



Subscription modelling May 2018

The Local Government Association of Tasmania (LGAT) has been tasked with reviewing the way in which current subscriptions are levied, in particular:

- Whether the mix of flat, population and revenue fees is reasonable;
- Whether increases or decreases could be 'smoothed'; and
- Whether a model could be developed to give some certainty about increases or decreases to inform out years financial planning within councils.

To this end, a project officer has undertaken modelling of 21 options which look at varied percentages of subscription components, population groupings and revenue groupings. Details are attached as an appendix to this paper, as is a brief write up of the results of modelling each option.

Please note that calculated figures are based on actual 2016/17 subscriptions, and as they include no indexation, are indicative only of how the particular model would have impacted those amounts.

Findings

As long as subscriptions are premised on a flat fee, plus population and revenue category fees, councils will have the potential to move up and down categories, and therefore experience annual fluctuations in their subscriptions. Having the flat fee as the higher proportion of the subscription formula, mitigates the impact of changes in population or revenue categories to a degree.

Broadening the number of population and/or revenue categories and percentages payable within each works in terms of managing impacts of change, particularly for smaller councils, however doing so increases the likelihood of councils moving up or down categories from year to year. Councils in lower population categories but mid-range revenue categories, and vice versa, will almost certainly produce what appear to be slightly perverse results, but that does not mean that they are incorrect.

Modelling as detailed in this paper indicates that, within current methodology, it is almost impossible to 'flatten' increases and decreases where category changes occur year to year, and that the imposition of the State Grants Commission 'collar and cap' approach may be the most equitable way to apply subscription changes going forward. The SCG applies a 'collar' to ensure that no council has base grant funding reduced by more than 10 per cent year to year, and a 'cap' to ensure that increases do not exceed 15 per cent year to year. Applying that same principle to subscriptions, but using a 10 per cent cap and collar, once out year subscriptions are calculated (using whatever mix of proportions is deemed most equitable), subscriptions would be adjusted to ensure that those

councils experiencing an increase would pay no more than 10 per cent compared to the previous year, and any decreases would also be limited to 10 per cent compared to the previous year. Adopting this approach would give councils some certainty for their financial planning, as they can proceed safe in the knowledge that, whether their subscriptions go up or down, neither would exceed 10 per cent of the previous year's subscription.

In terms of the options modelled, after considerable scenario analysis, it has been determined that option 21 provides the most equitable outcomes across the board, and with the cap and collar applied, subscription increases and decreases appear within reasonable limits. Option 21 imposes a flat fee of 40 per cent, and population and revenue fees of 30 per cent each. It also proposes eight revenue categories and eight population categories. Without a 10 per cent cap or collar, decreases would range from \$14,393 to \$1,187 and increases from \$581 to \$8,894. With a cap and collar however, decreases range from \$4,716 to \$244 and increases from \$581 to \$5,901. In determining whether or not to apply the collar to decreases, it is important from a LGAT perspective, to have the same budget certainty as councils, and having both a cap and collar provides some smoothing in that regard. On that basis, indicatively, 2016/2017 subscriptions would have been as follows:

Council	Actual 16/17 subscription	Option 21 applied without cap / collar			Option 21 applied with cap / collar		
		Option 21 16/17 subscription	\$ value change	Per cent change	Option 21 16/17 subscription	\$ value change	Per cent change
Break O'Day	\$41,268.47	\$32,181.27	-\$9,087.19	-22.0	\$37,141.62	-\$4,126.85	-10.0
Brighton	\$41,268.47	\$41,024.51	-\$243.95	-0.6	\$41,024.51	-\$243.95	-0.6
Burnie	\$53,059.46	\$48,806.57	-\$4,252.89	-8.0	\$48,806.57	-\$4,252.89	-8.0
Central Coast	\$47,163.96	\$48,806.57	\$1,642.61	3.5	\$48,806.57	\$1,642.61	3.5
Central Highlands	\$20,280.50	\$20,861.92	\$581.42	2.9	\$20,861.92	\$581.42	2.9
Circular Head	\$41,268.47	\$33,949.92	-\$7,318.55	-17.7	\$37,141.62	-\$4,126.85	-10.0
Clarence	\$59,013.90	\$66,846.78	\$7,832.88	13.3	\$64,915.30	\$5,901.39	10.0
Derwent Valley	\$30,656.57	\$33,949.92	\$3,293.35	10.7	\$33,949.92	\$3,293.35	10.7
Devonport	\$53,059.46	\$55,881.16	\$2,821.71	5.3	\$55,881.16	\$2,821.71	5.3
Dorset	\$30,656.57	\$32,181.27	\$1,524.70	5.0	\$32,181.27	\$1,524.70	5.0
Flinders Island	\$20,280.50	\$19,093.27	-\$1,187.23	-5.9	\$19,093.27	-\$1,187.23	-5.9
George Town	\$30,656.57	\$33,949.92	\$3,293.35	10.7	\$33,722.23	\$3,065.66	10.0
Glamorgan Spring Bay	\$41,268.47	\$26,875.33	-\$14,393.14	-34.9	\$37,141.62	-\$4,126.85	-10.0
Glenorchy	\$59,013.90	\$63,309.48	\$4,295.58	7.3	\$63,309.48	\$4,295.58	7.3
Hobart	\$59,013.90	\$64,370.67	\$5,356.77	9.1	\$64,370.67	\$5,356.77	9.1
Huon Valley	\$47,163.96	\$48,806.57	\$1,642.61	3.5	\$48,806.57	\$1,642.61	3.5
Kentish	\$30,656.57	\$32,181.27	\$1,524.70	5.0	\$32,181.27	\$1,524.70	5.0

King Island	\$20,280.50	\$20,861.92	\$581.42	2.9	\$20,861.92	\$581.42	2.9
Kingborough	\$53,059.46	\$59,772.19	\$6,712.73	12.7	\$58,365.40	\$5,305.95	10.0
Latrobe	\$41,268.47	\$35,718.57	-\$5,549.90	-13.4	\$37,141.62	-\$4,126.85	-10.0
Launceston	\$59,013.90	\$67,907.97	\$8,894.07	15.1	\$64,915.30	\$5,901.39	10.0
Meander Valley	\$41,268.47	\$44,738.68	\$3,470.21	8.4	\$44,738.68	\$3,470.21	8.4
Northern Midlands	\$41,268.47	\$39,432.73	-\$1,835.74	-4.4	\$39,432.73	-\$1,835.74	-4.4
Sorell	\$47,163.96	\$39,432.73	-\$7,731.23	-16.4	\$42,447.56	-\$4,716.40	-10.0
Southern Midlands	\$30,656.57	\$33,949.92	\$3,293.35	10.7	\$33,722.23	\$3,065.66	10.0
Tasman	\$20,280.50	\$20,861.92	\$581.42	2.9	\$20,861.92	\$581.42	2.9
Waratah Wynyard	\$41,268.47	\$39,432.73	-\$1,835.74	-4.4	\$39,432.73	-\$1,835.74	-4.4
West Coast	\$30,656.57	\$25,106.68	-\$5,549.90	-18.1	\$27,590.92	-\$3,065.66	-10.0
West Tamar	\$47,163.96	\$48,806.57	\$1,642.61	3.5	\$48,806.57	\$1,642.61	3.5
	\$1,179,099.00	\$1,179,099.01			\$1,197,653.15		

Table 1: Population categories 1

Population	Category number
<10,000	1
10,000 to 19,999	2
20,000 to 39,999	3
>40,000	4

Table 2: Population categories 2

Population	Category number
<1000	1
1,000 to 4,999	2
5,000 to 9,999	3
10,000 to 19,999	4
20,000 to 29,999	5
30,000 +	6

Table 3: Population categories 3

Proportion of State Population	Category
<1% of state population	1
1% to 1.9% of state population	2
2% to 2.9% of state population	3
3% to 3.9% of state population	4
4% to 4.9% of state population	5
5% or higher	6

Table 4: Population categories 4

Population	Category number
<1000	1
1,000 to 4,999	2
5,000 to 9,999	3
10,000 to 14,999	4
15,000 to 24,999	5
25,000 to 34,999	6
35,000 to 54,999	7
55,000+	8

Table 5: Revenue categories 1

Revenue range		Category number
\$0.00	\$5,291,793.00	1
\$5,291,793.00	\$8,231,677.00	2
\$8,231,677.00	\$11,759,538.00	3
\$11,759,538.00	\$23,519,076.00	4
\$23,519,076.00	\$35,278,615.00	5
\$35,278,615.00	And above	6

Table 6: Revenue categories 2

Revenue range		Category number
\$0.00	\$4,999,999.00	1
\$5,000,000.00	\$7,999,999.00	2
\$8,000,000.00	\$9,999,999.00	3
\$10,000,000.00	\$14,999,999.00	4
\$15,000,000.00	\$24,999,999.00	5
\$25,000,000.00	\$44,999,999.00	6
\$45,000,000.00	and above	7

Table 7: Revenue categories 3

Revenue range		Category number
\$0.00	\$4,999,999.00	1
\$5,000,000.00	\$7,999,999.00	2
\$8,000,000.00	\$9,999,999.00	3
\$10,000,000.00	\$14,999,999.00	4
\$15,000,000.00	\$24,999,999.00	5
\$25,000,000.00	\$34,999,999.00	6
\$35,000,000.00	\$59,999,999.00	7
\$60,000,000.00	and above	8

Table 8: Modelling options considered

Modelling option	Flat Fee %	Population %	Revenue %	No. Revenue categories	No. Population categories
1	30	40	30	6	4
2	25	50	25	6	4
3	50	25	25	6	4
4	40	30	30	6***	6*
5	50	25	25	6***	6*
6	40	20	40	6	4
7	40	20	40	6	6**
8	40	20	40	6	4**
9	30	20	50	6	4**
10	30	40	30	6	6
11	30	40	30	6	6**
12	30	40	30	6	8
13	40	30	30	6	8
14	50	20	30	6	8
15	40	20	40	6	8
16	50	25	25	6	8
17	40	20	40	6***	6*
18	50	20	30	6***	6*
19	45	25	35	6	8
20	40	30	30	7	8
21	40	30	30	8	8

*Categories premised on proportion of total State population living in municipality.

**Percentages within categories adjusted to offset the population component in municipalities with small populations. A number of iterations were modelled.

*** Categories premised on council revenue as a proportion of total state revenue.

Option 1: Flat fee 30 per cent, population fee 40 per cent and revenue fee 30 per cent. Modelling this option using four population categories premised on council voting principles, resulted in reduced subscriptions in 17 councils and increases in 12. Decreases ranged from just under \$6,000 to \$1,300 per annum, and increases, from \$180 to just over \$9,000 per annum. The most significant increases were experienced in councils in low population and revenue categories.

Option 2: Flat fee 25 per cent, population 50 per cent, and revenue 25 per cent. Again, using four population categories, modelling this option produced similar results to those in option 1. Decreases ranged from \$7,256 to \$1,361 per annum, and increases, between \$1,203 and \$8,979.

Option 3: Flat fee 50 per cent, population and revenue fees, 25 per cent each. Again, applying four population categories, subscriptions would be reduced in 19 councils and increased in 10. Decreases ranged from \$8,411 to \$1,218, and increases were between \$4,402 and \$12,069. As for Options 1 and 2, the most significant increases were reflected in small councils with lower populations and annual revenue.

Option 4: Flat fee 40 per cent, population and revenue fees, 30 per cent each (adjusted based on council revenue as a proportion of total revenue). In terms of population categories this option uses six, with populations grouped according to the percentage of total state population in each council area. Modelling indicates that subscriptions would decrease for 21 councils and increase for 8. Decreases would range from \$17,741 to \$37 per annum, and increases from \$274 to \$40,521. Unlike options 1, 2 and 3, the most significant increases were reflected in councils in higher population and revenue categories.

Option 5: Flat fee 50 per cent, population and revenue fees, 25 per cent each (adjusted based on council revenue as a proportion of total revenue). Applying the six population categories premised on proportions of state population, modelling this option would decrease subscriptions in 19 councils and increase in 10. Decreases would range from \$14,989 to \$195 and increases, from \$1,170 to \$30,571. As was the outcome for option 4, significant increases were reflected in councils in higher population and revenue categories.

Option 6: Flat fee 40 per cent, population fee 20 per cent and revenue fee, 40 per cent. Reverting to modelling four population categories, modelling resulted in decreased subscriptions in 19 councils and increases in 10. While the numbers are the same as option 5, there are marked differences in the value of the changes. Decreases range from \$6,905 to \$1,098 and increases, from \$3,431 to \$9,595. Unlike option 5, the most significant increases were in councils in lower population and revenue categories.

Option 7: Flat fee 40 per cent, population fee 20 per cent, and revenue fee, 40 per cent. Using 6 population categories, modelling this option produced wild fluctuations in both subscription increases and decreases. Results show that 20 councils would experience decreases ranging from \$16,292 to \$733, and 9 would experience increases ranging from \$75 to \$52,282. The most significant increases were indicated in councils in higher population and revenue categories.

Option 8: Flat fee 40 per cent, population fee 20 per cent and revenue fee, 40 per cent. This option uses four population categories, however the percentage payable by each category has been adjusted to offset costs for small population areas. Modelling indicates decreased subscriptions in 16 councils and increases in 13. Decrease amounts range from \$5,532 to \$503, whilst increases range from \$787 to \$7,520. While the adjustment of percentages payable in each population category did reduce the population component of the subscription for smaller councils, as the proportion charged within each revenue category cannot be changed, the most significant increases were again experienced in councils in relatively low population and revenue categories.

Option 9: Flat fee 30 per cent, population fee 20 per cent, and revenue fee 50 per cent. Applying six revenue and four adjusted population categories, this model decreased subscriptions for 14 councils and increased them for 15. Decreases ranged from \$5,471 to \$2,187 and increases from \$147 to \$6,617. This option reflected the 'flattest' changes overall, although the most significant increases were again being applied to councils in lower population and revenue categories.

Option 10: Flat fee 30 per cent, population fee 40 per cent and revenue fee 30 per cent. Applying six revenue and population categories, 16 councils would pay reduced subscriptions and 13 would experience an increase. Reductions range from \$12,592 to \$1,359 and increases from \$170 to

\$9,565. Increases would be applied mainly across councils in mid-range population groups and lower revenue groups.

Option 11: Using the same fee splits as option 10, but applying adjusted rates to the six population categories, modelling this option resulted in decreased subscriptions for 17 councils and increases for 12. While the upper end of increases and decreases were the same as option 10, the lower limit for decreases went from \$1,359 to \$300 and for increases, from \$170 to \$55. Increases would apply to much the same councils as option 10.

Option 12: Again, this model used the same fee splits as options 10 and 11, but used eight population categories instead of 6. Subscriptions would decrease for 14 councils and increase for 15, with decreases ranging from \$12,591 to \$248 and increases from \$621 to \$5,338. Increases are reflected predominantly in councils in lower population and revenue groups.

Option 13: Flat fee 40 per cent, population and revenue fees, 30 per cent each. Subscriptions would decrease in 18 councils and increase in 11, with decreases ranging from \$9,706 to \$421 and increases, from \$1,740 to \$5469. Whilst this option results in relatively low increases overall, as they are experienced in councils in lower population and revenue categories, the value of the increases for some equate to 21 per cent compared to the previous year.

Option 14: Flat fee 50 per cent, population fee 20 per cent and revenue fee, 30 per cent. The number of councils decreasing and increasing is the same as for option 13, however modelling reveals decreases ranging from \$6,820 to \$1,858 and increases from \$726 to \$8,355. As for option 13, the increases applied to smaller councils.

Option 15: Flat fee 40 per cent, population fee 20 per cent and revenue fee 40 per cent. As for options 13 and 14, the number of councils experiencing change was the same. Decreases range from \$6,758 to \$677 and increases from \$130 to \$6,294. Again, councils in lower population and revenue categories would bear the largest increases.

Option 16: Flat fee 50 per cent, population and revenue fees, 25 per cent each. Again, the proportions of councils experiencing change was the same as options 13 to 15, although there were relatively high changes to upper limits of both increases(\$8,293) and decreases (\$7,943), and slight changes to lower limits. Increases were reflected predominantly in councils in mid and lower range population groups and lower range revenue groups.

Option 17: Flat fee 40 per cent, population fee 20 per cent and revenue fee 40 per cent (adjusted based on council revenue as a proportion of total revenue). Applying 6 population groups premised on the proportion of State population living in each council area, this model would decrease subscriptions in 20 councils and increase them in 9. Decreases range from \$16,293 to \$733 and increases, from \$75 to \$52,282. As you might readily assume, the most significant increases would apply to councils in higher revenue and population categories.

Option 18: Flat fee 50 per cent, population fee 20 per cent and revenue fee 30 per cent. Again, using adjusted revenue fees as per option 17, the number of councils experiencing a change to their subscriptions was unchanged. Decreases range from \$13,386 to \$771 and increases from \$1,917 to \$43,386. Increases would predominantly apply to those councils affected by option 17, although a few smaller councils would also experience a relatively significant increase.

Option 19: Flat fee 45 per cent, population fee 25 per cent and revenue fee 35 per cent. Applying 6 revenue categories and 8 population categories, subscriptions would decrease in 18 councils and increase in 11. Decreases would range from \$6,789 to \$1,268 and increases, from \$660 to \$7,325. Significant increases would be applied to councils in lower population and revenue categories, in some cases, equating to a 26.5 per cent increase compared to last year.

Option 20: Flat fee 40 per cent, population and revenue fees, 30 per cent each. Modelling options 1 to 19 has been premised on 6 revenue categories established under current rules. While it has been possible make allowances in councils with smaller populations by manipulating population categories and percentages payable within each, the same manipulations have not applied to lower revenue categories, resulting in some skewed outcomes for smaller councils. This option applies 7 revenue categories, in an attempt to offset impacts in lower population and revenue councils. Modelling this option, subscriptions would decrease in 11 councils and increase in 18. Decreases would range from \$15,012 to \$863 and increases from \$287 to \$7,361. Increases predominately apply to councils in higher population and revenue categories.

Option 21: Fees as per option 20, but applying 8 revenue and population categories. Subscriptions would decrease in 10 councils and increase in 19. Decreases would range from \$11,828 to \$1,252 and increases from \$287 to \$8,068. As was the case for option 20, increases were generally applied to councils in higher population and revenue categories.