considered not to be avoidable. The expenditure on these mains is required to provide new and replacement haulage capacity necessary to customers in all tariff classes. If any of the reference services were not provided, the expenditure would be required for provision of the remaining reference services.

Medium/low pressure mains are used to provide service to users requiring reference services B1, B2 and B3. If either of reference service A1 or A2 were not to be provided, the forecast capital expenditure on medium/low pressure mains would still be required to provide the other three reference services. Network operators are required to provide service to users requiring any of reference services A2, B1, B2 and B3, and therefore not avoidable. A proportion of each project or programme identified as avoidable was allocated to each tariff class.

The following table presents the return on and of the identified avoidable capital costs by tariff class.

Table 3: Return on and of avoidable capital expenditure

Tariff class $ million real at 30 June 2014	July to Dec. 2014	2015	2016	2017	2018	2019
A1	-	0.0	0.0	0.0	0.0	0.0
A2	-	0.2	0.5	0.9	0.9	0.9
B1	-	0.0	0.0	0.0	0.1	0.1
B2	-	0.1	0.3	0.5	0.7	0.9
B3	-	1.3	3.9	6.4	8.8	11.4

1.1.4 Total avoidable costs

The total avoidable cost of providing each of the reference services is presented in the table below.

Table 4: Avoidable costs by tariff class

Tariff class $ million real at 30 June 2014	July to Dec. 2014	2015	2016	2017	2018	2019
A1	0.6	1.3	1.4	1.4	1.5	1.5
A2	0.2	0.7	1.0	1.4	1.4	1.5
B1	1.0	1.8	1.9	2.1	2.1	2.1
B2	0.7	1.4	1.7	2.1	2.2	2.4
B3	7.7	15.2	18.2	20.9	23.7	26.7

1.2 Stand alone costs

The stand alone cost of providing a particular reference service is the cost that would be incurred by an efficient service provider entering the market for gas distribution services and providing *only* that reference service. It is the capital and operating expenditure required for facilities and operation designed to deliver the reference service in question and no other service.

ATCO Gas Australia has not estimated an optimised replacement cost of the facilities required to provide each reference service individually. Rather, ATCO Gas Australia has taken the forecast total costs of providing all the services in AA4 and subtracted the avoidable cost of providing each of the other reference services. This calculation is presented in the following table.

Table 5: Stand alone operating costs by tariff class 2014 to 2019

$ million real at 30 June 2014	July to Dec. 2014	2015	2016	2017	2018	2019
Operating costs (including UAFG)	39.3	78.8	80.5	82.7	85.5	87.0
Avoidable costs of all tariff classes excluding;						
A1	9.7	19.1	22.8	26.5	29.5	32.6
A2	10.06	19.76	23.21	26.52	29.51	32.71
B1	9.32	18.68	22.35	25.88	28.87	32.10
B2	9.56	19.01	22.53	25.90	28.73	31.78
B3	2.6	5.2	6.0	7.0	7.2	7.4
Stand alone operating costs;						
A1	29.61	59.67	57.70	56.19	56.02	54.42
A2	29.21	59.02	57.31	56.18	55.97	54.34
B1	29.95	60.10	58.18	56.82	56.61	54.95
B2	29.71	59.77	57.99	56.80	56.76	55.27
B3	36.70	73.54	74.49	75.68	78.24	79.63

The stand alone capital costs have been determined by identifying a proportion of the capital base at 30 June 2014 required to provide each reference service on a stand

alone basis, plus the forecast capital expenditure for the next access arrangement required to provide each of the reference services on a stand alone basis.

Depreciation and return were calculated for each of these stand alone asset bases in the same way as depreciation and return were calculated for the purpose of determining total revenue (straight line depreciation over the same asset lives; return on opening asset base at the rate of return). Depreciation and return for stand alone reference service provision are summarised in the following table.

Table 6: Depreciation and return for stand alone reference service provision

Tariff class $ million real at 30 June 2014	July to Dec. 2014	2015	2016	2017	2018	2019
A1	13.7	28.2	29.9	32.4	35.9	37.5
A2	27.2	55.2	57.1	59.9	62.9	64.1
B1	36.9	75.6	79.0	82.5	86.4	89.1
B2	37.1	76.7	81.7	86.7	92.2	96.6
B3	45.0	95.8	104.2	111.6	118.8	125.0

The stand alone cost of providing each of the reference services is the sum of:

- Depreciation and return on the stand alone capital base; and
- Forecast stand alone operating costs.

Total stand alone costs are presented in the table below.

Table 7: Stand alone costs by tariff class 2014 to 2019

Tariff class $ million real at 30 June 2014	July to Dec. 2014	2015	2016	2017	2018	2019
A1	43.3	87.8	87.6	88.6	91.9	91.9
A2	56.4	114.2	114.4	116.1	118.9	118.4
B1	66.9	135.7	137.2	139.3	143.0	144.1
B2	66.8	136.5	139.7	143.5	148.9	151.8
B3	81.7	169.3	178.7	187.3	197.1	204.6

1.3 Expected revenue

The following table presents the expected revenue by tariff class compared with the stand alone and avoidable cost of providing the reference service.

Table 8: Expected revenue, stand alone and avoidable cost by tariff class

$ million real at 30 June 2014	A1	A2	B1	B2	B3
Expected revenue	43.0	38.9	52.9	55.0	746.0
Stand alone cost	408.9	532.0	637.5	654.1	841.2
Avoidable cost	6.2	5.0	8.5	8.3	89.0
Compliance with Rule 94 (3)	Yes	Yes	Yes	Yes	Yes