



COMMUNITY CARBON AND ENERGY FOOTPRINT

KINGBOROUGH MUNICIPALITY REPORT 2023



Kingborough



ABOUT THE COMMUNITY (MUNICIPAL) CARBON AND ENERGY FOOTPRINT

The Community (municipal) Carbon and Energy Footprints (CmCEF) have been developed as part of the Southern Councils Climate Collaboration. The Collaboration is an initiative of the Southern Tasmanian Councils Authority's (STCA) climate program, the Regional Climate Change Initiative (RCCI). It is supporting the 12 southern councils to build capacity and capability to develop climate responses, to reduce carbon emissions and energy use, and respond to the challenges and opportunities of a changing climate.

The Collaboration uses a common and consistent approach to work with councils to find local solutions. The approaches and resources used in the Collaboration have been developed specifically to meet the role and functions of councils and enable actions to be scaled between councils or regionally resulting in greater efficiencies and avoid duplication.

To support councils in understanding carbon footprints and energy use within their municipal areas the Collaboration developed a peer reviewed open-source model that uses reliable historic and current energy trends, which uses publicly available Australian Energy Statistics and National Greenhouse Accounts Factors data and is supported by other key government datasets. It is freely available to the Australian local governments, Australia-wide, to encourage common and pragmatic reporting and scalability of actions across the sector.

The CmCEF uses national carbon accounting methods set out by the Australian Government in its National Greenhouse and Energy Reporting (Measurement) Determination 2008 legislation.

This project compliments the Council Carbon and Energy Footprints that support Councils in understanding their own corporate emissions and where there are opportunities exist to reduce these.

METHOD

This report has been created by local government, using national and State Government statistics.

Southern Tasmanian and Launceston City councils have worked with TasNetworks to publish data on electricity used by households and businesses and show localised electricity generation, which is not widely available in other jurisdictions.

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- City of Hobart developed and piloted the initial methodology for community emissions
- TasNetworks provided residential and commercial/industrial sector electricity data
- Brighton Council, provided in-kind expertise and technical support
- TasWater, providing water and sewerage emissions data
- STCA RCCI provided waste data for councils across the southern region

CONTENTS

KEY MESSAGES	4
KINGBOROUGH COMMUNITY (MUNICIPAL) CARBON AND ENERGY FOOTPRINT	6
WHAT IS AN EQUITABLE WAY TO ALLOCATE EMISSIONS FROM INDUSTRY AND TRANSPORT?	7
WASTE AND SEWERAGE EMISSION SOURCES	7
KEY INDUSTRIAL TRENDS FOR TASMANIA, AUSTRALIAN ENERGY STATISTICS	8
TRANSPORT ENERGY USE AND EMISSIONS TRENDS	10
KINGBOROUGH LOCAL ENERGY USE TRENDS	11
FREQUENTLY ASKED QUESTIONS	15
METHOD CHANGES	17

FIGURES

FIGURE 1. Proportion of greenhouse gas emissions in tonnes of carbon dioxide equivalent emitted by community sector	6
FIGURE 2. Industrial emissions by energy sources (tCO ₂ e) 2020-21	8
FIGURE 3. Energy use emissions sources in the residential sector in Gigajoules (GJ)	11
FIGURE 4. Electricity use across the residential and business sector	12
FIGURE 5. Renewable electricity generation across the residential and business sectors	13

KEY MESSAGES

The 2023 Community Carbon and Energy Footprints, produced for the 12 southern Tasmanian councils highlights more needs to be done to reduce emissions.

Higher impact emission reduction efforts are required as more than 275,266 tonnes of carbon dioxide equivalent (tCO₂-e) are released into the atmosphere every year from activities in the Kingborough's municipal area. This is equivalent to 61,255 vehicles driving around for one year.

Greenhouse gas emissions, mainly come from burning fossil fuels (coal, petrol and diesel, gas), and must urgently be reduced if we are to avoid the worst impacts of climate change.

Industrial and transport sector energy use are clearly the largest emitters (over half of community emissions) and a key focus for government, community, and private sector emission reductions. Combined the commercial and residential sectors contribute 14% of community emissions and the waste, sewerage and agricultural sectors contribute 11%. Emission reduction actions are needed across all sectors.

Leading International Climate Change Bodies, scientists, and Governments around the world have determined that greenhouse emissions must urgently be halved if we are to limit more than 1.5C of warming.

The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for assessing climate change science. Its most

recent report, the Sixth Assessment Report March 2023, warns urgent action is required to cut emissions by nearly half by 2030 to limit warming to 1.5C for a safe and liveable planet.

Local governments throughout Australia are acting to reduce greenhouse gas emissions and prepare for the changing climate.

The 12 southern Tasmanian councils, collaborating through a regional climate alliance, developed a community (municipal) emissions methodology for waste and energy based on current reporting methods and protocols. Community greenhouse and energy footprints were completed for each of the councils in 2019 and updated in May 2023.

This report identifies emissions sources that require substitution with low emission fuels, products, and services.

Recording and reporting community emissions, technology adoption and energy use can reveal successes over time, highlight the role of emerging industries, and increase accountability towards a low to zero emission future.

Energy statistics show emerging technologies that are making a difference.

Rooftop solar installations have doubled across the LGA in a matter of years and provide 9.4 million units generated locally back to the grid, registered electric vehicles have grown from 7 in 2018 to 27 in recent years.



Community energy use and waste greenhouse gas emissions footprints	Community footprint 2023
Brighton community	275,266 tonnes of carbon dioxide (tCO ₂ -e)
Regional community	2,788,000 tonnes of carbon dioxide (tCO ₂ -e)
Tasmanian community	3,720,000 (tonnes of carbon dioxide (tCO ₂ -e)

Sources (left to right, top to bottom): Regional Community Energy Use and Greenhouse Gas Footprint, STCA, 2023; Australian Energy Statistics, Australian Government, 2023; Australian Greenhouse Gas Accounts Factors (Tasmania) 2022. Renewable Energy Climate Future Industries Tasmania, 2023.

We all have a role to play to reduce emissions. The world is moving towards zero emissions, achieving this is a huge challenge that requires all members of the community to do their part.

Local governments have a key role increasing public understanding by being a corporate leader in the commercial sector, and through communicating successful local initiatives to our households and communities.

Small actions together can have a large impact.

The southern Tasmanian local government areas are responsible for over half of Tasmania's energy and waste emissions.

We can make a difference – our combined efforts have flow on impacts around the world.

Switching away from fossil fuels and other emissions sources such as coal (from manufacturing) continues to contribute the most, as well as reducing gas, diesel, petrol, and wood use will all work to reduce the impact of global warming on climate change. While Tasmania is a smaller contributor to Australia's emissions, than other states and territories, due to a high percentage of renewables in the electricity mix, greenhouse gas emissions are currently contributing to global warming across all sectors.

Southern Tasmanian councils are leading and targeting permanent emission and energy reductions.

The RCCI STCA councils have identified four key areas for climate action moving forward:

1. Warm healthy homes
2. Low carbon transport
3. Energy efficient businesses
4. Minimise methane emissions from waste and sewerage

On behalf of researchers, public officials, decision makers, community sustainability champions and students who can all access this information to help inform the debate on best practice abatement (emissions reductions), the RCCI makes special acknowledgement of:

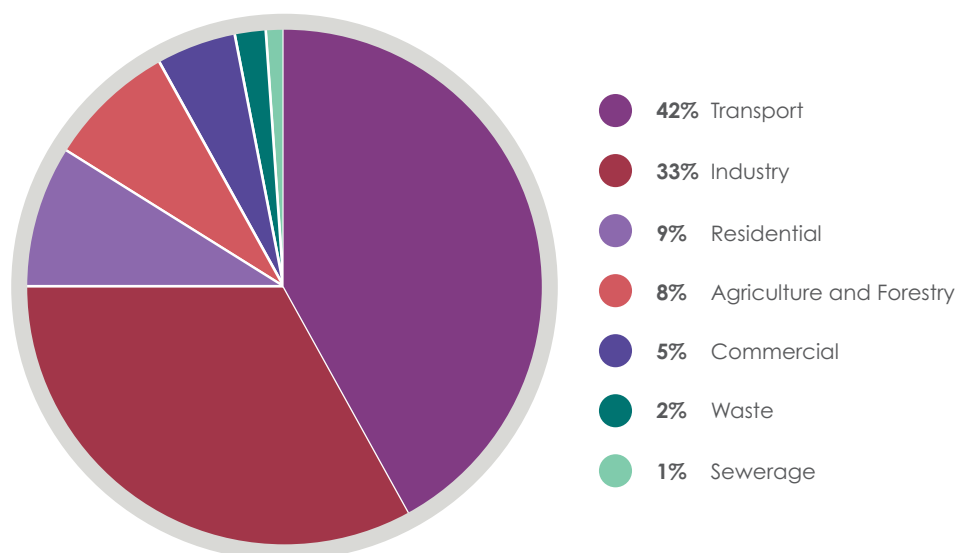
- TasNetworks for providing metered electricity data for the residential, commercial (and industrial sectors as part of the commercial data);
- RCCI members for ongoing review, support and data testing;
- The Local Government Association of Tasmania for advocacy; and
- Renewable Energy Climate Future Industries Tasmania for advocacy to access local community data.

KINGBOROUGH COMMUNITY (MUNICIPAL) CARBON AND ENERGY FOOTPRINT

Kingborough Community (municipal) Carbon and Energy Footprint (CMCEF) results show that 275,266 tonnes of carbon dioxide emissions (tCO₂-e) were released in 2021-22.

The municipalities biggest source of energy and waste emissions continues to be the transport (42%), followed by the industrial (33%) and residential (9%) then commercial (5%) sectors, followed by agriculture and forestry (8%), waste (2%) and sewerage (1%) sectors.

Figure 1. Proportion of greenhouse gas emissions in tonnes of carbon dioxide equivalent emitted by community sector



Source: Southern Tasmanian Councils Authority, 2023.

Data sources: Australian Energy Statistics, 2023, TasNetworks, 2023, TasWater, 2023, STCA RCCI Southern Councils Snapshot Report, 2023.

Overall energy and waste community greenhouse gas emissions have reduced by 25%.

Energy emissions have decreased by 26%, the reductions were most significant from industry (69,687tCO₂-e), followed by the commercial (6,609tCO₂-e) and residential (15,253tCO₂-e) sector. Waste emissions increased by 60 tCO₂-e.

What is an equitable way to allocate emissions from industry and transport?

Transport emissions are created from passenger vehicles (travelling to work and play), travelling by road, as well as rail, freight, by boat and by aeroplane.

Road transport is the largest creator of transport emissions, particularly from petrol and diesel. In this community profile transport emissions are allocated based on per capita, rather than location. It is likely that the larger cities have more of an emissions footprint. However, location specific models will allocate airports to the LGA they are located, when emissions here are the responsibility of everyone who flies.

In the future there may be highly accurate mobile phone data on journey's travelled and locations, this is still in its infancy for smaller cities such as Hobart.

Industrial emissions largely come from coal and natural gas use, and are also allocated per capita across LGA's, even though a few key locations are responsible for a large portion of industry sector emissions.

Industrial and transport emissions might not reflect local trends as data sources are based on Statewide trends. Until all local industrial companies volunteer their emissions data to a central reporting agency, or the Australian Government regulatory reporting bodies negotiate commercial in confidence concerns for public data release these datasets will be largely inaccessible.

Waste and sewerage emission sources

Emissions from waste are sourced from kerbside and Waste Transfer Station tonnages from council records. The Australian Government provides a waste emissions methodology that outlines the emissions from organic matter rotting in landfill and creating methane emissions. Kingborough's waste emissions are:

Kingborough Council	Landfilled Waste (tonnes of carbon dioxide equivalent tCO ₂ -e)	Non-landfill Organic Waste (tCO ₂ -e)	Total waste emissions (tCO ₂ -e)
2019/20	5,204.4	-	5,204.4
2020/21	5,185.0	70.3	5,255.3
2021/22	5,155.2	109.2	5,264.4

NB: not all community waste to landfill is captured this way i.e. commercial waste is not included.

Waste emissions most likely increased in Kingborough due to the large population growth from 35,723 people in 2014-15 to over 40,000 in 2021. The annual waste tonnage to landfill also increased from 5,204 in 2019-20 to 5,264 tonnes in 2021-22.

Sewerage emissions estimated are calculated on a per capita basis. TasWater provides an estimate for water, sewer, and other emissions per capita, then this factor is multiplied by the population.

In rural areas, such as rural Kingborough, these figures are not as accurate as in urban areas, as there are many households on septic tanks. While the emissions from septic tanks can be calculated using Australian Government techniques there is limited information on the number of septic tanks. This is an area for further research.

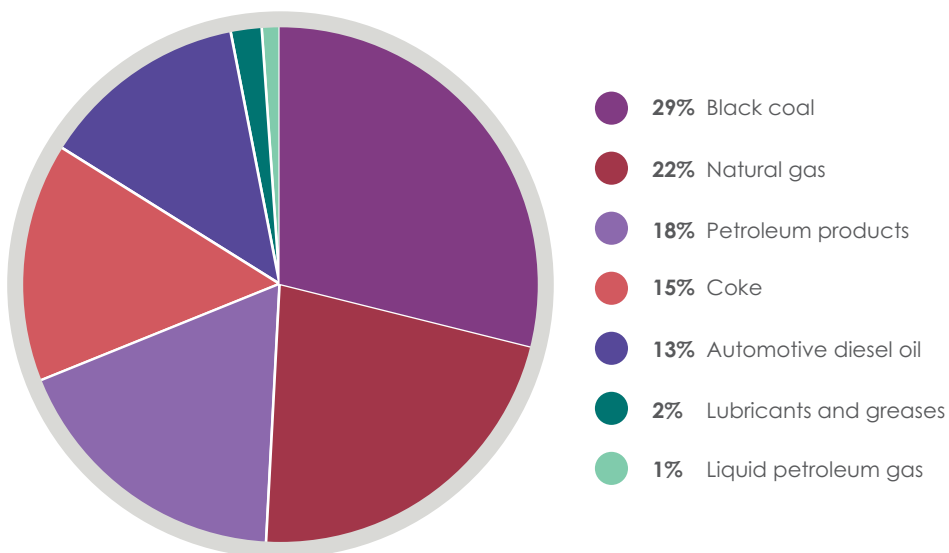
Emission reductions occurred in the industrial, commercial, and residential sectors, in part due to Covid.

Covid restrictions reduced travel, reduced the viability of some commercial businesses, and shifted electricity use from the commercial sector to residential as more people worked from home. National and state policies, market trends and commercial supply lines have been having a large impact on industry trends, while local electricity use trends reflect population growth, local climate conditions and economic growth. The emissions coming from Tasmanian electricity use also decreased over the last decade, even though this rose slightly in the last year.

Key industrial trends for Tasmania, Australian Energy Statistics

Industrial emissions mainly come from burning black coal (29%), natural gas (22%), coke (15%), petroleum products (18%) and diesel oil (13%).

Figure 2. Industrial emissions by energy sources (tCO₂e) 2020-21



Industrial emissions are also allocated per capita across LGAs, even though a few key locations are responsible for a large portion of industry sector emissions.

Industrial and transport emissions might not reflect local trends as data sources are based on Statewide trends. Until all local industrial companies volunteer their emissions data to a central reporting agency or the Australian Government regulatory reporting bodies negotiate commercial in confidence concerns for public data release these datasets will be largely inaccessible.

Table 1: Community greenhouse gas emissions in tonnes of carbon dioxide equivalent

GHG emissions	2010-11	2020-21	Growth % over the decade	Total difference between 2010-11 and 2020-21
Agriculture and Forestry	12,772	22,604	56	9,832
Commercial	20,043	13,434	-39	-6,609
Industry	160,319	90,631	-56	-69,687
Residential	39,129	23,876	-48	-15,253
Transport	114,749	116,307	1	1,558
Waste	5,204	5,264	1	60
Sewerage	2,163	3,149	37	986
Grand Total	354,380	275,266	-25	-79,113
Subtotal energy	347,012	266,853	-26	-80,160

Source: Southern Tasmanian Councils Authority, 2023.

Data sources: Australian Energy Statistics, 2023, TasNetworks, 2023. Australian Greenhouse Gas Accounts Factors (Tasmania) 2022. The Midpoint method for determining growth rates is used.

Kingborough community energy use has decreased by 1% from 2010-11 to 2021-22 to 5,408,348GJ.

Industrial energy use decreased by 37% and transport energy use increased by 1%, while residential energy use increased by 42%, as well as increasing agricultural (56%) and commercial (6%) growth.

Table 2: Community energy use in Gigajoules (GJ)

Energy use (GJ)	2010-11	2020-21	Growth % over the decade	Total difference between 2010-11 and 2020-21
Agriculture and Forestry	182,409	323,028	56	140,619
Commercial	273,265	289,774	6	16,508
Industry	2,255,952	1,556,748	-37	-699,204
Residential	877,976	1,347,626	42	469,649
Transport	1,865,841	1,891,174	1	25,333
Grand Total	5,455,443	5,408,348	-1	-47,095

NB: change in residential energy use is in part due to increasing the accuracy of postcode energy use divisions between shared postcodes.

Source: Southern Tasmanian Councils Authority, 2023.

Data sources: Australian Energy Statistics, 2023, TasNetworks, 2023. The Midpoint method for determining growth rates is used.

Transport energy use and emissions trends

Emissions from transport have changed over time. Before the year 2020-11 transport emissions consistently increased over time. Since 2020-11 emissions fell to an all-time low in 2017-18. Emissions rose since then and decreased during the covid period of 2019-20, then increased again in 2020-21. The difference between a decade ago and 2020-11 is so similar in some regions there is a slight decrease or a slight increase (tends to be the larger municipalities where the total energy used and emissions are higher).

Transport GHG emissions tCO ₂ -e	2010-11	2020-21	Difference between 2010-11 and 2020-21
Auto gasoline-unleaded	63,687	43,945	-19,742
Aviation gasoline	165	46	-119
Aviation turbine fuel	4,889	2,703	-2,186
Fuel oil	494	851	357
Kerosene and heating oil	0	0	0
Lubricants and greases	0	0	0
Natural gas	317	86	-230
Petroleum products	8	0	-8
Liquid Petroleum Gas	1,325	0	-1,325
Automotive Diesel Oil	43,864	68,416	24,552
Liquid/Gas Biofuels	0	259	259
Total GHG emissions	114,749	116,307	1,558

The clear switch from petrol to a higher emission fuel, diesel, led to an increase in emissions. The table above shows that there is a clear technology/user preference trend towards diesel vehicles, driving up diesel fuel use, while petrol use has decreased.

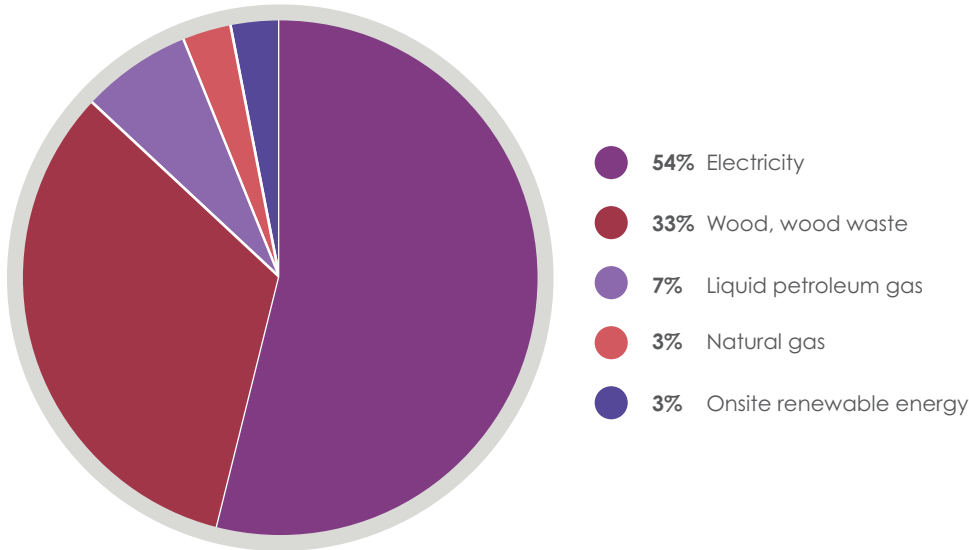
Emissions footprint from each Gigajoule generated		
Energy sources	Emissions per unit of energy used	Footprint from example 60,000 GJ per annum
LPG	61.5 kgCO ₂ -e /GJ	3,690,000 kgCO ₂ -e
Auto gasoline-unleaded	67.42 kgCO ₂ -e /GJ	4,045,200 kgCO ₂ -e
Diesel	70.5 kgCO ₂ -e/GJ	4,230,000 kgCO ₂ -e
Electricity (Tasmania)	39 kgCO ₂ -e /GJ	2,340,000 kgCO ₂ -e

Diesel emissions are 184 tonnes of CO₂-e more than petrol in the example used in the table above. If vehicles use electricity the emissions footprint is even lower, saving an estimated 1,890 tonnes of CO₂-e per annum.

Electricity use is more than half of residential and commercial sector energy use, providing a good indication of energy trends in the sector.

Metered electricity use and generation data provides high accuracy localised energy use information, improving insights into local electricity use.

Figure 3. Energy use emissions sources in the residential sector in Gigajoules (GJ).



Source: Southern Tasmanian Councils Authority, 2023.
Data sources: Australian Energy Statistics, 2023, TasNetworks, 2023.

Kingborough local energy use trends

Emissions factors have decreased significantly from 2010-11, which has the greatest effect (mainly due to electricity use being the main residential sector energy use) on overall emissions reduction, despite total residential electricity use increasing significantly.

Contrary to the Tasmanian Energy Statistics, which suggest a halving of wood use over the last decade, Kingborough is likely to have higher wood use than in more urban areas. LPG use has doubled over the same time across Tasmania in the residential sector, which may reflect the Kingborough area

well, with many off-grid residential homes, however, it is unlikely that Kingborough reflects the Tasmanian average with wood a preferred heater option and lower popularity of gas appliance cooking more generally. Hot water systems and BBQs are likely to be the main gas users in homes.

Kingborough LGA covers growing urban centre and relatively large rural and mainly agricultural area. Known for its horticulture and aquaculture and tourism, the area has milder local climate by the coast, and a highly seasonal visitor profile.

Total electricity was higher in 2020-21 compared to 2017-18.

Households on average are using slightly higher electricity in 2021 compared to 2016 in Kingborough, and total residential electricity use is higher. Average commercial electricity use has increased. High new business meter connections (70) and 2077 new residential connections has meant emissions from the residential and commercial sectors are higher in 2020-21 than in 2010-11.

Table 3: Residential and commercial electricity National Meter Identifiers (NMI) connections

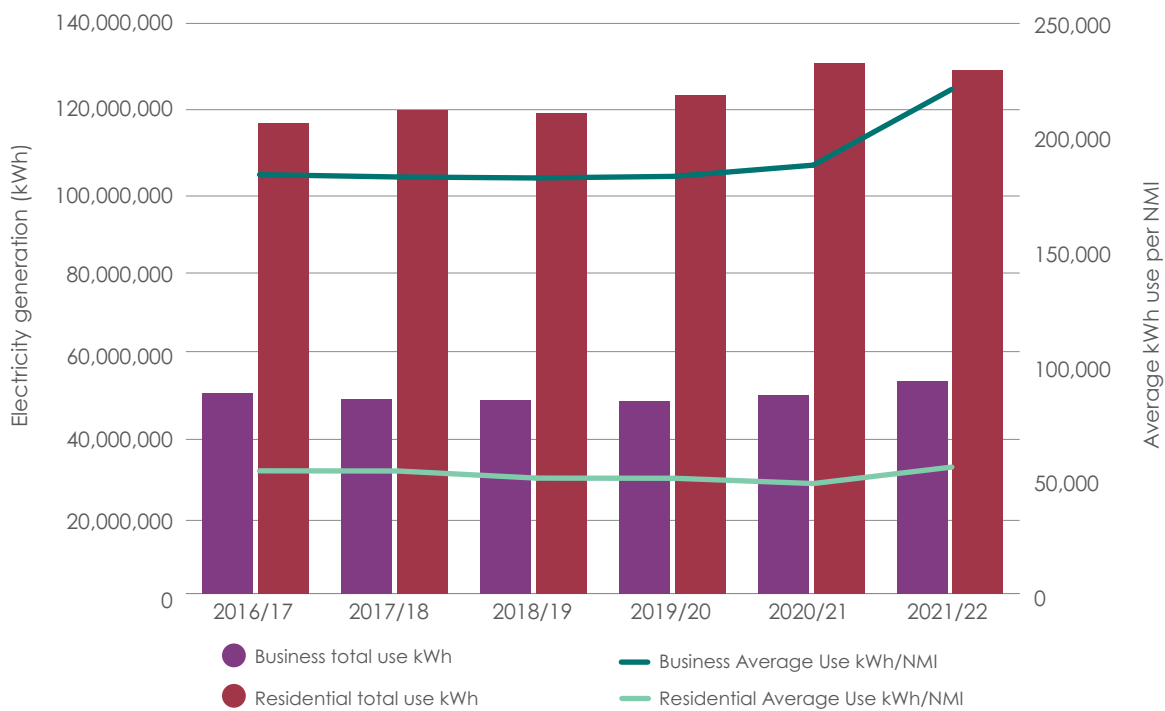
Values	2016-17	2017-18	2018-19	2019-20	2020-21
Business NMIs	1,196	1,215	1,207	1,247	1,266
Residential Use NMIs	13,837	14,280	15,056	15,699	15,914

NB: Ridgeway shared postcode boundary was adjusted altering the number of NMI's in Kingborough slightly.

Data source: TasNetworks, 2023.

NB: Electricity meter connections are based on National Meter Identifier (NMI) data. Electricity use is represented as kilowatt hour (kWh). One kWh is equal to one unit on electricity bills. This includes both commercial and industrial facilities to protect the identification of facilities at a local level.

Figure 4. Electricity use across the residential and business sector



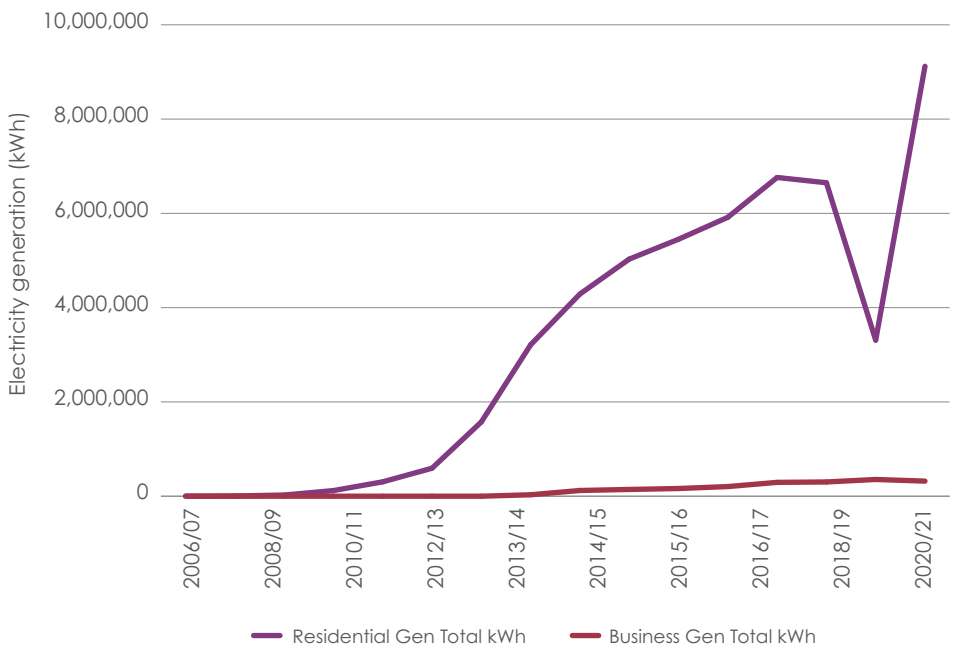
Data source: TasNetworks, 2023.

NB: Electricity meter connections are based on National Meter Identifier (NMI) data. Electricity use is represented as kilowatt hour (kWh). One kWh is equal to one unit on electricity bills. This includes both commercial and industrial facilities to protect the identification of facilities at a local level.

Emerging electric vehicle technologies and the prevalence of rooftop solar continue to have a positive impact, reducing emissions and changing the way the electricity sector interacts with household and business consumers.

In the Kingborough LGA, registered electric vehicles went from 7 in 2018 to 27 in 2020. Locally 3,125 homes and businesses are generating to supply renewable energy onsite in addition to exporting over 9.4 million units or kWh to the electricity grid. The bulk of renewable energy systems are likely to be the more dominant technology of rooftop solar photovoltaic systems.

Figure 5. Renewable electricity generation across the residential and business sectors



Data source: TasNetworks, 2023.

NB: Electricity meter connections are based on National Meter Identifier (NMI) data. Electricity use is represented as kilowatt hour (kWh). One kWh is equal to one unit on electricity bills. This includes both commercial and industrial facilities to protect the identification of facilities at a local level.

Southern Tasmanian councils are displaying leadership and are at the forefront of information provision to target permanent emission and energy reductions



There are key areas for climate action where energy and greenhouse gas information can assist with project/program development and implementation:

- Energy efficient businesses – the industrial and commercial sectors can often represent a larger portion of local community emissions. Developing local partnerships via a climate action agreement can help promote local champions, provide data reporting, accountability, and case studies to stimulate further action across the sector.
- Agricultural and forestry energy use is primarily focused on energy use associated with businesses. Energy audits, such as walk through audits, can help identify key areas for energy bill savings, develop case studies, and identify the best possible tariff arrangements, or result in early issue identification. Total commercial electricity use per meter or average electricity use can help measure the effectiveness of any interventions.
- Low carbon transport – Transport is a key area for emission reductions. There is a strong push to change to electric vehicles, yet currently these are a very small portion of the transport market. The Australian Bureau of Statistics provides the number of registered vehicles in local areas, gives an indication of the adoption of electric vehicles, the age of vehicles selected, the number of vehicle per household and user technology/energy preferences. Active transport planning can encourage consumers to choose public transport or walk/ride.
- Warm healthy homes – programs can not only improve the energy efficiency of the home but improve other health outcomes, such as reduced mould from warmer, drier homes. Mould and asthma can be the cause of underlying respiratory problems in the very young or elderly. Total household electricity use and average household electricity use provides an indication of the effectiveness of home energy use awareness raising programs and alongside the Home Energy Audit Toolkit (HEAT) available for free from councils, can provide the top 10 ways to reduce residential energy use.
- Minimising methane emissions from waste are directly linked to the amount of organic matter rotting in landfill. Greater organic waste recycling will decrease emissions and can be measured via the tonnes of waste to landfill. Food Organics and Garden Organics waste services reduce the total immediate emissions coming from landfill as do awareness raising programs that work with local businesses and schools.
- Sewerage emissions can be reduced through the types of sewerage collection i.e. from remote sewerage tanks to specifically designed treatment facilities that can capture the methane gas or alter the composition of the material to reduce emissions. TasWater is the primary agency responsible for water and sewerage decisions.

FREQUENTLY ASKED QUESTIONS

Why report community emissions?

Local governments voluntarily report to a range of bodies on community emissions and answer a range of queries from individual community members, scientists, researchers, policy makers and program developers. Having clear evidence regarding source emissions helps plan and guide decision-making for the transition to a low carbon economy.

Why provide local energy and emission trends?

Greenhouse gas emissions accounting relies on energy use information, such as measured electricity generation. This project provides community access to local energy use by postcode. Each council is provided with this data from reliable government and government business enterprises so communities across the southern region of Tasmania can access energy and greenhouse gas information compiled at a local level. This includes detailed and accurate electricity data measured at the meter by TasNetworks which provides insights into electricity use and onsite renewable energy generation trends at a household and business level. Completing an initial energy and greenhouse gas snapshot provides a starting point whereby targets can be set, plans developed, and community projects can be evaluated over time. This reflects a well-established international framework for driving and documenting community climate change action to reduce greenhouse gas emissions.

What do the changes identified mean for our communities?

The results show common ground and unique energy and greenhouse trends across communities. Common findings across municipalities show average residential electricity use does not jump considerably suggesting households have improved the energy efficiency of buildings or are responding to other factors that drive electricity use to find savings. Consumer behaviour in commercial premises and the home have been influenced by increasing awareness of energy costs and actions as well as factors such as:

- the weather
- population or business growth
- price signals
- the use of energy efficient appliances and materials
- government programs
- energy efficiency measures, such as insulation, buffer the impact of extreme temperature events reducing the demand for heating and cooling, decreasing electricity use
- renewable energy is expanding in every municipality, with solar photovoltaics (PV) the most popular technology
- electric vehicles are gaining in popularity with exponential growth in the southern region

For unique trends in each municipality see the individual summary papers or regional summary document.

How else can this information be used?

Electricity use data is metered, so it can be used to measure the effectiveness of programs following the installation of energy saving measures such as insulation, efficient heating, and draught proofing. This evidence can then be used to guide program priorities or the development of improved programs. By outlining how energy and greenhouse estimates are made, and providing a clear methodology, the energy and greenhouse gas footprints can be repeated over time. This is a nationally and internationally accepted process. Developing a baseline energy and greenhouse summary is one of the first steps to taking effective mitigation action.

Why are local governments involved in providing climate change information?

Tasmanian councils are required by the Local Government Act to provide for the health, safety, and welfare of their communities. Although not specifically detailed, it is self-evident that climate change impacts on communities, not only in terms of increased temperatures and weather-related events, but also in terms of efforts to reduce energy use and greenhouse gas emissions as we transition to low carbon future. Therefore councils, as well as considering climate matters in their programs and services, also have a key role in supporting communities to ensure relevant information is available to enable informed decision making. The provision of current and accurate energy and greenhouse data by councils helps the community to know where they can most effectively act, as society transitions to a low carbon future, such as whether to invest in an energy upgrade, or renewable energy technologies, or participate in activities within their communities to facilitate change.

It is self-evident that climate change impacts on communities, not only in terms of increased temperatures and weather-related events, but also in terms of efforts to reduce energy use and greenhouse gas emissions as we transition to low carbon future.

How accurate are the results using this method?

This method is a robust and sound approach as it relies on government verified energy statistics (the Australian Energy Statistics for Tasmania, applied per capita) and substitutes Tasmanian estimates with more accurate local data, where available. The accuracy of the results has been significantly increased by using the metered electricity data from TasNetworks. In the residential and commercial sectors this means around half of the energy information provided is very accurate, as electricity use is a large portion of the results. Standard government determined emissions factors (Australian National Greenhouse Accounts Factors), are used for all energy uses, such as electricity, diesel, and petrol, and have been used to calculate greenhouse gas emissions. As with any method for estimating energy use and greenhouse gas emissions there are areas that can be improved over time. These include estimates for wood use and non-energy related emissions (currently excluded) such as industrial chemical emissions, forestry, and agricultural emissions.

METHOD CHANGES

Since the last reports were completed, councils reporting in 2023 have tried to improve reporting by addressing the following reporting challenges:

Most up-to-date information – the Australian Energy Statistics for Tasmania, National Greenhouse Gas Accounts factors and Australian Bureau of Energy statistics (electric vehicles census data) have been updated yearly since 2019, so this round of reporting includes several more years of data.

Increasing scope of emissions included – estimates for waste and sewerage have been included for the first time. Both areas do not cover all emissions from each sector, rather a portion. For example, waste emissions are taken from the corporate inventories reported across the region and include only the measured waste to landfill, not commercial waste delivered outside of this. In the sewerage sector an estimate per capita has been used and does not account for the differing sewerage arrangements in regional areas, such as septic tanks, that have a differing emissions profiles.

Population growth now included – the last iteration of reporting used standard population figures and now these population figures are updated yearly, better reflecting growth and per capita energy use.

Tasmania's emissions factors fluctuate due to variations in our energy mix (for example an increase in natural gas due to the Basslink failure saw an increase in the emissions factor for Tasmania) so emissions factors are revised yearly and have been revised historically sometimes changing the total emissions reported in hindsight.

Factors such as seasonal change continue to be hard to separate out: It is a significant challenge to identify a single factor influencing yearly electricity use results - this is an area for further research. Heating Degree Days indicate whether there have been seasonal changes to heating needs. Project data is received on an annual basis, which does not allow for more detailed analysis of the impact of seasonal changes from year to year.

The range of data on transport is represented in the detailed data rather than summary reports. The Australian Bureau of Statistics has a range of information on local transport trends such as the southern Tasmanian region age of vehicle stock, fuel choices, commuter choices such as public transport, walking or cycling support.

State-wide energy statistics have been used for sectors such as industry, transport, and agriculture, suggesting any change in the larger industries impacts results in all communities. This is due to the lack of complete, up to date, and accurate local data on energy use available.

Please email if there are datasets available that would be of use to local government community emission footprints going forward:
alison.johnson@brighton.tas.gov.au





CITY OF HOBART COMMUNITY ENERGY USE AND GREENHOUSE GAS FOOTPRINT SUMMARY

PUBLISHING DETAILS The Southern Tasmanian Regional and Municipal Energy and Emissions Project 2018, was endorsed in the Regional Climate Change Initiative (RCCI) Action Plan 2021, by the Board of the Southern Tasmanian Councils Authority (STCA) in November 2021. First version by Southern Tasmanian Councils Authority, Regional Climate Change Initiative April 2019. Second publishing 2023.

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REGIONAL
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