

# switch

## your thinking



**Business Plan**  
2020-21 to 2024-25

## GLOSSARY

Term	Definition
Emissions	Greenhouse Gas Emissions
GHG	Greenhouse Gas
Group	The South East Regional Energy Group
IP	Intellectual Property
KPI	Key Performance Indicator
LGA	Local Government Area
MOU	Memorandum of Understanding
Program	The Switch Your Thinking program
SEREG	The South East Regional Energy Group
SYT	The Switch your thinking program
TOR	Terms of Reference
UHI	Urban Heat Island
VPP	Virtual Power Plant
WA	Western Australia



## EXECUTIVE SUMMARY

Switch your thinking (SYT) supports the community and local government partners to reduce their greenhouse gas (GHG) emissions. This Business Plan outlines strategies and actions that will be undertaken between 2020/21 and 2024/25.

In the current business cycle (2015/16-2019/20), the Program achieved significant success in expanding revenue streams and accomplishing all key actions and objectives set out in the Business Plan.

Highlights of the 2015/16-2019/20 business cycle include:

- Securing over \$986,500 of funding from external sources (\$313,537 in Intellectual Property and sponsorship fees and \$673,033 in grant funding) to assist the South East Regional Energy Group (SEREG) partner local governments to undertake corporate and community emission abatement and sustainability projects.
- Building a digital presence that reached over 138,847 community members in 2019.
- Engaging over 22,800 residents, 90 businesses and 78 schools in sustainability programs and events.
- Attracting a record number of member Intellectual Property (IP) licence local governments.

The key actions and recommendations outlined in the Business Plan 2020/21 – 2024/25 are designed to efficiently achieve GHG abatement while meeting community and stakeholder expectations through:

- Focusing on key areas of local government influence (building, development, renewable energy and infrastructure).
- Fostering innovation through research and collaboration.
- Leveraging existing strong community support and partnerships.
- Implementing efficient delivery mechanisms.
- Growing external revenue.

Executing the recommendations and initiatives in this Business Plan will expand the Program's capacity to facilitate GHG emission reductions and place the program in a competitive position to take advantage of new funding opportunities that arise during the next five years.

Switch your thinking is a unique asset of SEREG partner local governments and the regional community. The actions outlined in this Business Plan realise community aspirations and demonstrate leadership.

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## 1 INTRODUCTION

This Switch your thinking Business Plan 2020/21-2024/25 has been prepared to ensure the most effective use of resources to achieve greenhouse gas abatement across the participating local government areas.

The stages in development of the Business Plan included:

### 1. Information gathering

- Stakeholder consultation
- Community survey
- Analysis of emissions data
- Review of key community and industry demographics
- Literature review of best practice programs

### 2. Strategy development

- Identify key focus areas
- Develop corporate and community initiatives
- Prioritise GHG abatement opportunities

### 3. Formalise business plan

- Select actions for 2020/21-2024/25
- Assign roles and responsibilities
- Present plan for consideration of SEREG partner local governments

The Plan is informed by independent advice that included the following recommendations:

- **Communicate the Program objective and ensure it is reflected in the initiatives undertaken.** Actions have not always been clearly communicated as being tied to the

program mission of reducing corporate and community emissions. It is important that all initiatives are measured against this goal.

- **Clearly articulate roles and responsibilities.** SYT currently fulfils many roles within each of the SEREG local governments and to the community. To ensure the most effective use of SYT resources and maintain focus on its core mission, SYT should clearly communicate its role and offerings to all stakeholders.
- **Clearly articulate expectations.** Currently, local governments who licence the SYT brand get numerous workshops and support upon request. This means that participating local governments receive varying service levels and resource allocation.
- **Grow revenue.** Costs to licence SYT have not changed in over 10 years, and thus have gone backward in real terms. This is despite costs to administer the program increasing. A new IP licence structure is recommended.
- **Strategic selection of actions.** Actions undertaken by SYT should align with the key focus areas and address the key Program objective.
- **Measure success through emissions profile assessments and community reach.** Having a clear understanding of the community's emissions profile is critical to planning mechanisms to reducing regional GHG emissions. It also informs efforts to effectively understand the impact of national policy changes at the local level. Capturing data on corporate and community emissions, and the reach of initiatives to the community should be a key focus of the SYT program.

These recommendations are addressed in Section 4.3.

## 2 SWITCH YOUR THINKING

### 2.1 Program History

Switch your thinking was established in 2002 by the South East Regional Energy Group (SEREG) as a mechanism to reduce corporate and community greenhouse gas emissions. Since then, the program has expanded to include intellectual property licencing to additional Western Australian local governments. Licencing local governments currently pay an annual fee of \$5,000 for access to the SYT brand, programs and presentations. There are currently 14 local governments that licence SYT. The money from licence fees along with grants and corporate sponsorship funds are used for program delivery.

SEREG partner local governments fund SYT staff wages and on-costs. Program staff rotate between the SEREG partner local government offices.

### 2.2 Program Objective

The objective of the Switch your thinking program is to facilitate behaviour change to reduce greenhouse gas emissions and embed sustainability in SEREG local government operations.

The Program also meets objectives outlined in the Strategic Community Plans of partner local governments. For further information see Appendix A.

## 2.3 Program Mission

Switch your thinking's mission is to assist the community and local government partners to reduce greenhouse gas emissions and address GHG emissions reductions through sustainable practices.

The delivery channels for achieving this are:

- **Projects** that demonstrate and facilitate the uptake of innovative technologies and sustainable practices by local governments and the community.
- **Collaborative partnerships** between local governments, industry and community groups to share learnings and to maximise impacts.
- **Assistance with drafting policies and strategies** of SEREG partner local governments.
- **Research** into new and innovative measures that align with the Program's objectives.
- **Education** of the community and local governments through the provision of workshops and reference materials.
- **Marketing and communications** to promote awareness of Switch your thinking initiatives, highlighting key achievements and environmental messages of SEREG partner local governments.
- **Rewards and incentives** through discounted sustainability products to residents and businesses by partnerships with corporate sponsors.
- **Advocacy** to all levels of government to promote Switch your thinking initiatives and gain partnerships or funding.

## 2.4 Recent Achievements

The Switch your thinking program strives for continual improvement and has been recognised as a national leader in the areas of resource conservation, innovation and community engagement.

### 2.4.1 Awards and Recognition

In the period of the current Business Plan (2015/16-2019/2020), Switch your thinking was recognised for a range of initiatives:

Year	Awards	Category	Outcome	Project
2019	Smart Cities and Suburbs Awards	Best Residential Innovation	Finalist	Cool Roofs

2019	Cities Power Partnership Awards	Energy Efficiency Achievement	Finalist	Cool Roofs
2017	United Nations Association of Australia (WA division) Awards	Environment Action	Finalist	Switch your thinking
2017	National Energy Efficiency Awards	Best in Residential Energy Efficiency Project	Winner	Switched on Homes

#### 2.4.2 Reach and Brand Equity

Between 2015/16 and 2019/20 the SYT brand expanded to reach 1.4 million residents across 18 local government areas.

Other areas of growth include:

- **Enhanced digital offering** by replacing print advertising with Facebook advertising for events, piloting online courses and expanding eNews subscribers. This resulted in 83,010 page-views on the SYT website in 2019 compared to 29,822 in 2015, an increase of almost 180%. In 2019 SYT also reached an additional 109,025 people via the program's Facebook page, e-news and SMS tips. This approach has realised considerable cost savings over print marketing.
- **Increased the number of physical workshops.** Figure 1 shows the growth in attendance at SYT workshops and events.
- **Achieved record participation.** SYT engaged over 22,800 residents, 90 businesses and 78 schools in sustainability programs and events.
- **Delivered high profile abatement projects** such as Smart Cities Cool Roofs project (see Figure 2) and assisting the City of Armadale implementing its landfill gas flaring project.
- **For every collective dollar invested by SEREG** local government partners, SYT attracted \$1.69 of funding from external sources.

Workshop numbers and attendance are displayed below (Figure 1).

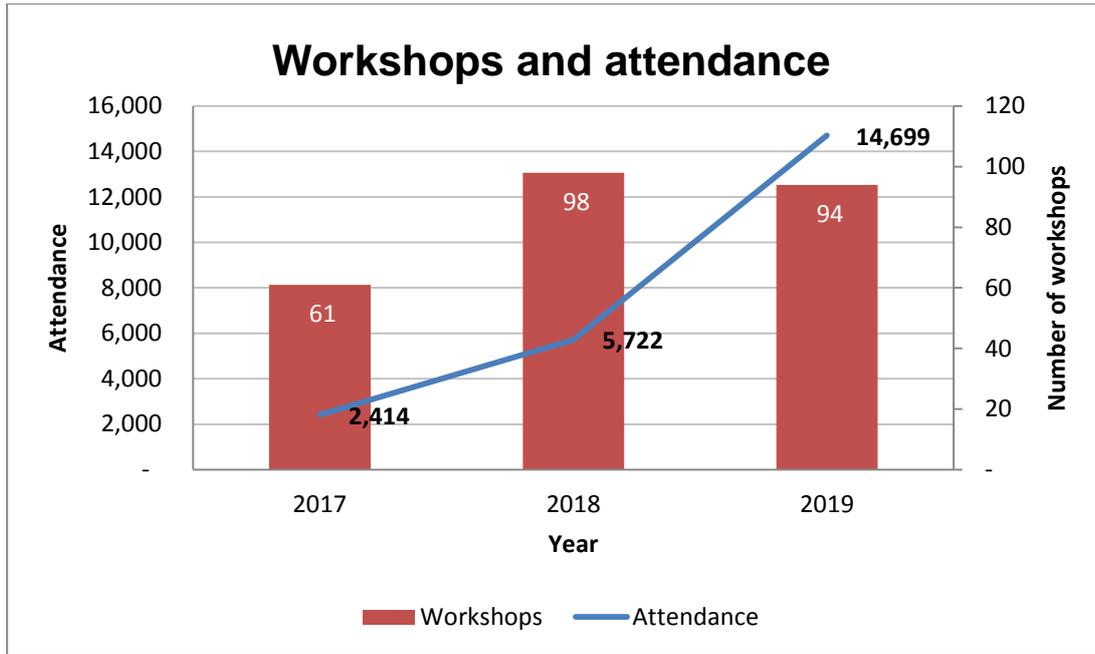


Figure 1: Workshops and attendance from 2017 to 2019

Potential abatement and energy savings resulting from Switch your thinking’s Smart Cities and Suburbs Cool Roofs research is outlined below (Figure 2).

## COOL ROOFS

**267,000kg** reduced CO<sup>2</sup> emissions on each day reaching 40°C

equivalent to 374 trees growing for 100 years



**380,166kWh**

saved on each day reaching 40°C

equivalent to taking 57 vehicles off the road for one year

Figure 2: Potential impact of SYT’s Cool Roofs research based on one day of electricity use of 18,802 homes (which is the number of new homes built in 2018 in climate zone 5).

### 2.5 Program Structure

The structure of the Switch your thinking program is shown in Figure 3.

The South East Regional Energy Group (SEREG) is comprised of a delegated councillor and senior officer from each partner local government. The Group’s primary function is to guide the development and implementation of Switch your thinking. SEREG employs a full-time coordinator and two full-time officers who implement projects and initiatives to achieve the program mission.

SEREG is not a committee of Council and operates under endorsed Terms of Reference and a Memorandum of Understanding to implement actions identified in successive Switch your thinking Business Plans that are endorsed by each member local government.



Figure 3: Organisational Structure of the Switch your thinking program.

## 2.6 Roles and Responsibilities

The roles and responsibilities of key stakeholders are defined below:

- **SEREG** guide the development and implementation of the program to the satisfaction and mutual benefit of partner local governments.
- **Switch your thinking staff** manage the Program and implement projects and initiatives to achieve SYT's mission and support each SEREG partner local government in implementing policies and strategies.
- **SEREG partner local governments** provide funding for Switch your thinking staff wages and on costs, and host staff within the local government offices.
- **Licencing local governments** pay the licencing fee and adhere to the terms of the SYT IP Licence Agreement.
- **Corporate sponsors** offer financial support to the Switch your thinking Program and provide rewards and incentives to communities in SYT local government areas.
- **Project partners** offer assistance, access to networks and / or funding to Switch your thinking for the successful implementation of projects.

## 2.7 Key Demographics

The demographics of the SEREG communities are a key consideration when developing Switch your thinking programs. A snap shot is provided below, full demographic analysis can be found in Appendix B.

The population living in SEREG partner local governments in 2020 is displayed below (Figure 4).

Local government	Population
City of Armadale	87,634
City of Gosnells	123,325
Shire of Serpentine Jarrahdale	30,933

Figure 4: Population of SEREG communities. Source: ABS Estimated residential population 2018

SEREG local governments are located in the South East metropolitan corridor and are experiencing rapid population growth. The City of Armadale and the Shire of Serpentine Jarrahdale are experiencing significant residential green-field development while the City of Gosnells has a greater rate of infill development.

Major industries across the region include health care and social assistance, retail, construction, education and training.

The Cities of Armadale and Gosnells are largely urban residential while the Shire of Serpentine Jarrahdale has a greater proportion of rural land. All have a proportion of rural lifestyle blocks. The South East region of Perth has a higher than average unemployment rate and socio-economic disadvantage.

Switch your thinking tailor educational messages and promote low cost or no cost actions to assist households in reducing bills and environmental impact. Awareness of Switch your thinking in SEREG local governments is between 50-60% and is steadily growing, as shown in Figure 5 below.

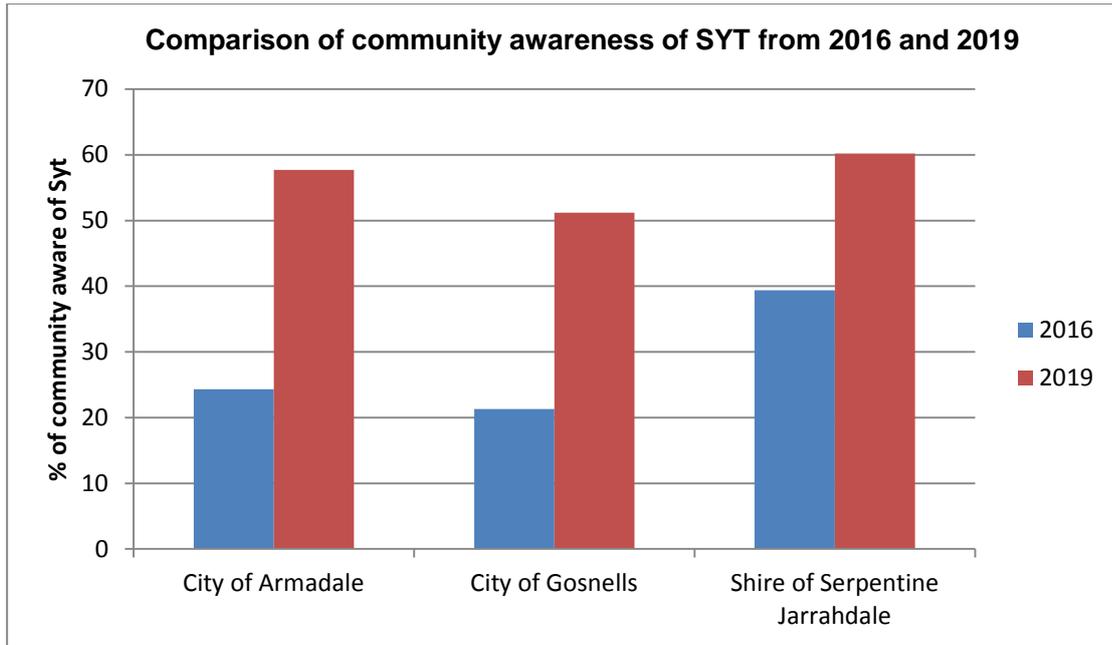


Figure 5: Comparison of community awareness in 2016 and 2019 Source: SYT community surveys

### 3 EMISSIONS PROFILES

To maximise the impact of the program, Switch your thinking aims to focus its initiatives on areas with the largest potential emissions reduction. Conducting an annual emissions inventory facilitates effective targeting of initiatives and tracking progress over time. Figure 6 illustrates that emissions reporting is undertaken by 39% of Perth metropolitan local governments. This is likely to become more common during the term of this Business Plan.

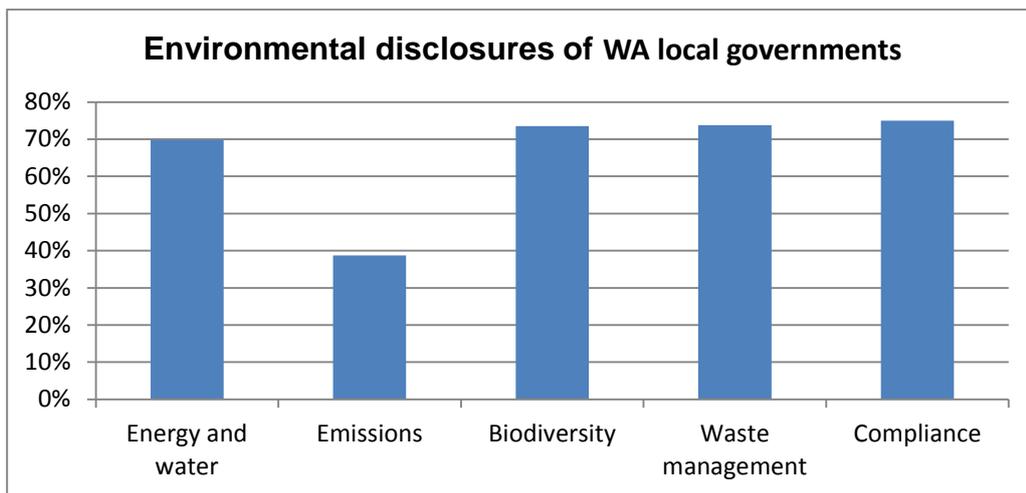


Figure 6: Environmental disclosures of Western Australian local governments. Source: Curtin University research commissioned by SYT(2019)

Corporate greenhouse gas emissions are recorded in the Cities of Armadale and Gosnells. The Shire of Serpentine Jarrahdale has corporate emissions data to 2017/18.

Direct measurement of community and business emissions is complex and not currently undertaken in SEREG local governments. A summary of the available electricity data is

included in Figure 7, however this is not a complete analysis. Future data collection is recommended.

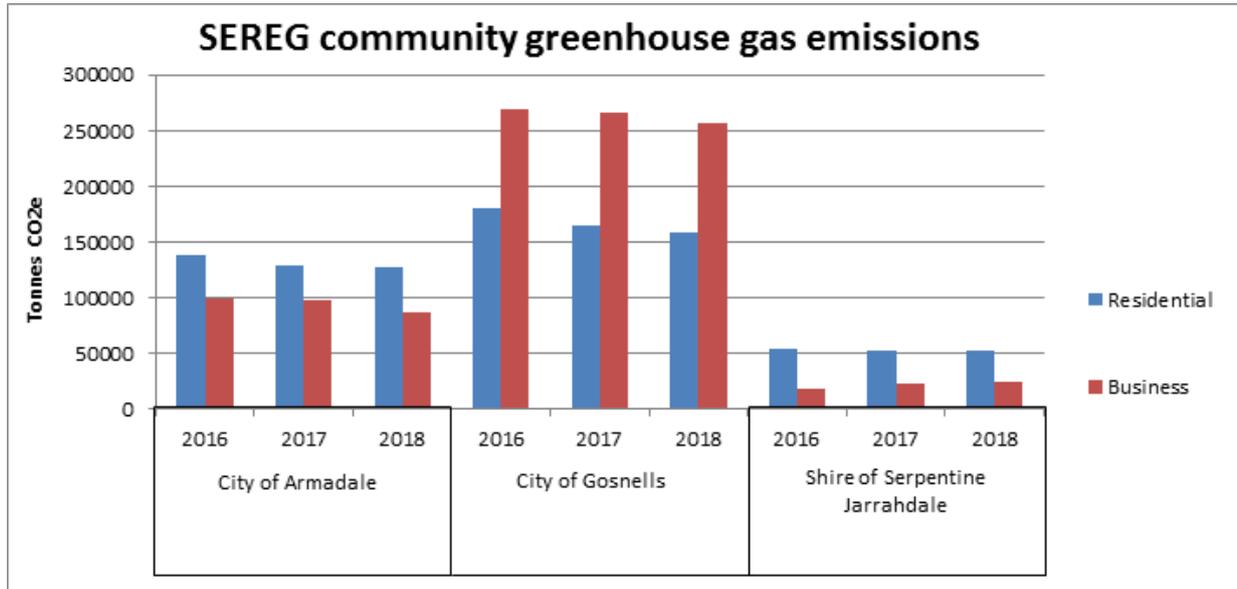


Figure 7: SEREG local government's community greenhouse gas emissions from electricity.

Local businesses in Gosnells contribute the largest share of emissions from electricity across the SEREG local governments. This is due to the concentration of industry in the City, and presents an opportunity to target business through focused initiatives.

The suburb of Canning Vale (reported as being within Gosnells) represents ~48% of the total emissions of the City of Gosnells community, 80% of those being from local businesses. Accordingly, pilot programs targeting electricity reduction measures for business would be effective.

Armadale, Forrestdale and Kelmscott suburbs represent around 50% of the total emissions of the City of Armadale community, and the suburb of Byford represents around 43% of the total emissions of the Shire of Serpentine Jarrahdale community. Accordingly, it is most effective to target emissions reductions programs towards residents and businesses in these areas.

A summary of SEREG partner local government's corporate GHG emissions are displayed below in Figure 8.

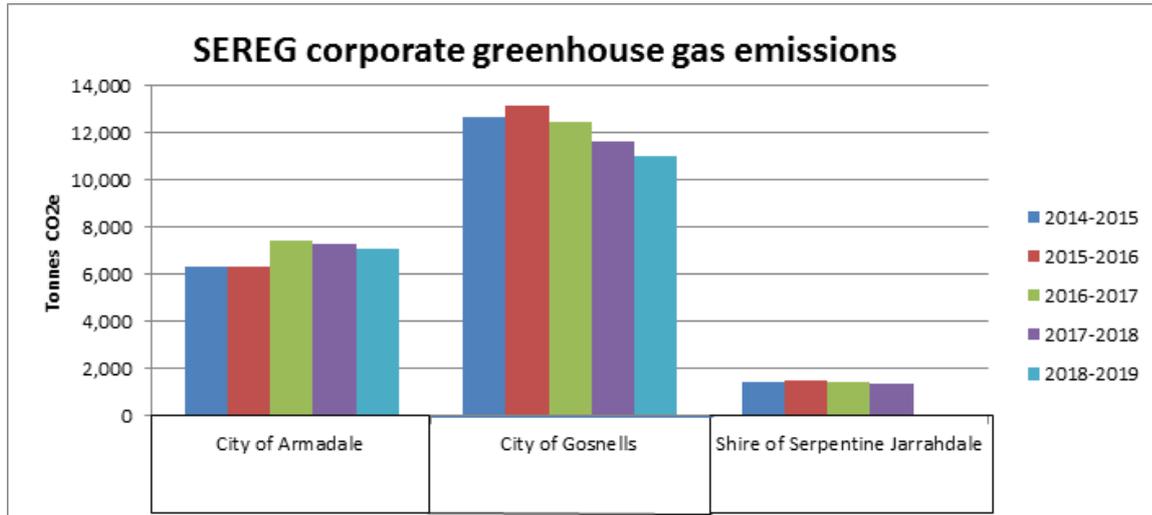


Figure 8: SEREG local governments community greenhouse gas emissions from electricity.

The primary source of emissions for SEREG partner local governments is electricity, with the partner local governments achieving emissions reductions since 2016/17 despite population growth. These emissions reductions are attributed to greenhouse gas abatement projects and decreasing carbon intensity of electricity from the grid due to widespread uptake of renewable energy. However, to achieve further cuts in emissions further effort and prioritisation of resources is required.

The City of Armadale landfill gas data is not included in Figure 8 as these emissions are offset as part of a landfill flaring project.

More detailed information relating to GHG emissions profiles for SEREG partner local governments is located in Appendix C.

## 4 BUSINESS PLAN DEVELOPMENT METHODOLOGY

The following research underpins the actions recommended in this Business Plan:

- **Community survey** of a statistically significant, random sample of households in SEREG local government areas. The survey instrument was designed by Behavioural Economist Colin Ashton Graham and fieldwork carried out by Thinkfield.
- **In-depth stakeholder interviews** and survey analysis was conducted by Curtin University researchers.
- **SWOT analysis and best practice review** was undertaken by Ndver Environmental in consultation with SEREG and informed by in-depth stakeholder interviews conducted by Curtin University researchers.
- **Stakeholder consultation** undertaken by Ndver Environmental.
- **Stakeholder survey** undertaken by Ndver Environmental.

The outcomes of this research informs the program direction set out in this Business Plan and is discussed below.

### 4.1 Community insights

A statistically significant sample of 458 residents in the City of Gosnells, City of Armadale and Shire of Serpentine Jarrahdale completed a Switch your thinking survey in November 2019. Survey results show strong support for SEREG partner local governments committing to and resourcing GHG emissions reduction (Figure 9).

Overall the areas of most interest to the community are the impacts of plastic on the environment, recycling and waste. Switch your thinking currently uses these popular topics to generate interest in program initiatives and educate the community on broader sustainability themes. The community also demonstrate strong support for Rewards for Residents (Figure 9), offering discounts on eco-products, and expressed concern over rising utility bills (Figure 10). SYT supports residents to manage their electricity costs through community workshops, Energysmart SMS and discounts on energy efficient appliances and renewable energy and storage.

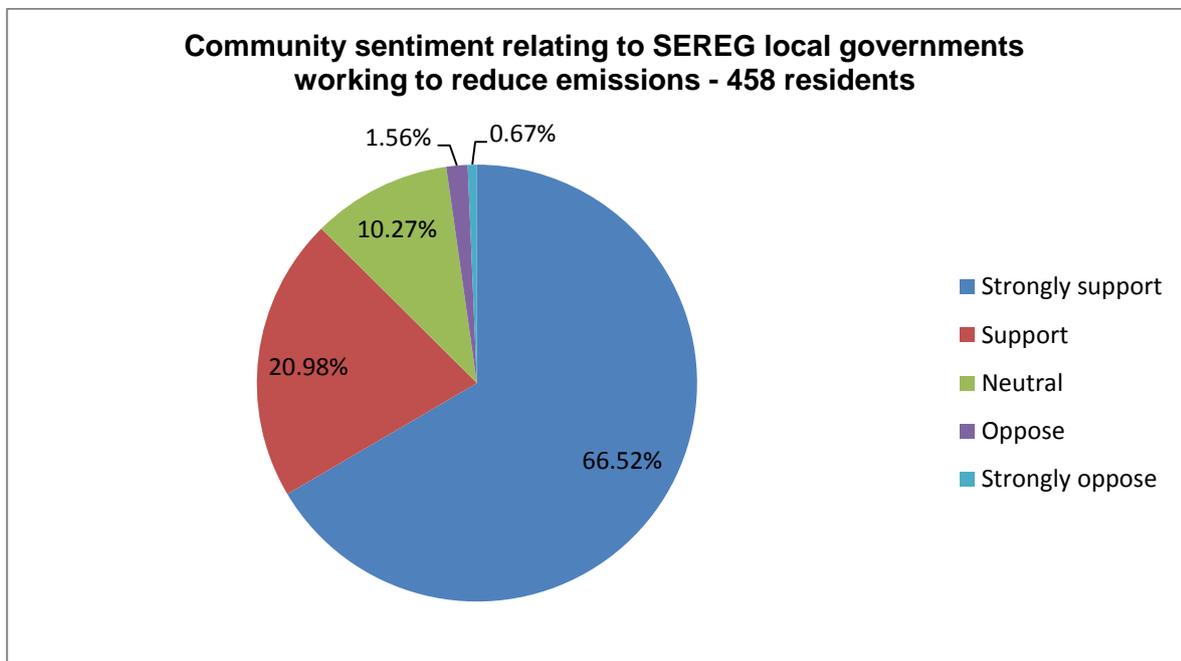


Figure 9: Community sentiment for the Cities of Gosnells and Armadale and Shire of Serpentine Jarrahdale to work to reduce greenhouse gas emissions.

87.5% of survey respondents support their local government working to reduce carbon emissions.

89% of survey respondents report concerns that energy use is contributing to climate change (see Figure 10).

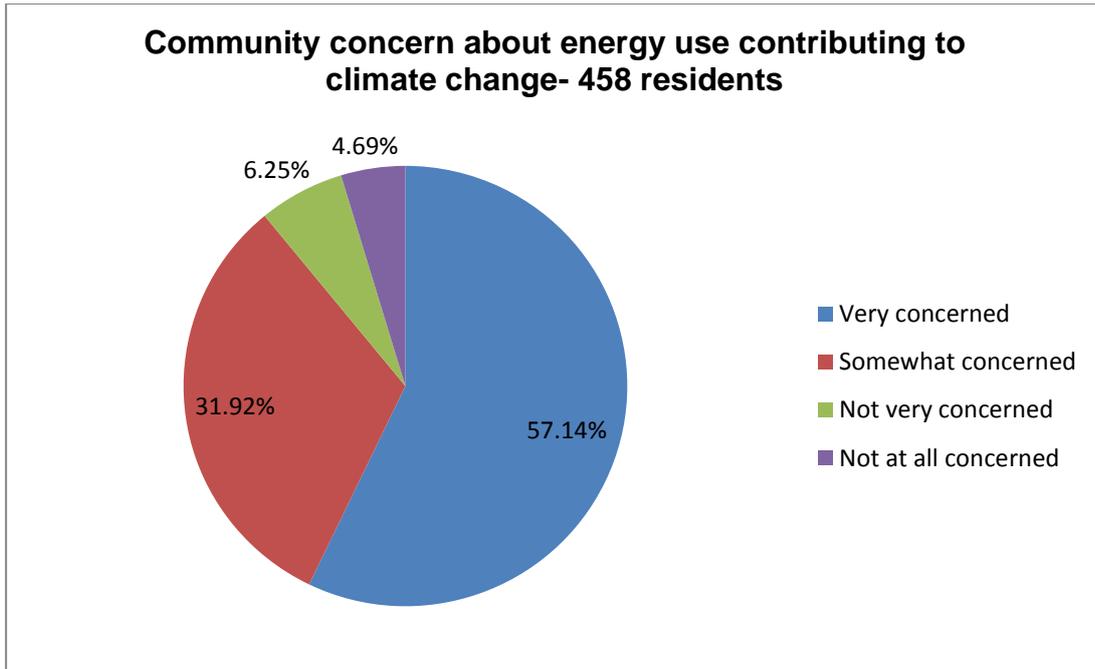


Figure 10: Community concern in SEREG partner local governments about energy use contributing to climate change.

93% of survey respondents also report concerns about the rising cost of energy and water bills and 86% reported they find discounts on eco-products useful. SYT delivers a program called Rewards for Residents that provides discounts for residents and local businesses on eco products and services.

#### 4.2 Stakeholder perceptions

In addition to the community survey, the development of this Business Plan included stakeholder workshops, interviews and an online survey to identify key focus areas and initiatives.

The stakeholder consultation and survey was undertaken by Ndver Environmental and included the following groups:

SEREG delegates and staff members	City of Armadale staff
City of Gosnells staff	Shire of Serpentine Jarrahdale staff
IP Licence local government staff	Businesses engaged with SYT
State government agencies	Staff at local schools

30 stakeholders completed surveys. The top three objectives in each SEREG partner local government were; raising awareness of sustainability in the community (average score 92%); reducing the local government’s environmental footprint (83%); and promoting community behaviour change (83%). The City of Armadale stakeholders also indicated a key objective is to demonstrate leadership. Local governments that licence the SYT brand also stated similar objectives (see Figure 11).

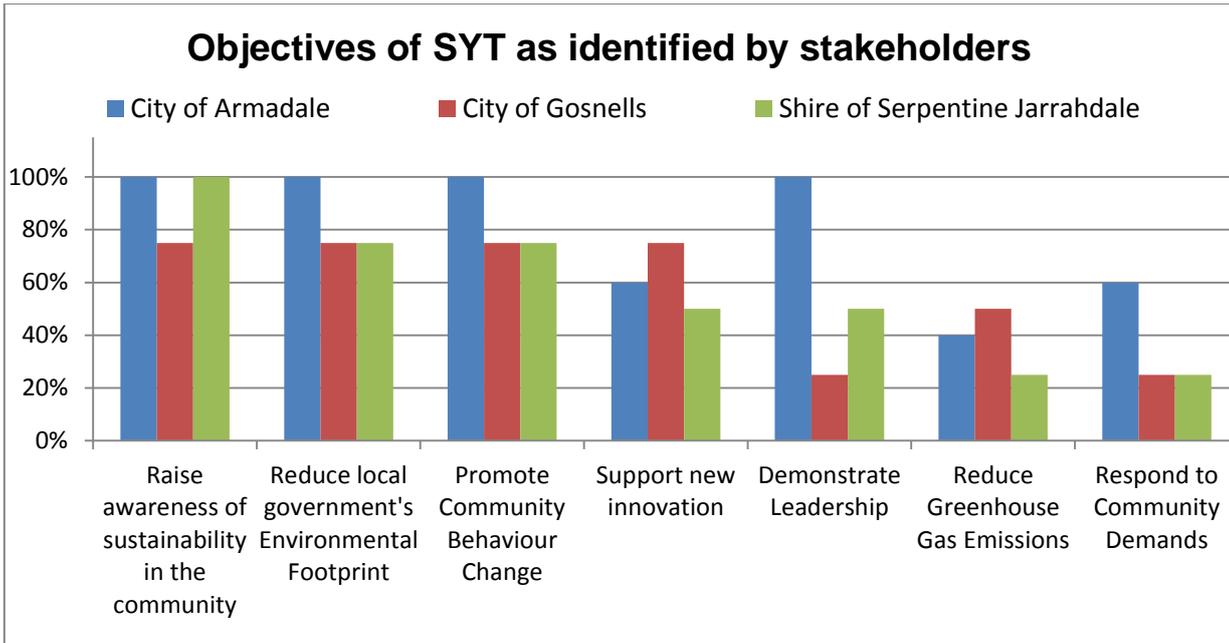


Figure 11: Objectives of SYT as identified by stakeholders

### 4.3 SWOT analysis

A SWOT analysis of the Switch your thinking program (Figure 12) was facilitated by Ndver Environmental and informed by the South East Regional Energy Group.

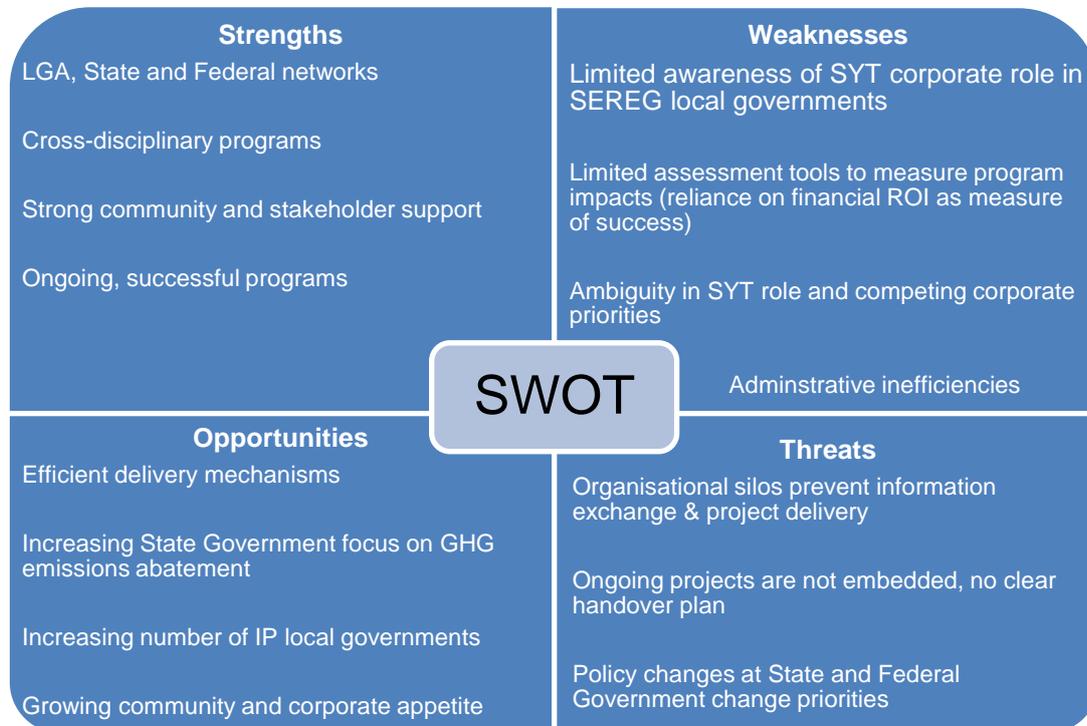
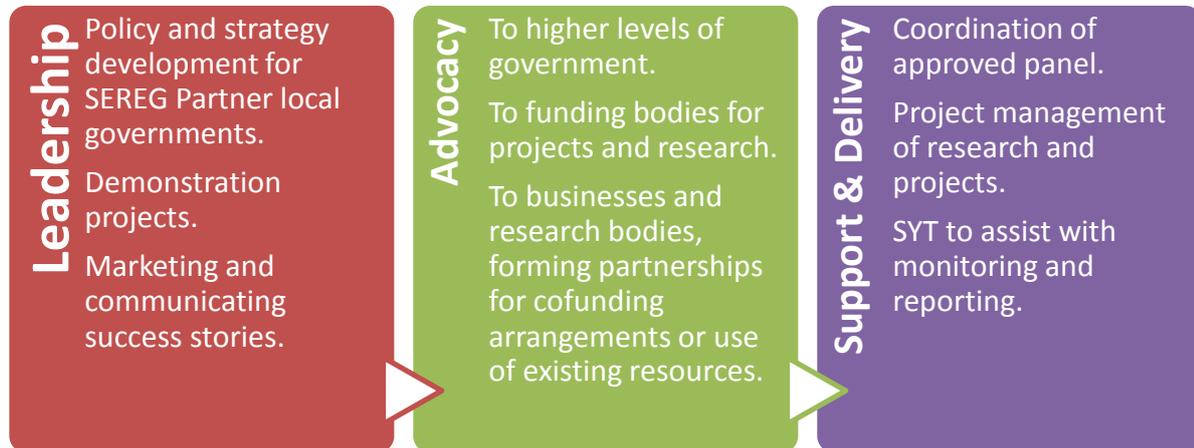


Figure 12: Switch your thinking SWOT Analysis

To capitalise on upcoming opportunities, utilise Program strengths and address the weaknesses and threats identified in the SWOT analysis the following actions will be taken:

### 1. Define the role of SYT

- To manage stakeholder expectations and enable resources to be allocated efficiently SYT will focus staff resources on the following areas.



### 2. Maximise efficiency

- To maximise efficiency and enable continued growth of external revenue a panel of approved contractors will be established to deliver community workshops using SYT developed and endorsed content.

This will enable SYT staff to focus on strategic priorities, program coordination and researching grant opportunities. It will also facilitate the continued expansion of the Program to new licenced local governments increasing revenue.

### 3. Embed projects and practices

- A program of works selected for delivery (2020/21-2024/25) includes key springboard projects that raise awareness of SYT and emissions abatement opportunities within SEREG partner local governments. These projects are outlined in Section 6.

### 4. Raise program profile amongst internal stakeholders

- Program outcomes will be reported enhancing internal awareness of SYT and providing an opportunity to further embed emissions abatement and sustainability practices in SEREG partner local governments. This is further detailed in Section 9.

## 4.4 Target Audience and Approaches

To maximise the impact of the Program key initiatives engage the following target audiences:

- The City of Armadale, City of Gosnells and the Shire of Serpentine Jarrahdale.
- Households in SEREG local governments.
- Businesses in precincts such as Canning Vale, Maddington, Armadale, Forrestdale, Kelmscott and Byford with high electricity usage.

- Developers in SEREG local governments, enabling outreach to new residents and to enhance the energy performance of homes.
- Small businesses through awards programs and education.

## 5 2020-2025 KEY FOCUS AREAS

The key focus areas for 2020/21-2024/2025 identified through community and stakeholder consultation and informed by best practice are:



**Energy**  
Renewable Energy  
Energy Efficiency



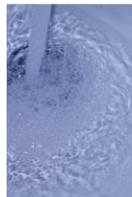
**Transport**  
Active and public transport  
Low emissions fleet  
Electric vehicles and charging infrastructure



**Waste**  
Circular economy  
Waste Avoidance  
Recycling and composting initiatives



**Sustainable infrastructure**  
Sustainable development – corporate and community green building policies  
Green-blue infrastructure – urban forest, community gardens, verges



**Water**  
Conservation  
Total water cycle management

## 6 2020-2025 PROGRAM OF INITIATIVES

Within the five key focus areas (Section 5), a number of specific initiatives have been identified for implementation for this business plan cycle.

279 initiatives were identified through stakeholder consultation and officer research. These have been evaluated against the criteria outlined below to ensure those selected best meet community and stakeholder expectations while efficiently achieving the Program objective.

Evaluation criteria

- Environmental impact - carbon abated
- Relevance to local government operations
- Demand from SEREG partner local governments

- Effort for impact e.g. Rewards for Residents and no junk mail sticker - low effort and high community popularity
- Regional benefits e.g. saves effort or provides a consistent message if done once for all local governments
- Community impact - greatest demand, highest impact, uses known effective interventions.

Each initiative attracts a key performance indicator (KPI) and weightings against cost and greenhouse gas emissions abatement potential as part of the scoring and prioritisation process.

Implementation costs and abatement potential have been defined as below

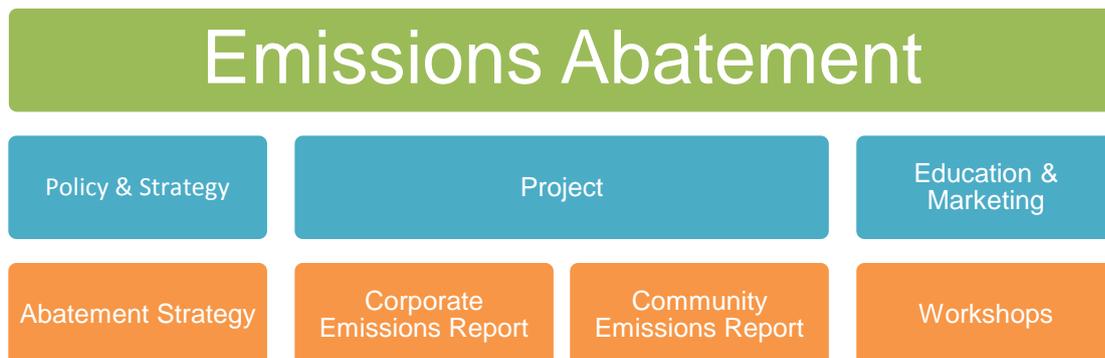
	Cost	Abatement
High	Will require resourcing and capital budget	Large potential due to targeting large emission source(s) >20%
Medium	Will require commitment of resourcing and/or capital investment <\$40k	Significant potential 10-20%
Low	Can be done within existing resources in a business as usual capacity	Small – expected to be in the order of 5% of inventory

A mix of short-term and long-term projects with varying financial commitments have been selected. This approach has been taken to deliver project outcomes, but also provides SYT the flexibility to adapt to new opportunities and priorities.

Initiatives will be rolled out at SEREG partner local governments in accordance with stakeholder demand and alignment with strategic priorities. Therefore some initiatives may not be rolled out at partner local governments.

### 6.1 Greenhouse emissions abatement and reporting

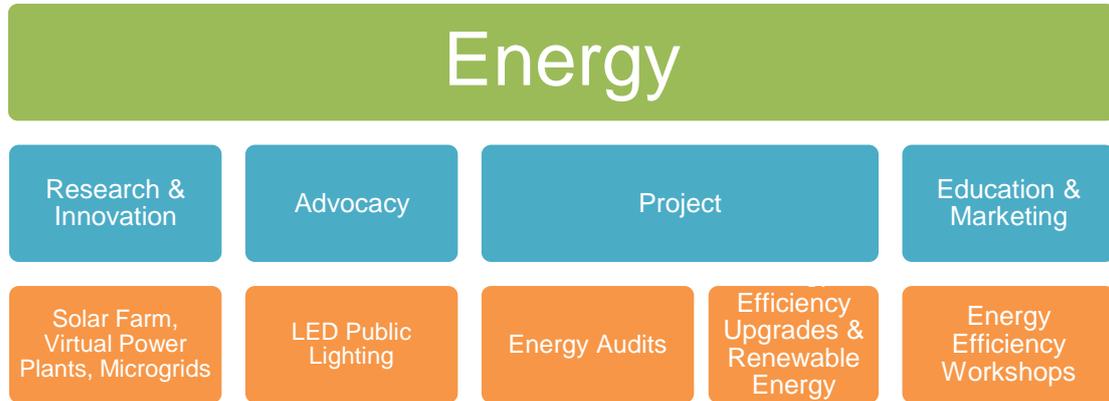
The key objective of the Switch your thinking program is GHG emissions reduction. To achieve this objective a baseline for consistently measuring corporate and community emissions needs to be established. This will assist tracking successes and coordinating efforts to reduce emissions.



Initiative	Target Audience	Delivery Channel	KPI	Responsibility	Cost	GHG Abatement Potential	Year
Abatement and Reporting Program							
Abatement Strategy <ul style="list-style-type: none"> <li>• Umbrella strategy for all programs</li> <li>• Outline emissions reduction and renewable energy targets and offset strategy</li> <li>• Emissions monitoring and reporting commitments</li> <li>• Support provided to SEREG local governments for political advocacy and action on emissions.</li> </ul>	Corporate	Policy and Strategy	Strategy drafted Progress towards targets recorded	SYT to develop regional GHG emissions abatement strategy Customisation to local opportunities and priorities in each SEREG local government	Low	High	1
Establish GHG accounting for SEREG partner local governments and estimations for community in line with recognised standards.	Corporate and Community	Project	Completion and maintenance of corporate and community emissions profiles	SYT to support SEREG partner local governments to gather and compile information	Medium	Medium	1
Promote community sustainability and GHG emissions reductions. Highlight key achievements and messages of SEREG local governments.	All	Marketing and Communications	Launch App Increase number of traditional media opportunities Expand social media and SYT website reach	SYT to develop materials – radio scripts, videos, social media posts and publish	Low	Medium	On-going
Deliver workshops that align with areas of interest identified in community survey.	All	Education	Increase attendance at workshops Increase external funding secured for workshop	SYT to lead	Medium	Medium	On-going

## 6.2 Energy Program

Energy consumption from electricity was the largest source of emissions from local government operations, and renewable energy initiatives were highly rated by stakeholders and the community.



Initiative	Target Audience	Delivery Channel	KPI	Responsibility	Cost	GHG Abatement Potential	Year
Energy Program							
Conduct energy audits at major City / Shire facilities (including park precincts) to identify opportunities to reduce GHG emissions, energy use and costs.	Corporate	Projects	Number of audits Abatement and cost saving achieved from upgrades identified in audits	SYT to support Infrastructure teams in engaging auditor (and fund first audit) SYT to lead assessment of minor facilities	Medium	Medium	1-2
Prepare business cases and support local government staff to implement energy efficiency upgrades and renewable energy for City / Shire facilities.	Corporate	Advocacy	Number of business cases prepared	SYT to prepare and disseminate business cases	Low	Medium	3
Support SEREG local governments to adopt renewable energy through rooftop solar installations on facilities and conducting feasibility studies on emerging technologies such as: <ul style="list-style-type: none"> <li>• Microgrids</li> <li>• Batteries</li> <li>• Power sharing arrangements</li> <li>• Renewable power purchase agreements</li> <li>• Virtual power plants.</li> </ul>	Corporate	Research and Innovation	Number of business cases prepared for new renewable energy installations  Number of business cases prepared to expand existing renewable energy installations	SYT to gather and provide data, and engage third party to deliver business cases SYT to monitor feasibility of emerging technology	Medium	Medium	2-3
Support the construction of a solar farm – collaborative initiative between partner local governments to invest in the development of a solar farm to offset emissions.	Corporate	Project	Seek expressions of interest from SEREG local governments Completion of project	SYT to lead feasibility study	High	High	4-5
Investigate business grants / incentives for energy audits.	Community	Project / Advocacy	Number of local businesses receiving support to reduce energy use	SYT to lead	Medium	Medium - high	On-going

Initiative	Target Audience	Delivery Channel	KPI	Responsibility	Cost	GHG Abatement Potential	Year
Develop an energy efficiency program for tenanted City / Shire facilities incorporating energy audits, renewable energy assessments and workshops.	Corporate and Community	Education	Number of workshops and attendees Number of audits Abatement potential of recommendations	SYT to develop material, establish a preferred supplier panel. Delivery by third party.	Low	Medium	On-going
Advocate for accelerated LED street lighting adoption.	Corporate	Advocacy	Engagement with providers Emissions abated	SYT to lead	Low	High	1
Develop a program of sustainability audits for households.	Community	Project	Number of households audited Potential abatement	SYT to lead. Audits delivered by third party.	Low	Low	On-going
Deliver workshops to households and local businesses on energy efficiency opportunities (e.g. passive solar design).	Community and Business	Education	Increase attendance at workshops	SYT to develop content. Delivery by third party.	Low	Medium	On-going
Investigate and implement ways to increase community adoption of renewable energy technologies Including: <ul style="list-style-type: none"> <li>Virtual power plants</li> <li>Renewable power purchase agreements</li> <li>Rebates / incentives</li> <li>Workshops and education</li> <li>Community battery hubs.</li> </ul>	Community and Business	Advocacy / Project	Number of households and businesses up taking offered services Amount of renewable energy produced	SYT to research project viability	Low	High Depending on uptake	3

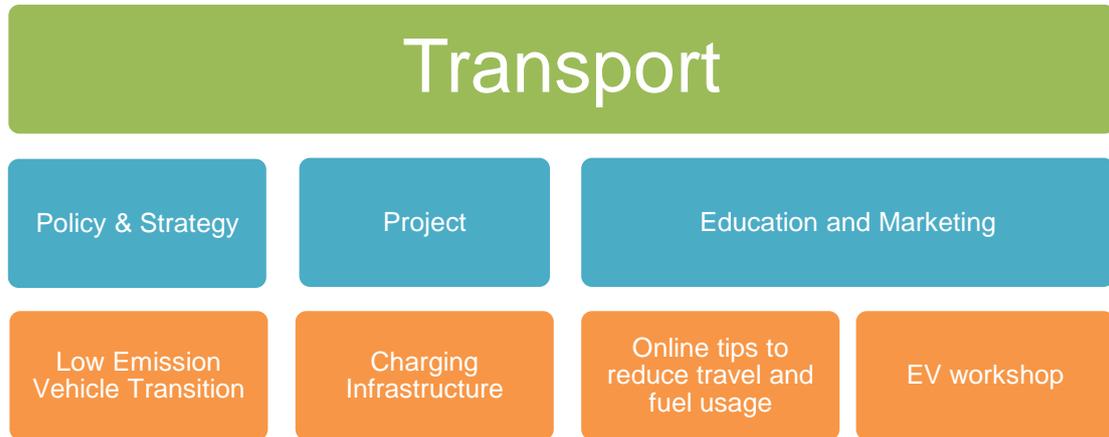
Initiative	Target Audience	Delivery Channel	KPI	Responsibility	Cost	GHG Abatement Potential	Year
Encourage households and business to adopt energy conservation and renewable energy technology through education and promotion.	Community	Education	<p>Increase attendance at workshops</p> <p>Increase number of residents receiving Energysmart SMS and using App</p> <p>Increase number of products / services offered via Rewards for Residents and Rewards for Business</p>	SYT to lead	Low	Low	On-going

### 6.3 Sustainable Transport Program

In 2018 transport accounted for 19.1 percent of Australia's emissions.

Local government fleet impact:

- Corporate emissions
- Availability of low emission vehicles on local second-hand markets.



Initiative	Target Audience	Delivery Channel	KPI	Responsibility	Cost	GHG Abatement Potential	Year
Feasibility study into transition to low emissions fleet in SEREG partner local governments to achieve fleet optimisation. (Light and heavy fleet).	Corporate	Policy and Strategy	Completion of study	SYT to engage third party	Medium	Medium – High	1
Investigate external funding and joint procurement of EV charging infrastructure.	Corporate	Project	Amount of charging infrastructure installed	SYT to partner with businesses for co-funding of charging infrastructure	Medium – high	Medium	4
Promote sustainable transport to the community through Switch your thinking's marketing and promotion channels.	All	Education	Increase SYT website reach	SYT to lead	Low	Low	On-going

## 6.4 Sustainable Infrastructure Program

Local government can influence the design and construction of new developments through planning scheme provisions, approvals and infrastructure projects. This influence can assist in reducing the ongoing operational emissions of buildings through better design.



Initiative	Target Audience	Delivery Channel	KPI	Responsibility	Cost	GHG Abatement Potential	Year
<b>Sustainable Infrastructure</b>							
<p>Research and implement actions to improve environmental performance of new housing in SEREG partner local governments including:</p> <ol style="list-style-type: none"> <li>1. Encouraging innovation in local government led developments</li> <li>2. Demonstrating benefits of sustainable design features</li> <li>3. Education at key interaction points with home buyers</li> <li>4. Advocacy to state and federal government.</li> </ol>	Community	Project / Research / Policy	<p>Analysis of local government's influence points</p> <p>Number of stakeholders engaged</p> <p>Investigate tracking progress using CSIRO National Energy Analytics Research tool</p>	<p>SYT to engage with Planning and Building teams.</p> <p>SYT to create case studies</p>	Medium	Medium	2-4
Develop and implement a green building policy to increase the environmental performance of new and existing City / Shire facilities.	Corporate	Policy / Project	<p>Policy prepared</p> <p>Emissions abated and operational cost savings compared to business as usual</p>	SYT to lead	Low	High	1
Sustainable development policy / local planning policy / guidelines to encourage adoption of ecological sustainable design principles and measures to reduce urban heat island effect in new developments.	Corporate	Policy and Strategy	<p>Policy / guidelines prepared</p> <p>Investigate tracking progress using CSIRO National Energy Analytics Research tool</p>	SYT to lead	Low - Medium	High	1
Develop guidelines for low urban heat island developments.	All	Research and Innovation	<p>Development education materials</p> <p>Establishment of guidelines</p>	SYT to establish collaborative research partners	Medium	Low	2

## 6.5 Waste Program

Waste was a key focus area for stakeholders. The City of Armadale is the only local government responsible for a landfill facility, which is participating in the Emissions Reduction Fund.



Initiative	Target Audience	Delivery Channel	KPI	Responsibility	Cost	GHG Abatement Potential	Year
<b>Waste</b>							
Deliver waste workshops.	Community and Business	Education	Increase attendance at workshops	SYT lead	Medium	Medium	On-going
Investigate an online portal that promotes a circular economy.	Business	Education	Implement CSIRO's ASPIRE portal or similar Number of local businesses using portal Tonnes of waste diverted from landfill	SYT to lead	Medium	Medium	2
Provide opportunities and incentives for business and households to avoid waste.	Community and Business	Education / Marketing	Increase number of businesses and residents participating Increase number of products / services offered via Rewards for Residents and Rewards for Business Increase number of water bottles avoided from deployment of portable water fountains	SYT to lead	Low	Low	On-going
Promote SYT initiatives, SEREG partner local government achievements and other locally available schemes.	Community and Business	Marketing and Communications	Increase reach of enews, SYT website and social media Increase number of 'No junk mail stickers' provided to residents	SYT to lead	Low	Low	On-going
Develop and deliver a "low waste" events program including guidance and marketing materials.	Community	Marketing and Communications	Increase proportion of local government led events which are low waste	SYT to assist Events and Communications teams	Low	Low	On-going
Develop a sustainable procurement policy.	Corporate	Policy and Strategy	Policy prepared	SYT to provide assistance as required	Low	Medium	2

## 6.6 Water Program

Water conservation and water cycle management initiatives were prominent amongst stakeholder feedback and reflect Western Australia’s dry climate. Greenhouse gas emissions from scheme water production are relatively high as a result of an increasing reliance on desalination.

The initiatives outlined below will facilitate SEREG partner local governments participation in the Water Corporation’s Waterwise Councils program.



Initiative	Target Audience	Delivery Channel	KPI	Responsibility	Cost	GHG Abatement potential	Year
Develop a Sustainable Water Strategy and Action Plan to identify water efficiency goals and opportunities.	Corporate and Community	Policy and Strategy	Strategy and action plans prepared	SYT to assist Parks and Assets teams	Low	Low	Ongoing with Waterwise program
Develop annual water inventories.	Corporate and Community	Policy and Strategy	Reports published (or provided for inclusion in existing environmental reports)	SYT to assist Assets and Park teams	Low	Low	Ongoing with Waterwise program
Promote Waterwise messages and programs through the SYT marketing channels.	Community and Business	Education	Increase reach of website, enews and social media	SYT to lead	Low	Low	Ongoing with Waterwise program
Develop a leak detection program including <ul style="list-style-type: none"> <li>Monitoring water bills</li> <li>Water monitors/loggers.</li> </ul>	Corporate	Project	Number of loggers installed Litres of water saved	SYT to lead in consultation with Assets and Parks teams	Low	Low	Ongoing with Waterwise program
Support urban greening through verge gardens and street tree education and incentives.	Corporate	Project	Increase in potential mature canopy	SYT to assist Parks team	Low	Low	Ongoing with Waterwise program

## 7 RESOURCE ALLOCATION

### 7.1 Delivery Mechanisms

The following delivery mechanisms will be implemented over this Business Plan period to accommodate increasing demand for Switch your thinking services and to grow external revenue.

- **An approved panel of workshop delivery professionals will present SYT developed / approved content.** This will provide SYT staff with more time for strategic projects and enable continued growth in the number of IP licence local governments.
- **Springboard projects and strategic policies** will be used to engage internal stakeholders, reduce emissions, create community benefit and embed sustainable practices in SEREG local governments. The green building program, sustainable residential development and urban heat island projects have been identified as springboard projects.
- **Review of IP Licence fees.** Licencing local governments currently pay an annual fee of \$5,000 for access to the SYT brand, programs and presentations. This fee has been unchanged since the first IP local government joined in 2007. It is proposed that local governments joining the program from 2020/21 be charged \$7,000 p.a. This will grow program income and facilitate outsourcing of some workshops. Existing licenced local governments will be offered a transitional fee schedule outlined in Figure 16 to acknowledge their ongoing investment in the program and to allow forward budget planning:

2020/21	2021/22	2022/23	2023/24	2024/25
\$5,000	\$5,500	\$6,000	\$6,500	\$7,000

Currently all IP licenced local governments are located in the Perth metropolitan area. In the 2020/21-2024/25 business cycle consideration will be given to expanding digital offerings to rural local governments for a discount price.

### 7.2 Resourcing of Initiatives

Resourcing available to deliver this Business Plan is three SYT FTE staff equating to 5,472 hours across the team and an additional implementation budget of an average of \$102,000 p.a.

## 8 BUDGET

Below are the forecasted program costs between 2020/21 and 2024/25.

Annual Operating Costs	2020/21	2021/22	2022/23	2023/24	2024/25
Salaries and on-costs	350,058	357,075	364,206	371,476	378,911
Vehicle Costs	10,434	10,803	11,182	11,571	11,980
Training and Conferences	2,600	2,600	2,600	2,600	2,600
Implementation budget	87,979	95,110	102,230	109,341	116,432
<b>Total</b>	<b>451,071</b>	<b>465,588</b>	<b>480,218</b>	<b>494,988</b>	<b>509,923</b>

Forecasted program income between 2020/21 and 2024/25 is detailed in the table below. Modest grant income is forecast due to current grant availability, however should Federal and State funding opportunities arise, Switch your thinking will be in a competitive position to apply for large grants.

Program Income	2020/21	2021/22	2022/23	2023/24	2024/25
<b>SEREG contributions</b>					
City of Gosnells	178,530	182,108	185,745	189,453	193,245
Carry forward discount (Gosnells)	-84,711	0	0	0	0
City of Armadale	126,021	128,547	131,114	133,731	136,408
Carry forward discount (Armadale)	-62,686	0	0	0	0
Shire of Serpentine Jarrahdale	45,508	46,420	47,347	48,292	49,258
Shire of Serpentine Jarrahdale admin fee	3,712	3,712	3,712	3,712	3,712
Carry forward discount (SJ Shire)	-22,025	0	0	0	0
<i>Sub total</i>	<i>184,348</i>	<i>360,787</i>	<i>367,918</i>	<i>375,189</i>	<i>382,623</i>
<b>External Revenue</b>					
Unforecasted income earned 2015-2019	169,423	0	0	0	0
Sponsorship + IP License Fees	75,000	82,500	90,000	97,500	105,000
Fuel Contributions + Misc.	2,300	2,300	2,300	2,300	2,300
Grants	20,000	20,000	20,000	20,000	20,000
<i>Sub total</i>	<i>266,723</i>	<i>104,800</i>	<i>112,300</i>	<i>119,800</i>	<i>127,300</i>
<b>Total</b>	<b>451,071</b>	<b>465,587</b>	<b>480,218</b>	<b>494,989</b>	<b>509,923</b>

The budget forecast includes SEREG partner local governments contributions to cover salaries and on-costs of program staff. Contributions are based on the proportional size of each local government area population. The Shire of Serpentine Jarrahdale pays a 12 cent per resident administration fee as the Cities of Gosnells and Armadale incur costs for employing staff and holding accounts for SYT and Armadale Gosnells Landcare Group respectively.

A discount is provided in 2020/21 to SEREG partner local governments as the program was successful in attracting unforecasted grant funding in the 2015/16 - 2019/20 business cycle that subsidised staff wages. Unforeseen sources of funding included grants secured from Smart Cities and Suburbs (\$132,000) and Inspiring Australia (\$70,250). These grants are not typically secured by local government sustainability initiatives.

The City of Armadale will consider transferring its portion of forecasted income to the Revolving Energy Fund to be used for corporate emissions reduction projects and the Shire of Serpentine Jarrahdale will consider utilising its discount for a project to improve energy and thermal performance through improved building practices and blue / green infrastructure.

## 9 REPORTING OUTCOMES

To measure the success of the Program mission, SYT needs to measure corporate and community emissions profiles over time.

This enables specific initiatives to be selected that focus on areas that will have the maximum impact.

Key metrics and channels that will be used to report Program progress 2020/21-2024/25 include:

KPI	Metrics	Reporting channel	Frequency
Digital reach	Engagement numbers	SEREG	Bi-monthly
Workshops attendance	Numbers	SEREG	Bi-monthly
Corporate emissions	Tonnes of GHG	Report	Yearly
Community emissions	Tonnes of GHG	Report	Yr 1,3 and 5
Status of initiatives	Project status	SEREG, Quarterly Executive Report	Bi-monthly
Waterwise Council	Milestone achieved and amount of water saved	Annual Report	Yearly

## 10 CONCLUSION

The SYT Program is a unique asset of SEREG partner local governments and the regional community. The investment and actions outlined in this business plan will ensure emissions are abated efficiently, partner local governments continue to demonstrate leadership and community aspirations for environmental action are realised.

## APPENDIX A – ALIGNMENT OF SWITCH YOUR THINKING WITH SEREG PARTNER LOCAL GOVERNMENT'S STRATEGIC OBJECTIVES

The three founding local governments have Strategic Community Plans as required under the Local Government Act. Objectives within these plans as well as a number of other strategic planning documents provide a basis for the delivery of Switch your thinking.

Local government	Objectives
City of Armadale	<p><b>Strategic Community Plan</b></p> <p><b>A natural environment that is valued and conserved</b></p> <ul style="list-style-type: none"> <li>• <i>Outcome 2.1.4 Minimise the City's carbon footprint.</i> <ul style="list-style-type: none"> <li>• <i>2.1.4.2 Implement the actions in the City's Corporate Greenhouse Action Plan 2014/15 to 2019/20.</i></li> </ul> </li> </ul> <p><b>Other documents/projects</b></p> <ul style="list-style-type: none"> <li>• Environmental Management Framework</li> <li>• Urban Forest Strategy</li> <li>• Corporate Greenhouse Action Plan: sets targets in relation to greenhouse gas emissions</li> <li>• Local Biodiversity Strategy: designed to identify significant natural areas, and where possible plan for their protection, retention and management within the City.</li> </ul>
City of Gosnells	<p><b>Strategic Community Plan</b></p> <ul style="list-style-type: none"> <li>• <i>3rd strategic priority (environment): "The environment is protected and enhanced"</i></li> <li>• <i>Goal 3.1 Develop buildings and open spaces which have minimal environmental footprints.</i></li> </ul> <p><b>Other documents/projects</b></p> <ul style="list-style-type: none"> <li>• Ongoing program of building energy efficiency including three Greenstar rated buildings.</li> <li>• Biodiversity Conservation Management plan 2010</li> </ul>
Shire of Serpentine Jarrahdale	<p><b>Strategic Community Plan</b></p> <ul style="list-style-type: none"> <li>• <i>2nd strategic priority (place): "A protected and enhanced natural, rural and built environment"</i></li> <li>• <i>Outcome 2.2.2 Seek to minimise resource usage and continue to maximise reuse opportunities</i></li> </ul> <p><b>Other documents/projects</b></p> <ul style="list-style-type: none"> <li>• Verges and Street Trees policy</li> <li>• Biodiversity strategy</li> <li>• Urban and Rural Forest Strategy 2018-2028</li> <li>• State of the Environment Report 2019</li> </ul>

## APPENDIX B – DEMOGRAPHICS

Triple Bottom Line	Key demographics	City of Armadale	City of Gosnells	Shire of Serpentine Jarrahdale
People	Population	87,634	123,325	30,933
	Forecast population for 2036	141,805	170,000	63,336
	Median age	33	34	32
	Non-English-speaking backgrounds	18%	32%	9%
	Education	Bachelor or Higher degree: 16% Vocational qualification: 23.6%	Bachelor or Higher degree: 17.3% Vocational qualification: 20.2%	Bachelor or Higher degree: 11.3% Vocational qualification: 24.1%
	Employed residents	41,389	62,089	15,932
	Local jobs	20,985	29,295	6,384
	Unemployment	9.20%	9.70%	7.10%
Profit	Gross regional product (billions)	2.71	3.97	0.93
	Major industries	1. Health care and social assistance 2. Retail 3. Education and training 4. Construction 5. Manufacturing	1. Education and training 2. Health care and social assistance 3. Retail 4. Construction 5. Public admin and safety	1. Education and training 2. Construction 3. Agriculture, forestry and fishing 4. Retail 5. Health care and social assistance
	# Local business	4,550	7,509	2,056
Planet	Area (km <sup>2</sup> )	545	127	905
	Hectares of parks and reserves	1,431	2,005	6,018
	And as a percentage of total area	(2.63%)	(15.79%)	(6.65%)

Triple Bottom Line	Key demographics	City of Armadale	City of Gosnells	Shire of Serpentine Jarrahdale
	<p><b>Stance on Sustainability / GHG emissions abatement</b></p>	<ul style="list-style-type: none"> <li>• 2nd strategic priority (environment): "The level of care afforded to our natural environment and the way land and physical infrastructure is planned, provided and maintained"</li> <li>• State of the environment report: 5-year direction for environmental management programs</li> <li>• Urban Forest Strategy</li> <li>• Corporate greenhouse action plan: sets targets in relation to GHG emissions</li> <li>• Local biodiversity strategy: designed to identify significant natural areas, and where possible plan for their protection, retention and management within the City.</li> <li>• Diversity of management plans for designated natural areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Public commitment to minimise the impact of its actions on the environment.</li> <li>• 3rd strategic priority (environment): "The environment is protected and enhanced"</li> <li>• Rehabilitation and revegetation of natural areas policy: formalisation of City's position and requirement</li> <li>• Guided by its 'Biodiversity conservation management plan 2010'</li> <li>• Built 5 green star Civic Centre and first 6 green star community facility in Australia (Mills Park)</li> </ul>	<ul style="list-style-type: none"> <li>• 2nd strategic priority (place): "A protected and enhanced natural, rural and built environment"</li> <li>• 2nd core community aspiration (natural environment) <ul style="list-style-type: none"> <li>- Verges and Street Trees policy</li> <li>- Biodiversity strategy</li> <li>- Diverse Reserve Management Plans</li> <li>- Natural Assets Management Plan</li> <li>- Urban and Rural Forest Strategy 2018-2028</li> </ul> </li> <li>• State of the Environment Report 2019</li> </ul>

## APPENDIX C - CORPORATE EMISSIONS PROFILES

Figure 1 below shows that the City of Gosnells primary source of emissions is electricity consumption and that overall, emissions have declined from 2015/16.

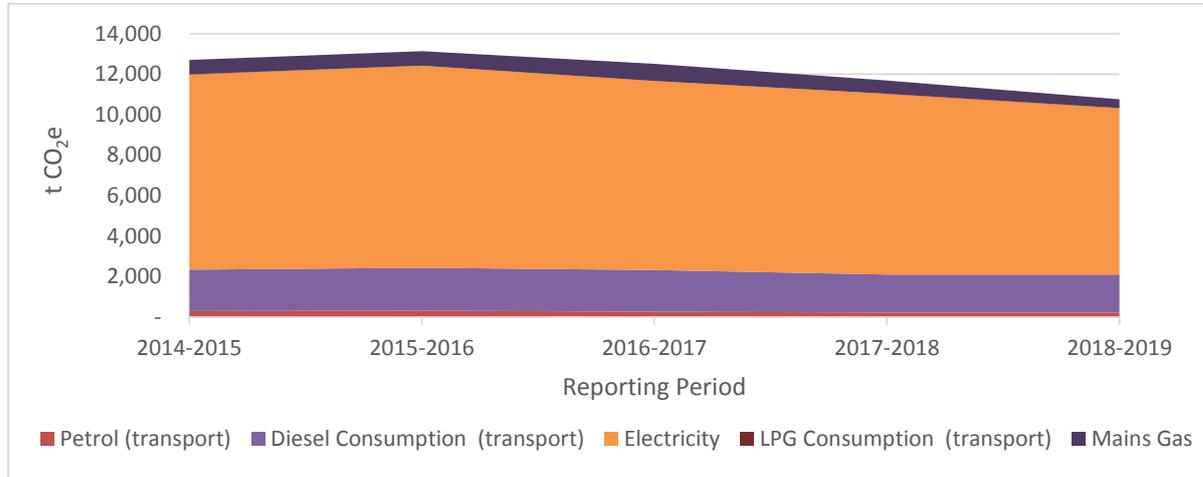


Figure 1: City of Gosnells Historical Corporate Emission Profile (t CO<sub>2</sub>-e)

Figure 2 illustrates the emissions trajectory (electricity emission) for the Shire of Serpentine Jarrahdale. This also demonstrates the Shire is realising a reduction in emissions intensity. Fleet fuel consumption and gas data was not available for the Shire of Serpentine Jarrahdale. Electricity data was only available up until 2017/18.

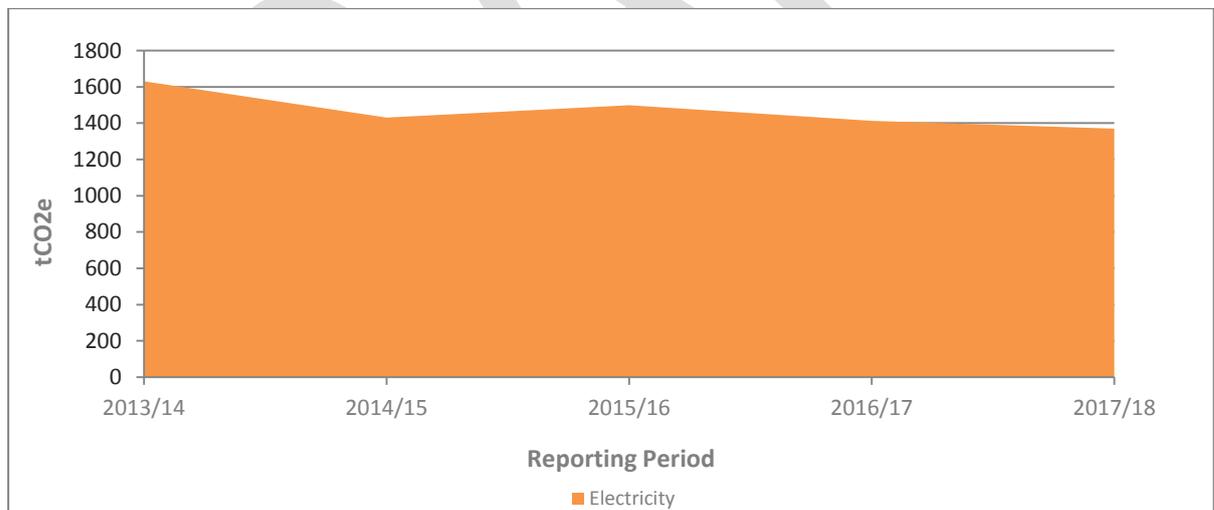


Figure 2: Shire of Serpentine Jarrahdale Historical Corporate Emission Profile (t CO<sub>2</sub>e)

Figure 3 illustrates that the City of Armadale’s primary source of emissions is electricity consumption and that overall, emissions are only marginally trending down. The figures displayed in Figure 3, differ from those reported in the Corporate Greenhouse Action Plan as landfill gas data has not been included in this profile as these emissions are offset as part of a landfill flaring project. Figure 3 also includes electricity consumed by Western Power streetlights located within the City of Armadale for consistency of approach.



*Figure 3: City of Armadale Historical Corporate Emission Profile (t CO2-e)*

Electricity consumed by streetlighting is the largest source of emissions for all three local governments. Other high energy consumers include aquatic facilities, administration buildings, depots and large sporting pavilions. SEREG local governments have invested in new and larger community facilities in recent years and the slight reduction in electricity emissions is significant given the growth of facilities. Accordingly, programs targeting electricity reduction measures in new and existing facilities are recommended actions in this Business Plan.

All three local governments have reduced corporate emissions since 2016/17 despite population growth. This reduction in emissions is attributed to greenhouse gas abatement projects and decreasing carbon intensity of electricity from the grid due to widespread uptake of renewable energy. However, to achieve further emissions reductions additional efforts and resources are required.