

Typical Electricity Customers in Tasmania - 2022



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EXECUTIVE SUMMARY

The Tasmanian Economic Regulator has identified, by consumption levels, a set of typical electricity customers who consume electricity under regulated tariffs with standing offer prices offered by Aurora Energy. This is enable the Regulator to:

- assess Aurora Energy's proposed electricity prices in its regulated tariffs in terms of the impact of price changes on customers; and
- compare the electricity bills under electricity tariffs available to customers on mainland Tasmania (including Bruny Island) and interstate.

For any tariff, or tariff combination, the typical customer has the median level of annual consumption and, generally, annual expenditure.

The Office of the Tasmanian Economic Regulator (OTTER) has developed a methodology, using Aurora Energy's customer consumption data for 2021-22, to identify typical electricity customers for tariffs or tariff combinations with a threshold number of customers.¹ Details on this methodology can be found in the Appendix. As set out in Table 1, for residential consumers, 18 typical customers have been identified, while for business customers, seven typical customers have been identified.

Table 1: Typical customers' total annual consumption for 2021-22²

Residential	Total annual consumption (kWh)				
	Very Low	Low	Median	High	Very High
T31			2 947		
T31/T41	3 699	5 657	7 428	9 664	14 022
(% T31 / T41)	(45.4/54.6)	(42.4/57.6)	(42.1/57.9)	(41.9/58.1)	(41.7/58.3)
Concession		4 293	6 684	10 487	
(% T31 / T41)		(44.3/55.7)	(41.4/58.6)	(41.3/58.7)	
Non-concession		4 614	8 028	12 826	
(% T31 / T41)		(44.4/55.6)	(42.8/57.2)	(41.8/58.2)	
T140/T31/T41			7 275 ³		
(% T31 / T41)			(39.6/60.4)		
T31/T41/T61			10 871		
(% T31 / T41 / T61)			(37.9/36.2/25.9)		
T93			7 932		
Concession			7 508		
Non-concession			8 288		
T140/T93			7 175 ⁴		

¹ The threshold number of customers is 1 000 for single tariffs and 2 000 for tariff combinations. All data are for customers with billing days of between 330 to 400 (around 11 to 13 months).

² The numbers in the brackets under each tariff combination are the proportions of the annual total consumption a typical customer consumes under each individual tariff (excluding the feed-in tariff (Tariff 140) - see note 3).

³ Total annual consumption comprises consumption under Tariff 31 and Tariff 41 but excludes self-consumption of electricity generated from a customer's distributed generation system.

⁴ Total annual consumption comprises consumption under Tariff 93 but excludes self-consumption of electricity generated from a customer's distributed generation system.

Business	Total annual consumption (kWh)				
	Very Low	Low	Median	High	Very High
T22	222	1 179	3 508	8 782	25 388
T75			14 994		
T94			12 180		

Residential customers using the tariff combination of Tariff 31 and Tariff 41, and business customers on Tariff 22, account for more than 60 per cent of all residential and all business customers on these tariffs. To reflect the large number of customers and the range of consumption levels, five typical customers have been identified in both cases.

Compared to Aurora Energy's consumption data for 2018-19, used for the previous typical customer report issued in 2020, number of Aurora Energy's residential customers on the tariff combination of Tariff 31 and Tariff 41 in 2021-22 decreased from 73.3 per cent to 62.5 per cent. For Tariff 93 (the time-of-use tariff), the number increased from around three per cent to around 13 per cent. Similar movements between Aurora Energy's non-time-of-use tariffs and time-of-use tariffs has also been observed for business customers.

Both concession and non-concession typical customers have been identified for the combination of Tariff 31 and Tariff 41, as well as for Tariff 93.

Table 2 below compares the total annual consumption for the typical median consumption customers estimated across the last four reports. Due to changes to estimation methodology and tariff definitions, it is difficult to make comparisons between the consumption estimates for typical customers from the 2014 and 2017 reports.

Compared to the 2020 Report, the median typical customers' electricity consumption for residential customers remained relatively stable, except for Tariff 93, which increased by 14.4 per cent. For business customers, the median typical customers' electricity consumption decreased significantly for all three tariffs, which could be the result of reduced business activities due to COVID-19.

In the case of tariffs that apply to space heating and air conditioning, part of any difference in annual consumption levels may be due to climactic conditions, such as an exceptionally cold winter or a large number of days in summer with very high temperatures.

Table 2: Typical customers' total annual consumption (overall median only) - 2014, 2017, 2020 and 2022 Reports (kWh)

Residential	2022	2020	2017⁵	2014
T31	2 947	3 149	3 000 ⁶	2 897
T31/T41	7 428	7 666		6 405/8 310 ⁷
Concession	6 684	6 688	6 400	
Non-concession	8 028	8 422	7 500	
T140/T31/T41	7 275	7 410		
T31/T41/T61	10 871	10 698		9 133/10 624 ⁸
T93	7 932	6 932		
Business	2022	2020	2017⁸	2014
T22	3 508	4 428	6 700	4 398
T75	14 994	17 366		
T94	12 180	38 287		

⁵ The 2017 methodology excluded the lowest quintile of Tariff 31 and Tariff 22 customers. In the case of Tariff 22 customers, this resulted in a much higher estimate of median consumption than if the lowest quintile had been included.

⁶ The 2017 methodology split Tariff 31 customers into concession and non-concession groups. The estimate reported was consumption for a typical non-concession customer on Tariff 31.

⁷ The 2014 report includes Tariff 42, which was not included in subsequent reports as Tariffs 41 and 42 were combined to form the new Tariff 41. In the 2022, 2020 and 2017 reports, the level of consumption for Tariff 41 is therefore the equivalent of the sum of Tariff 41 and Tariff 42 consumption in the 2014 report. The two total consumption figures for 2014 are the total annual consumption of typical customers with tariff combinations of Tariff 31 and Tariff 41, and Tariff 31 and Tariff 42 respectively.

⁸ The two total annual consumption figures for 2014 are the total annual consumption for typical customers with tariff combinations of Tariff 31, Tariff 41 and Tariff 61, and Tariff 31, Tariff 42 and Tariff 61 respectively.

1. INTRODUCTION

This report identifies typical electricity customers on Aurora Energy's regulated tariffs in Tasmania, based on electricity consumption patterns, using customer usage data for the 2021-22 financial year provided to the Regulator by Aurora Energy.

As at 31 March 2022, around 95.8 per cent of residential customers and 81.6 per cent of small business customers on mainland Tasmania were on regulated tariffs.⁹ Some market contacts, offered by Aurora Energy and other retailers, are set with reference to regulated tariffs. Standing offer prices under regulated tariffs therefore have a very strong influence on electricity expenditure by residential and small business customers in Tasmania.

The Regulator uses the information on typical electricity customers to assess Aurora Energy's proposed electricity prices in terms of the impact of price changes on customers and to compare regulated electricity tariffs in Tasmania and interstate.

In 2006, OTTER established a methodology for modelling typical electricity customers¹⁰ which was used again in the 2010¹¹ and 2014¹² Information Papers on typical electricity customers. The 2017 report¹³ used a different modelling methodology than that used in the 2006, 2010 and 2014 reports.

In 2020, OTTER developed a new methodology by changing the process for calculating the total consumption for a typical customer on a tariff combination. In this analysis, a typical customer's consumption under each tariff within the tariff combination is calculated based on the median total consumption for these consumers.¹⁴ This report uses the same methodology as in the 2020 report.

⁹ Sourced from the Australian Energy Regulator's Retail Energy Markets Performance Update for quarter 3, 2021-22.

¹⁰ Typical Electricity Customers Information Paper, March 2006.

¹¹ Typical Electricity Customers Information Paper, 2010.

¹² Typical Electricity Customers Information Paper, May 2014.

¹³ Typical Electricity Customers 2017.

¹⁴ Typical Electricity Customers in Tasmania 2020.

2. TYPICAL RESIDENTIAL CUSTOMERS

The annual consumption for all typical residential customers has been estimated using Aurora Energy's customer consumption data for 2021-22. Annual expenditure has been calculated using Aurora Energy's 2022-23 tariff rates. Details on the standing offer tariffs available in Tasmania and on the data and methodology used to identify typical residential customers for some of the standing offer tariffs can be found in the Appendix.

2.1 Tariff 31

The median annual consumption for Tariff 31 customers was 2 947 kWh, which was 6.4 per cent below the median consumption in 2018-19. The annual electricity expenditure for 2022-23 for a typical customer on Tariff 31 would be \$1 175, based on this consumption level. These customers would generally not rely on electricity for heating or would have a small heating unit that would not be on Tariff 41.

2.2 Tariff 31 and Tariff 41

The majority of residential consumers in Tasmania continue to receive their electricity supply under this tariff combination. This is despite its share of Aurora Energy's regulated residential customers has reduced from 73.3 per cent in 2018-19 to 62.5 per cent in 2021-22. It appears that many customers have moved from Tariff 31 and Tariff 41 to Tariff 93, the time-of-use tariff.

Three categories of typical customers have been identified as representing residential customers on Tariff 31 and Tariff 41: concession, non-concession and all customers.

The five typical customers using Tariffs 31 and 41 are shown in Table 3. These typical customers have been determined by breaking the population into five equally sized groups (based on consumption) and calculating the median for each group.

The Regulator uses the typical customers from the concession and non-concession groups for price comparison purposes. Tables 3, 4 and 5 set out the total annual consumption and estimated annual electricity expenditure for this typical customer group.

Table 3: Typical electricity customers for the Tariff 31 and Tariff 41 customer group

Combined	T31 (kWh)	T41 (kWh)	Total annual consumption (kWh)	Annual expenditure in 2022-23 ¹⁵
Very Low	1 681	2 018	3 699	\$1 255
(% T31 / T41)	(45.4%)	(54.6%)		
Low	2 397	3 260	5 657	\$1 676
(% T31 / T41)	(42.4%)	(57.6%)		
Median	3 125	4 303	7 428	\$2 064
(% T31 / T41)	(42.1%)	(57.9%)		
High	4 064	5 618	9 664	\$2 554
(% T31 / T41)	(41.9%)	(58.1%)		
Very High	5 846	8 176	14 022	\$3 511
(% T31 / T41)	(41.7%)	(58.3%)		

¹⁵ Annual expenditure estimated without the concession.

Table 4: Typical Tariff 31 and Tariff 41 electricity customers: concession

	T31 (kWh)	T41 (kWh)	Total consumption (kWh)	Annual expenditure ¹⁶
Low	1 903	2 390	4 293	\$808
(% T31 / T41)	(44.3%)	(55.7%)		
Median	2 770	3 914	6 684	\$1 321
(% T31 / T41)	(41.4%)	(58.6%)		
High	4 327	6 161	10 487	\$2 155
(% T31 / T41)	(41.3%)	(58.7%)		

Table 5: Typical Tariff 31 and Tariff 41 electricity customers: non-concession

	T31 (kWh)	T41 (kWh)	Total consumption (kWh)	Annual expenditure
Low	2 047	2 568	4 614	\$1 455
(% T31 / T41)	(44.4%)	(55.6%)		
Median	3 434	4 593	8 028	\$2 202
(% T31 / T41)	(42.8%)	(57.2%)		
High	5 356	7 470	12 826	\$3 249
(% T31 / T41)	(41.8%)	(58.2%)		

Compared to typical customers identified from the 2018-19 data, there has been a small decrease in total consumption for the majority typical customers in 2021-22 by less than 5 per cent. There was also a shift toward more consumption under Tariff 41, the control load tariff for space heating and hot water, which has a lower per kWh rate than Tariff 31.

2.3 Tariff 140, Tariff 31 and Tariff 41

The feed-in tariff load data (Tariff 140) relate to the volume of electricity generated from a customer's distributed generation system that is exported to the grid. As there are no data on the amount of energy produced by these customers' systems,¹⁷ only total grid electricity consumption (Tariff 31 + Tariff 41) can be estimated for customers using this combination of tariffs. The typical volume of electricity exported on Tariff 140 is estimated separately by using the median of these exports.

One typical customer represents this group. Given that there are multiple tariff types under this category, the percentage of the total annual consumption used on each tariff has been calculated in accordance with the methodology outlined in the Appendix of this Report. Table 6 presents the median percentage breakdown and median annual consumption for Tariff 31 and Tariff 41, and the median export of electricity on Tariff 140.

¹⁶ Annual expenditure estimated taking into account the concession, not including the one-off payment under the Tasmanian Government's Winter Bill Buster.

¹⁷ Output from distributed generation systems varies greatly and depends on a number of factors including system size and orientation (for solar panels), the quality of the components and location.

Table 6: Median percentages and annual consumption for customers on Tariff 31 and Tariff 41 and median export under Tariff 140

	Median Proportion	Median Export / Consumption (kWh)
T140		1 804 (export)
T31	39.6%	2 878 (consumption)
T41	60.4%	4 396 (consumption)

The median of the total grid consumption (7 275 kWh per annum) in 2021-22 is 1.8 per cent below the median grid consumption in 2018-19. The share of consumption between the two tariffs remained very similar.

The typical customer is estimated to export 1 804 kWh of electricity to the grid, which is 36.6 per cent below the median volume exported to the grid in 2018-19.

The annual electricity expenditure for a typical customer with this tariff combination would be \$1 852 in 2022-23 based on this consumption. The revenue received from exported electricity is treated as a rebate or deduction from the customer's electricity bill and is therefore included in the calculation of annual expenditure by customers in this category.

2.4 Tariff 31, Tariff 41 and Tariff 61

One typical customer represents the combination of Tariff 31, Tariff 41 and Tariff 61. Table 7 presents the adjusted median percentage breakdown and annual consumption for the typical customer on Tariff 31, Tariff 41 and Tariff 61.

Table 7: Median adjusted percentage and consumption for customers on Tariff 31, Tariff 41 and Tariff 61

	Median adjusted	Annual consumption (kWh)
T31	37.9%	4 120
T41	36.2%	3 940
T61	25.9%	2 811
Total		10 871

The typical customer's total consumption increased by 1.6 per cent from 2018-19 to 2021-22. There was also a shift towards more consumption under Tariff 41, up from 34.0 per cent in 2018-19 to 36.2 per cent in 2021-22.

The estimated consumption results in annual electricity expenditure of \$2 763 for a typical customer on Tariff 31, Tariff 41 and Tariff 61 in 2022-23.

2.5 Tariff 93

Tariff 93 is a time-of-use tariff for residential consumers with peak and off-peak rates, unlike the other regulated tariffs for residential consumers under which the rate remains the same, irrespective of the time of day the electricity is used.

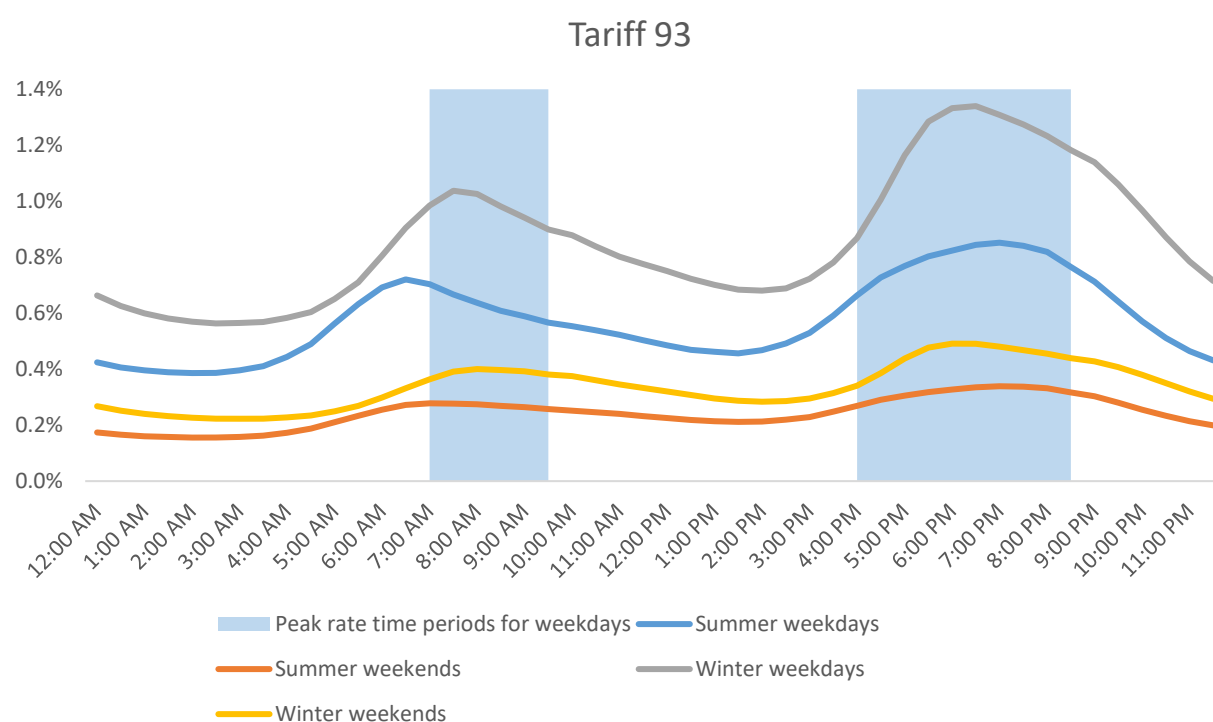
Three categories of typical customers have been identified to represent residential customers on Tariff 93: concession, non-concession and all customers. The Regulator uses the typical customers from the concession and non-concession groups for price comparison purposes.

Table 8: Typical electricity customers for the Tariff 93 customer groups

	Total consumption (kWh)	Peak (kWh)	Off-peak (kWh)	Annual expenditure
T93	7 932	2 392	5 539	\$2 062
Concession	7 508	2 247	5 261	\$1 395
Non-Concession	8 288	2 516	5 770	\$2 139

The median annual usage for a typical customer on Tariff 93 is 7 932 kWh, with 30.2 per cent consumed during the peak period and the remaining 69.8 per cent consumed during the off-peak period. Compared to the typical Tariff 93 customer identified from the 2018-19 data, the total annual consumption increased by 14.4 per cent to be above the total annual consumption for the median typical customer on Tariff 31 and Tariff 41.

Non-concession typical customers consumed slightly more during the peak period than concession typical customers, but the difference is less than 0.5 per cent. Similar to customers on the tariff combination of Tariff 31 and Tariff 41, total annual consumption is the highest for the typical customer on Tariff 93 without concession and the lowest for the typical customer on Tariff 93 with concession.

Figure 1: Consumption profile for Tariff 93 customers (per half hour as a percentage of annual consumption)¹⁸

The peak rate time periods shaded in Figure 1 apply only for weekdays with the off-peak rate applying for all other time periods.

The four curves in Figure 1 represent the percentages of annual electricity consumption that are consumed during any half-hour period on either summer weekdays, summer weekends, winter weekdays or winter weekends. For example, 0.5 per cent of annual consumption was consumed during the half-hour between 12pm to 12:30pm from all the summer weekdays in a year.

¹⁸ This chart uses consumption data from before 2021-22.

2.6 Tariff 140, Tariff 93

One typical customer represents customers with a combination of Tariff 140 and Tariff 93. Table 9 shows the median consumption and median export for a typical customer on Tariff 140 and Tariff 93.

Table 9: Median adjusted percentage and consumption for customers on Tariff 140 and Tariff 93

Tariff	Median export / consumption (kWh)
T140	3 416
T93	7 175

The total grid consumption for a typical customer with Tariff 140 and Tariff 93 is 7 175 kWh, with 30.8 per cent of consumption during peak periods and 69.2 per cent of consumption during off-peak periods. The estimated median consumption results in annual electricity expenditure of \$1 608 for this typical customer in 2022-23.

3. TYPICAL BUSINESS CUSTOMERS

Total annual consumption for all typical business customers has been estimated using Aurora Energy's customer consumption data for 2021-22. Annual expenditure is calculated using Aurora Energy's 2022-23 tariff rates. Details on the data and methodology used to identify typical business customers can be found in the Appendix.

3.1 Tariff 22

Tariff 22 is the general regulated tariff for small business customers. Tariff 22 has one rate for the first 500 kWh of electricity used per quarter and a lower rate for electricity used in excess of 500 kWh in that quarter.

The five typical customers using only Tariff 22 are shown in Table 10. These typical customers have been determined by breaking the population into five equally sized groups (based on consumption) and calculating the median for each group.

Compared 2018-19, total consumption for typical Tariff 22 customers decreased at all levels in 2021-22. For typical customers:

- with very low consumption, consumption decreased by 5.2 per cent;
- with low consumption, consumption decreased by 12.8 per cent;
- with overall median consumption, consumption decreased by 20.8 per cent;
- with high consumption, consumption decreased by 18.5 per cent; and
- with very high consumption, consumption decreased by 19.6 per cent.

Table 10: Typical Tariff 22 business customers and estimated annual electricity expenditure in 2021-22¹⁹

Consumption category	Total consumption (kWh)	Annual expenditure
Very Low	222	\$448
Low	1 179	\$838
Median	3 508	\$1 422
High	8 782	\$2 746
Very High	25 388	\$6 912

3.2 Tariff 75

Tariff 75 is a time-of-use tariff for irrigation customers.

The structure of charges under Tariff 75 is complex as it includes a daily supply charge, peak energy per kWh, off-peak energy per kWh and shoulder energy per kWh, which applies to electricity consumed during different time periods. An estimation of the split in usage between the three time periods is therefore required to be able to estimate an annual expenditure for the typical customer using Tariff 75.

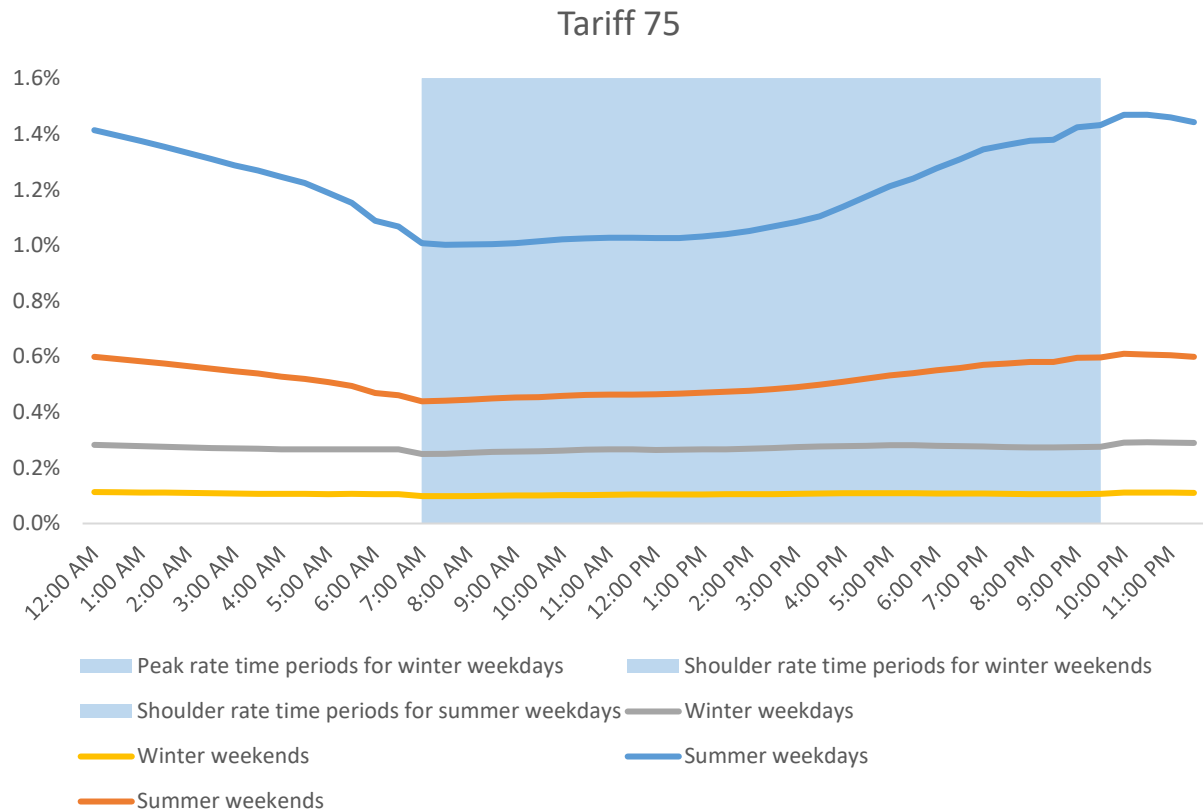
The median usage for a typical Tariff 75 customer was 14 994 kWh. Of this median usage, 5.6 per cent was consumed during peak periods, 54 per cent during off-peak periods with the remaining 40.4 per cent during shoulder periods.

¹⁹ Annual calculation assuming consumption is evenly distributed in every quarter of the year, as there is a two tier energy charge.

The annual expenditure for a typical customer on Tariff 75 in 2022-23 would be \$3 821.

Compared to 2018-19, consumption for a typical Tariff 75 customer decreased by 13.7 per cent, similar to the size of decreases observed in consumption for typical Tariff 22 customers.

Figure 2: Consumption profile for Tariff 75 customers (per half hour as a percentage of annual consumption)²⁰



The peak rate applies at time periods shaded in Figure 2 during weekdays in winter (1 April to 30 September). The shoulder rate applies at the same time periods during weekends in winter and for weekdays in summer (1 October to 31 March). The off-peak rates applies at all other times, including all weekends over summer.

The four curves in Figure 2 represent the percentages of annual electricity consumption that are consumed during any half-hour period on either summer weekdays, summer weekends, winter weekdays or winter weekends. For example, 1.0 per cent of annual consumption was consumed during the half-hour between 12pm to 12:30pm from all the summer weekdays in a year.

3.3 Tariff 94

Tariff 94 is a regulated time-of-use tariff available for small business customers.

The structure of charges under Tariff 94 is similar to Tariff 75, with a fixed daily supply charge and three different per kWh charges for consumption during peak, off-peak and shoulder rate time periods.

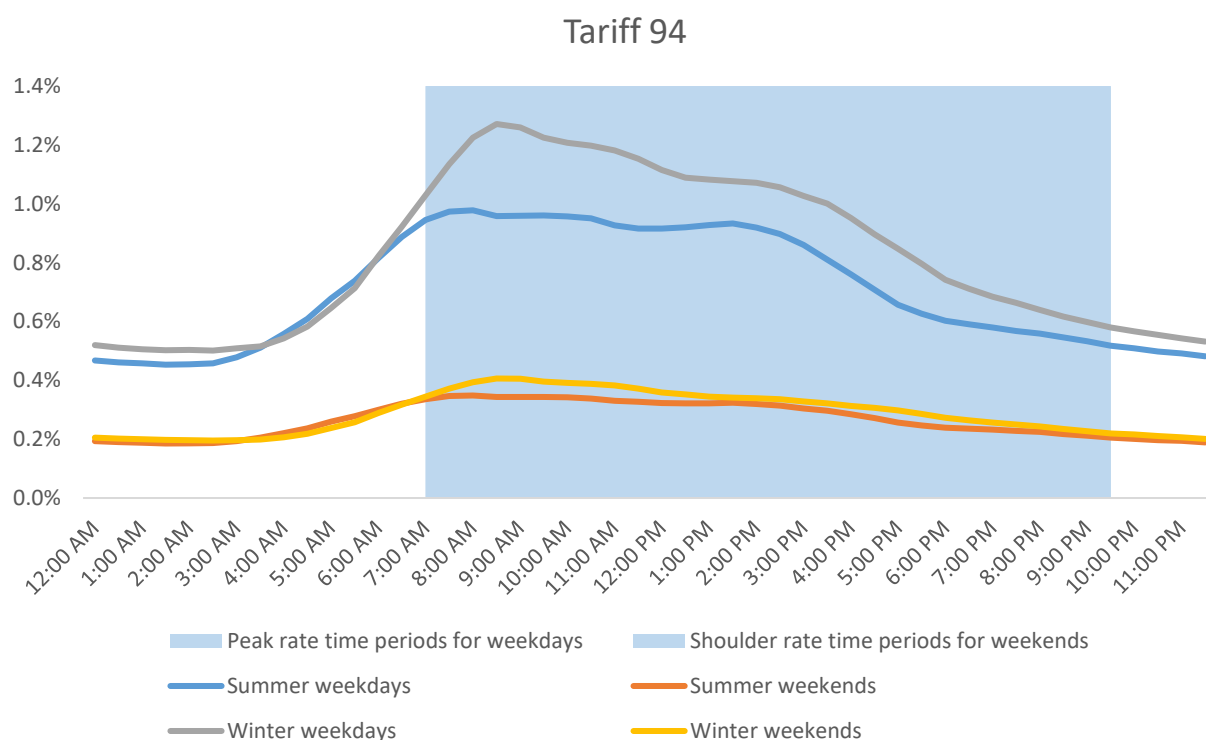
The median usage for a typical Tariff 94 customer is 12 180 kWh. Of this usage, 53.4 per cent is consumed during peak rate time periods, 28.4 per cent consumed during off-peak rate time periods with the remaining 18.2 per cent consumed during the shoulder rate time period.

²⁰ This chart uses consumption data from before 2021-22.

The annual expenditure for a typical customer on Tariff 94 would be \$3 075 in 2022-23.

Compared to 2018-19, consumption for a typical customer on Tariff 94 decreased by 68.2 per cent, significantly larger than the size of decreases observed for any other typical customers. The proportion of Aurora Energy's business customers on Tariff 94 increased from 4.3 per cent in 2018-19 to 14.4 per cent in 2021-22. The very large decline in median consumption is due, in part, to the large number of new business customers on this tariff that are lower consumption customers.

Figure 3: Consumption profile for Tariff 94 customers (per half hour as a percentage of annual consumption)²¹



The peak rate applies at time periods shaded in Figure 3 during weekdays, the shoulder rate applies to the same time periods during weekends while the off-peak rate applies for all other time periods.

The four curves in Figure 3 represent the percentages of annual electricity consumption that are consumed during any half-hour period on either summer weekdays, summer weekends, winter weekdays or winter weekends. For example, 0.9 per cent of annual consumption was consumed during the half-hour between 12pm to 12:30pm from all the summer weekdays in a year.

²¹ This chart uses consumption data from before 2021-22.

APPENDIX: METHODOLOGY AND DATA SPECIFICATION

Standing Offer Tariffs in Tasmania

Aurora Energy is the regulated offer retailer for mainland Tasmania and supplies electricity to small customers²² under a number of regulated tariffs and combinations of these tariffs with standing offer prices.

Residential customers are able to receive their electricity supply under the following regulated tariffs:

- Tariff 31 - residential light and power;
- Tariff 41 - residential space heating and hot water;
- Tariff 61 - off-peak with afternoon boost period;
- Tariff 62 - off-peak, night period only; and
- Tariff 93 - residential time of use.

Residential customers are also able to access:

- Tariff 140 - standard feed-in tariff for a distributed generation system; and
- Tariff 160 - feed-in for distributed generation systems too large to qualify for Tariff 140.

Business customers are able to receive their electricity supply under the following standing offer tariffs:

- Tariff 22 - general;
- Tariff 34 - nursing homes light and power;
- Tariff 43 - business hot water;
- Tariff 61 - off-peak with afternoon boost period;
- Tariff 62 - off-peak, night period only;
- Tariff 75 - irrigation time of use;
- Tariff 82 - monthly kVA demand low voltage; and
- Tariff 94 - business time of use.

Business customers are also able to access:

- Tariff 150 - standard feed-in tariff for a distributed generation system.

Prices for Tariffs 31 to 93 inclusive and Tariffs 22 to 94 inclusive are regulated as standing offer prices under the *Electricity Supply Industry Act 1995*. The Regulator determines the minimum rate for Tariffs 140 and 150 on an annual basis (the Regulated Feed-in Tariff Rate) and the rate for Tariff 160 is negotiated between the customer and Aurora Energy. Residential and business customers are also able to consume electricity under market retail contracts from Aurora Energy and other retailers. The prices payable under these contracts are not regulated.

Aurora Energy has not introduced any new tariffs since the release of the 2020 Typical Customer Report. While some tariffs listed above are not available to new customers, there are still existing customers on these tariffs. These tariffs have therefore been included in the above list.

²² Small customers consume less than 150MWh of electricity per year.

Data Specifications

In this report, a National Meter Identifier (NMI)²³ is used to represent an electricity customer. If there are multiple account ids with the same tariff under the same NMI, the load and billing days from the multiple account ids are added together. This is different from the previous report that used one account id to represent one electricity customer. This change is necessary because Aurora Energy has been migrating customers to a new billing system, with the customers migrated during 2021-22 having different account ids in each system and their consumption also split between the two systems.

All consumption data supplied by Aurora Energy relate to the 2021-22 financial year.

Aurora Energy customers are categorised as either residential customers or business customers.

To construct a typical customer's consumption profile for a financial year, the billing days would ideally be around 365 days to account for any seasonal variations in customer's electricity consumption. For this analysis, only customers with billing days between 330 days and 400 days are used for estimates of typical customers' annual consumption, with adjustments as set out below made to estimate consumption for 365 days.

Estimation Methods

In order to construct plausible typical electricity customer profiles for any tariff or tariff combination, there needs to be enough customers on each tariff or tariff combination. To include customers on any single tariff, at least 1 000 usable customer data are required. To include customers on any tariff combination, at least 2 000 usable customer data are required. As discussed earlier, useable customer data are customer data with between 330 and 400 billing days, inclusive.

For tariffs or tariff combinations that account for more than 20 per cent of all residential or all business customers on regulated tariffs, five typical electricity customers are identified, such that each typical customer represents 20 per cent of either all residential or all business customers on regulated tariffs.

The following method has been used to calculate electricity usage for typical customers:

1. for customers on a single tariff, annualise the median consumption so it represents 365 days of consumption;
2. for customers on more than one tariff, an estimate is made of the consumption under each tariff which is then adjusted to be consistent with the median level of consumption under all the tariffs.

This is done by:

- determining the annualised median consumption level per customer the same way as for a single tariff (as an example, for Tariff 31, Tariff 41 and Tariff 61, as presented in Section 2.4 of this Report, the median consumption was 10 871 kWh);
- calculating the shares or percentages of total consumption under each tariff for each customer;
- determining the median percentages for each tariff for all customers - for Tariff 31, Tariff 41 and Tariff 61, the median percentages are:
 - 35.8 per cent for Tariff 31;
 - 34.2 per cent for Tariff 41; and
 - 24.4 per cent under Tariff 61;

²³ A National Meter Identifier or NMI is a unique 10- or 11-digit number used to identify every electricity network connection point in Australia.

- adjusting these median percentages by the same factor so they sum to 100 per cent (in this case, the total is increased from 94.5 per cent (ie 35.8 per cent + 34.2 per cent + 24.4 per cent);
 - applying these adjusted percentages to the total median consumption level per customer to determine the median consumption level under each tariff (in this example, 37.9 per cent of 10 871 kWh under Tariff 31, 36.2 per cent under Tariff 41 and 25.9 per cent under Tariff 61, as in Table 7 of this report).
3. for customers on a tariff or tariff combination requiring more than one typical customer to adequately describe them due to the number of customers exceeding 20 per cent of all customers (residential or business) on regulated tariffs, the group is divided into an odd number of equally sized sub-groups based on their consumption and the method described above in 1 or 2 is then applied to each sub-group; and
 4. for customers on a tariff or tariff combination where there is a high degree of skewness in consumption levels²⁴, a second typical customer is added, representing either the top quartile or the bottom quartile depending on whether the skewness is positive or negative, to identify an additional typical customer.

In this case, the median consumption for all customers is used for the first typical customer, and the median consumption of the relevant quartile is used as the consumption level for the second typical customer.

If there are several typical customers for a tariff due to the large share of customers on that tariff, no additional typical customers are added on the basis of skewness.

The skewness of the distribution for different tariff or tariff combination used in this report ranges from 1.41 to 7.80. Therefore, no second typical customers need to be added for any tariffs or tariff combinations.

Table 11 below also shows the percentage of customers on those tariffs, or tariff combinations as a share of all residential or all business customers that are on regulated tariffs.

²⁴ Skewness is a statistical measurement which provides an indicator as to how far away the mean of the distribution differs from the median. A positive value for skewness indicates that there are a number of large values in the distribution which results in the mean exceeding the median. A negative value for skewness arises when the mean is below the median. This analysis uses the formula for skewness provided in Excel, which uses the median, the mean, the population size and standard deviation. A distribution with a skewness value greater than 1 or less than -1 is often defined as highly skewed. Since the 2020 Report, a skewness value of 10 is used as the cut off for defining a high degree of skewness for any distribution.

Number of Typical Electricity Customers

Table 11 shows the results, in terms of the number of typical customers identified, for single tariffs and tariff combinations. Some of the tariffs identified earlier are not included in the table as a very small number of customers receive their electricity supply under those tariffs.

Table 11: Tariffs and the number of typical customers identified

TARIFF	PROPORTION OF CUSTOMERS IN EACH CATEGORY ²⁵	PROPORTION OF CUSTOMER DATA USED ²⁶	NUMBER OF TYPICAL CUSTOMERS
Residential			
T140/T31/T41	8.4%	48.3%	1
T140/T93	2.7%	54.8%	1
T31	4.7%	52.9%	1
T31/T41	62.5%	52.7%	5
Concession	41.6%	49.2%	3
Non-concession	23.8%	48.0%	3
T31/T41/T61	2.5%	47.2%	1
T93	13.9%	64.3%	3 ²⁷
Business			
T22	69.3%	61.4%	5
T75	7.8%	56.2%	1
T94	14.4%	70.4%	1

Compared to the Regulator's previous report, *Typical Electricity Customers in Tasmania 2020*, the proportion of customer data used are lower for the majority of residential tariffs and tariff combinations, dropping from above 70 per cent to around 50 per cent. The exception is Tariff 93, where the proportion used increased from 14.0 per cent to 64.3 per cent.

For both residential and business customers, the proportion of customers on the time-of-use tariff has increased significantly since 2018-19.

²⁵ This refers to the percentage of all customers in the residential or business customer category which consumes under the tariff or tariff combination listed, for example, 62.5 per cent of all residential customer uses the combination Tariff 31 and Tariff 41.

²⁶ This refers to the percentage of all customers using a tariff or tariff combination which have billing days between 330 to 400 days. For example, 52.7 per cent of all residential customers using Tariff 31 and Tariff 41 were billed for greater than or equal to 330 days and less than or equal to 400 days by Aurora Energy during 2021-22.

²⁷ This includes one typical concession and one typical non-concession customer.

