ACT Government

2019–20 MINISTER'S ANNUAL REPORT UNDER THE CLIMATE CHANGE AND GREENHOUSE GAS REDUCTION ACT 2010

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Acknowledgement of Country

We wish to acknowledge the traditional custodians of the land we are meeting on, the Ngunnawal people. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

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Environment, Planning and Sustainable Development Directorate

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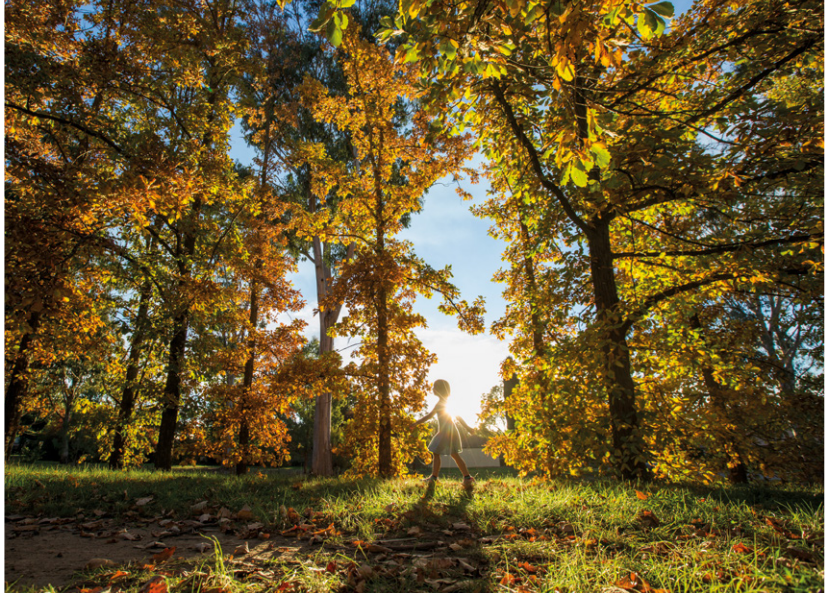


INTRODUCTION

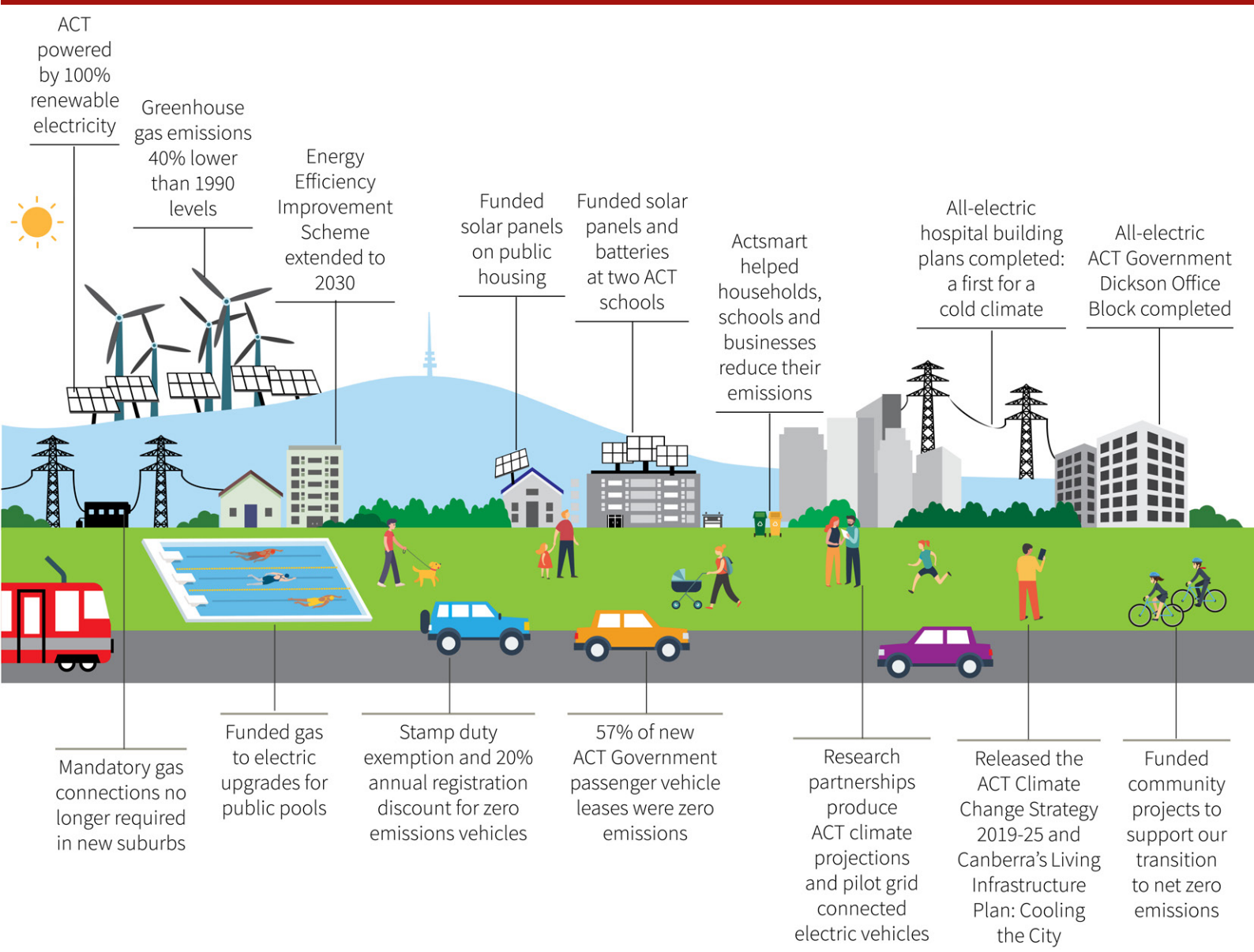
In 2010, the ACT Legislative Assembly passed the Climate Change and Greenhouse Gas Reduction Act 2010 (the Act). The purpose of the Act is to promote the development of policies and practices to address climate change, to set targets to reduce greenhouse gas emissions and to provide monitoring and reporting in relation to the targets. For each financial year, the Minister must prepare a report on:

1. the actions taken during the year to exercise the functions required of the Minister under the Act
2. the effectiveness of government actions taken to reduce greenhouse gas emissions
3. the findings of a cost-benefit analysis of any government policies or programs implemented to meet the targets.

This report outlines the ACT Government's actions against the requirements of the Act for the 2019–20 financial year. More details on some of these actions is available on the Environment, Planning and Sustainable Development Directorate website.

ACTIONS TAKEN IN 2019–20 UNDER THE CLIMATE CHANGE AND GREENHOUSE GAS REDUCTION ACT 2010

2019–20 AT A GLANCE



PART A: KEY ACHIEVEMENTS 2019–20

The ACT is a leader on climate change action, recognised nationally and internationally for its climate leadership. 2019–20 saw the ACT achieve two major milestones in its climate leadership journey: a 100% renewable electricity supply, and a more than 40% reduction in 2019–20 emissions, compared to 1990 emissions levels. It also saw the release of major new climate change policies, including the ACT Climate Change Strategy 2019–25, which refocuses the ACT's emissions reduction efforts to transport and gas, the largest remaining sources of emissions. This chapter details these and other key achievements in the exercise of the Minister's functions under the Act during 2019–20.

100% renewable electricity

In 2019–20, the ACT achieved a 100% renewable supply of electricity, making it the first major jurisdiction outside Europe with a population greater than 100,000 people to do so. This was achieved through the combination of large-scale renewable electricity projects procured through renewable energy auctions, rooftop solar generation and the ACT's share of the national Renewable Energy Target. The third stage of the Hornsdale wind farm, which commenced generation in October 2019 was the last piece of infrastructure to put the ACT on track to achieve and maintain 100% renewable electricity.

The ACT's fifth Renewables Auction was held in 2019–20. It secured additional renewable electricity supply that will ensure that the ACT remains at 100% renewable electricity as the population grows and the need for emissions reductions from natural gas and transport fuel drive increases in electricity demand.

The ACT will maintain 100% renewable electricity from 2020 onwards, as required under the Act.

40% emissions reduction

By achieving 100% renewable electricity, the ACT also reached its ambitious target to reduce greenhouse gas emissions by 40% on 1990 levels by 2020. Emissions in 2019–20 were 45.3% below 1990 levels. COVID-19 led to greater than expected reductions in transport, which are likely to grow again as the economy continues to recover. This achievement is illustrated in Figure 1 below, alongside the ACT's targets for further emissions reductions.

New climate change mitigation and adaptation policies

2019–20 saw the release of the ACT Government's Climate Change Strategy 2019–25 (the strategy). The strategy outlines the next stage of climate change responses to meet emissions reductions targets and prepare for climate change. The actions in the strategy were developed with the community and stakeholders and are focused on:

- meeting the 2025 target of reducing emissions to 50–60% below 1990 levels;
- building resilience to climate change impacts;
- ensuring we don't 'lock in' future emissions; and
- laying the foundations for achieving net zero emissions.

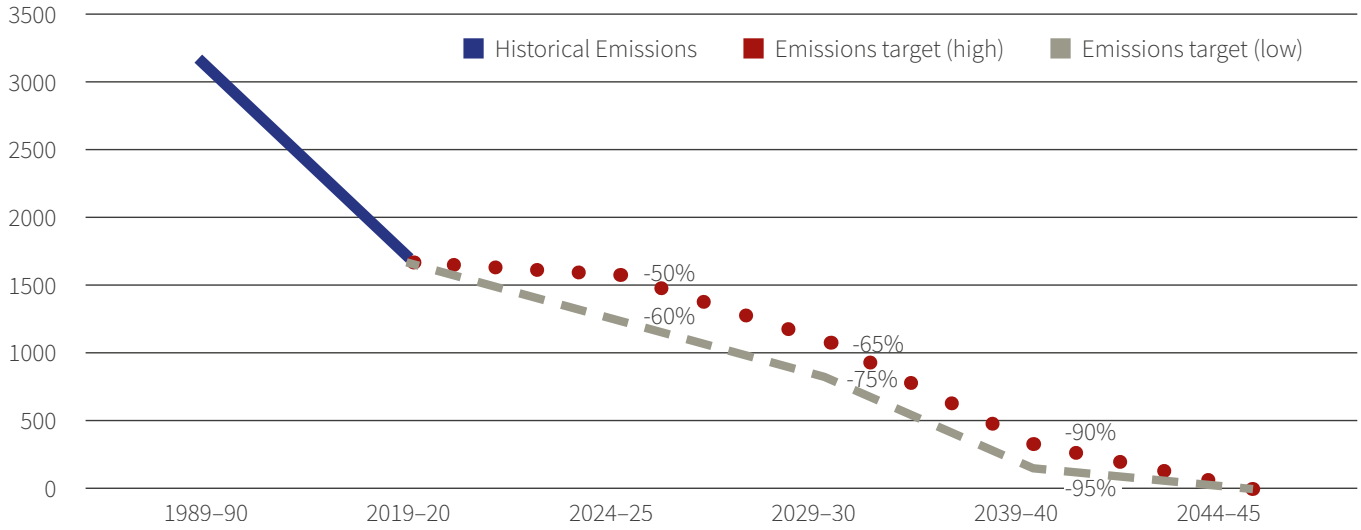
Key projects and initiatives from the strategy that were completed in 2019–20 included:

- The Energy Efficiency Improvement Scheme was extended to 2030 and the Priority Household Target—for the proportion of scheme participants that are low income households—was increased from 20% to 30% in 2020.
- From 20 December 2019, e-scooters and other similar devices that meet the definition of personal mobility device can legally be used in the ACT.
- Draft Variation 373 to the Territory Plan was released in January 2020 for public consultation. This variation removes the mandatory requirement for gas connection to blocks in new suburbs from the Estate Development Code. The variation formally took effect in August 2020.

Canberra's Living Infrastructure Plan: Cooling the City (the plan) was also released in 2019–20. It builds on the ACT Government's commitments under the ACT Planning Strategy 2018 to make Canberra a sustainable, liveable and resilient city into the future, including by helping to address the urban heat island effect. Projects and initiatives delivered under the plan in 2019–20 included:

- Supporting demonstration projects that showcase best practice living infrastructure and permeable surface options. This includes the Whitlam Village demonstration project.
- Supporting the development of a draft Urban Forest Strategy to promote the long-term strategic management and growth of the urban forest.

Figure 1: ACT emissions in 2019-20, and future targets, compared with 1989-90 levels



Economic stimulus and support to businesses

As part of its COVID-19 response, the ACT Government developed several 'screwdriver ready' infrastructure projects with benefits relating to climate change. Through the Sustainability Upgrades in Social Housing Project, solar panels will be installed on public and community housing properties including ten residential group homes and two larger complexes. The 12 systems will result in the generation of over 340,000kWh of electricity per annum, with an estimated benefit of almost $60,000 in the first year, bringing direct benefit to tenants by reducing their energy costs. Other COVID-19 stimulus projects included energy efficiency and fuel switching upgrades at public swimming pools and installation of solar panels and batteries in ACT Schools.

The Government also continued to administer the Renewable Energy Innovation Fund (REIF) and programs to realise its vision for the ACT as an internationally recognised centre for renewable energy innovation and investment. During 2019–20 the ACT Government supported renewable energy businesses through: grants to support a solar panel test laboratory; hydrogen storage; battery storage optimisation; reducing charging time of electric vehicles; a trial of batteries in an allelectric suburb; a portable solar pilot program; and heavy electric vehicle performance simulation.

The ACT Renewables Hub was refocussed in 2019–20 to drive collaboration and information sharing among renewable energy businesses without providing a physical co-working space. The new model has allowed for a stronger focus on delivering collaboration outcomes.

The Actsmart Solar for Business Trial which commenced in February 2019 was extended beyond the initial 12–month trial period to the end of 2020 as a stimulus measure to support local businesses. The trial provides independent, tailored advice on installing rooftop solar and a rebate to eligible small businesses and community organisations.

Reducing emissions from transport and gas

Support for electric vehicles

Electrification of transport will enable the ACT to leverage its 100% renewable electricity supply to power electric vehicles with zero emissions. Actions taken in 2019–20 to support this include:

- Providing financial incentives for the purchase and registration of zero emissions vehicles, including a full stamp duty exemption and an ongoing annual registration discount of 20%.
- Amending planning rules to make it easier to install public electric vehicle charging without needing a development application.
- Opening transit lanes to electric vehicles from 1 July 2019 to the end of 2023.
- Legalising the use of electric scooters and similar e-mobility devices on shared paths and footpaths from 20 December 2019.
- Supporting SEE-Change to establish the Canberra Electric Bike Library, which allows Canberrans the chance to borrow an e-bike bike for two weeks before investing in one.

Gas connections not mandatory in new suburbs

In April 2020, the Government put forward Variation to the Territory Plan 373 to remove the mandatory requirement for new estate developments to have natural gas connections, thereby allowing new suburbs to be all electric, powered by the ACT's 100% renewable electricity supply. The draft variation commenced on 28 August 2020.

Consultation

Sustainable Energy Policy 2020–25 Discussion Paper

In October 2019, the ACT Government released the **Sustainable Energy Policy 2020–25 Discussion Paper** for public consultation to work towards understanding how the ACT can best transition to renewable energy and zero greenhouse gas emissions in a way that is fair, equitable and cost-effective, while maintaining the reliability of the energy system.

Climate Change Council Community and Expert Forums

The ACT Climate Change Council held three community forums in March 2020 to ask Canberrans about their experiences during the bushfire, smoke and hail events of the 2019–20 summer. The Council combined the outputs of these forums with findings from an email consultation of 20 diverse subject matter experts, and Council members' expertise to produce the report Learning from Canberra's Climate-Fuelled Summer of Crisis.

National and International engagement

The ACT is a leader on climate change action and continues to engage with other jurisdictions on a national and international scale, through partnerships such as the Under 2 Coalition, Global Covenant of Mayors for Climate and Energy and the Cities Power Partnership.

The ACT also transparently reports its climate change actions and greenhouse gas emissions annually through the international Carbon Disclosure Project.

In September 2019, two ACT Government programs were recognised with awards at the national Cities Power Partnership Awards. The Next Generation Energy Storage Program received the **Renewable Energy Achievement Award**, while the Energy Efficiency Improvement Scheme received the **Energy Efficiency Achievement Award**.

Research

NSW and ACT Regional Climate Modelling (NARCliM) Project

In 2011, the ACT partnered with NSW in the **NSW and ACT Regional Climate Modelling (NARCliM) Project** to provide high-resolution climate projections for southeast Australia, including the ACT. These were delivered in 2014. During 2019–20, work continued on NARCliM 1.5, which is due for completion in November 2020. NARCliM 1.5 will deliver updated and expanded projections using more recent global climate models and provide projections out to 2100.

In June 2020, the ACT renewed its partnership with NSW for NARCliM 2.0, to be delivered in 2022. This will provide more comprehensive and finer resolution climate projections for the ACT based on the next round of global climate models. The ongoing partnership in NARCliM will continue to provide the ACT with robust, high resolution climate projections to enable policy and decision makers within government and beyond to effectively prepare, plan for and mitigate climate risks.

Realising Electric Vehicle-to-Grid Services (REVS)

The ACT Government is a partner in the 'Realising Electric Vehicle-to-grid Services' (REVS) project. This project will enable world-first business models that allow electric vehicles to feed electricity into the network. It will provide valuable information on the potential for electric vehicles to support the grid at times of peak demand and test new revenue streams that could reduce ownership costs. Fifty-one Nissan LEAF electric vehicles are to be deployed in the project, 50 of which will enter the ACT Government fleet to test and provide vehicle-to-grid services. The project began in June 2020 and will run for two years. It is co-funded by the Australian Renewable Energy Agency (ARENA) and led by ActewAGL Retail. Partners include the Australian National University, JET Charge, Evoenergy, SG Fleet and Nissan.

Support for ANU Battery Storage and Grid Integration Program

The ACT Government is providing up to $5 million over five years in joint funding for the ANU's Battery Storage and Grid Integration Program. Researchers in this Program undertake interdisciplinary research, development and demonstration to achieve integration and optimisation of energy storage in electricity grids and electricity markets globally.


100MW Tesla battery unit built next to Hornsdale Wind Farm. credit Neoen

PART B: GOVERNMENT EMISSIONS REDUCTIONS UNDER THE ZERO EMISSIONS GOVERNMENT FRAMEWORK

In 2019–20, the ACT Government released the Zero Emissions Government Framework, as part of the **ACT Climate Change Strategy**. The Framework commits the Government to achieving zero emissions in its operations by 2040 and coordinates a whole-of government approach to achieving this in a cost-effective manner. The successful implementation of electricity supply to the ACT from 100% renewable electricity has shifted the focus of emissions reduction to natural gas and transport emissions.

Government Emissions and Energy use

In 2019–20, greenhouse gas emissions from ACT Government operations were 63,737 t CO2-e. Due to the achievement of 100% renewable electricity, this is a 40 percent decrease on 2018–19 emissions.

The ACT Government utilised 1,568,645 GJ of energy in its operations in 2019–20, compared with 1,653,918GJ in 2018–19. The breakdown of energy use and emissions by source is illustrated below.

Table 1: ACT Government 2019–20 energy use and emissions by energy source[1]

ENERGY SOURCE	GJ	TCO_2-E
Electricity	518,684	0
Natural Gas	472,575	24,261
Transport fuels	577,386	39,476
Total	**1,568,645**	**63,737**

1 Data extracted from ACT Government Enterprise Sustainability Platform (ESP) 21 Oct 2020. Emissions data may vary slightly between reports due to the timing of emissions data uploaded to the ESP and revisions to electricity emissions factors.

Projects undertaken under the Zero Emissions Government Framework

During 2019–20, the ACT Government:

- Developed a plan for the new Canberra hospital building to be all-electric, taking advantage of Canberra's 100% renewable electricity supply. The plan was publicly announced in September 2020.
- Exceeded the target of at least 50% of newly leased Government fleet vehicles being Zero Emissions Vehicles. 57% of all new passenger leases (74% of new leases where a fit for purpose vehicle was available) were electric in 2019–20. The ACT Government now has one of the largest zero emissions passenger fleets in Australia.
- Commenced the ACT Government Gas Asset Replacement Strategy Stage 2 with a survey of large gas consuming assets at multiple sites to develop a cost-effective pathway to electric replacements.
- Funded the installation of solar systems and batteries at the Caroline Chisholm Senior School and the all-electric Margaret Hendry Primary School as part of the screwdriver-ready COVID-19 stimulus program. Each school received a 40 kWh battery storage system.
- Undertook a scoping study to assess the feasibility of undertaking Energy Performance Contracts (EPCs) for energy efficiency and emissions reductions, evaluating several Justice and Community Safety Directorate sites for energy efficiency and emissions reduction upgrades of plant and equipment under Energy Performance Contracts.
- Completed construction of the all-electric Dickson Office Block. This will significantly reduce non-transport emissions for the Environment, Planning and Sustainable Development Directorate, Transport Canberra and City Services and the Suburban Land Agency.

Zero Emission Government Loan Fund

The ZEG Fund is a zero-interest loan fund that allows ACT Government agencies to manage the cost of reducing emissions. The fund supports cost-effective emissions reduction projects with 35 projects to the value of $17.5 million supported under the fund to date. Highlights for the ZEG fund in 2019–20 included:

- Approval of the Stromlo Depot project, which combines building and vehicle emissions reduction technology upgrades and will be the first all-electric depot for the Environment, Planning and Sustainable Development Directorate. The project will include a 64kW solar PV system, replacement of a gas hot water system with an electric heat pump and installation of electric vehicle infrastructure. This will save a projected 2.26 tonnes CO_2-e per year.
- Commenced implementation of the Tuggeranong Police Station project, which converts conventional gas-based heating to a hybrid heat pump, alongside an LED lighting upgrade, and installation of a solar photovoltaic system and battery storage.
- Commenced implementation of the Tuggeranong Bus Station project which converts a gas-fired heating system for a large workshop to a heat pump system. This has been integrated with solar photovoltaic installation to give an estimated annual emissions reduction of 229 tonnes CO_2-e.

Agency specific performance

ACT Government agencies set emission reduction targets for each financial year using the previous calendar year as a baseline. Table 2 below shows each Directorate's performance against the targets for the 2019–20 financial year. The ACT Government as a whole outperformed its target for the 2019–20 financial year.

Table 2: 2019–20 emissions results for all Directorates

DIRECTORATE	2019–20 TARGET (TCO_2E)	2019–20 EMISSIONS (TCO_2E)	EMISSIONS AS A PERCENTAGE OF TARGET
Transport Canberra and City Services Directorate	41553	38165	91.8%
Canberra Health Services	9359	9390	100.3%
Education Directorate	6331	6161	97.3%
Justice and Community Safety Directorate[1]	3436	3686	107.3%
Chief Minister, Treasury & Econ Dev Directorate	4874	3482	71.4%
ACT Health Directorate[2]	145	248	171.1%
Environment, Planning and Sustainable Development	820	734	89.5%
Community Services Directorate[3]	429	587	136.8%
Totals	66947	62454[4]	93.3%

Data source: ACT Government Enterprise Sustainability Platform (extracted 03/09/2020)

1 JACS emissions increased due to bushfire demand on emergency services

2 When the 2019–20 emissions target was developed the natural gas usage in the Bowes St building was not correctly accounted for. This has since been rectified. ACTHD is currently working with EPSDD to set a new emissions target for ACTHD. Although ACTHD's emissions in 2019–20 were above target, the emissions of 248t CO_2-e were still lower than in 2018-19, had the Bowes St gas usage been correctly incorporated into the original target.

3 The apparent increase is due to the Bimberi Youth Detention Centre facilities coming back on line and underreported usage for 11 Moore Street when targets were set.

4 The total is smaller than the total emissions for all of ACT Government because it includes the emissions only for the listed Directorates, and not for a number of smaller agencies. This is because only these Directorates are required to set targets under the Zero Emissions Government Framework.

PART C: PROGRAM DELIVERY

The ACT Government delivers a range of programs to support businesses, households, schools and the broader community to achieve greenhouse gas emissions reductions alongside other environmental and financial benefits.

Rebates and Grants

Through the 2019–20 Community Zero Emissions Grants Program, seven grants with a combined value of more than $160,000 were provided to community groups and sponsored individuals to lead initiatives that support the ACT's transition to net zero emissions by 2045. Projects funded included:

- The Australian Dance Party's 'Move to Zero 2.0: It's Electrifying' campaign to communicate appealing, accessible ways to reduce emissions, focusing on sustainable and active transport
- SEE-Change's short film competition and festival for young people, Future Film
- The Conservation Council's Make the Switch project, which will support Canberra homeowners to switch their homes form gas to electricity
- Canberra Environment Centre's Canberra Community ReCyclery, where volunteers can service and repair bicycles in order to make active transport as accessible as possible
- 'The Carbon Diet', a communication project about cutting an individual's carbon footprint by 75%
- A hot composter run by the Hackett Compost Collective
- An exploration by Pre POWER ONE Co-op of pathways and mechanisms for community investment in renewable electricity.

The Actsmart No Interest Loan Scheme, administered on behalf of the ACT Government by Care Financial and the Salvation Army, subsidised energy and water efficient appliances for 32 homes.

The Actsmart Wood Heater Replacement program continued to provided rebates to encourage ACT residents to reduce air pollution from wood heaters by replacing them with efficient electric heaters.

Community Activities

Through the Actsmart Schools program, the Government continued to help schools move towards zero net emissions. All schools in the ACT are members of this program, which helps them develop and implement a staged approach to improving sustainability.

Via the Actsmart Public Event program, the Environment, Planning and Sustainable Development Directorate helped event organisers implement recycling, energy, water and transport efficiencies at 158 events including school fetes, festivals, fairs, shows and sporting events. The recycling component gave more than 700,000 event patrons the opportunity to recycle, avoiding approximately 62 tonnes CO_2-e in greenhouse gas emissions.

Eighty-two eligible ACT businesses and community organisations were offered free, independent, tailored advice and rebates for the installation of rooftop solar systems through the Actsmart Solar for Business trial.

The Government also provided funding to the Canberra Environment Centre, SEE-Change and the Conservation Council ACT Region to engage with the community on a range of sustainability issues, initiatives, policies and programs through established community partnerships.

Business engagement

Over 2019–20, the Actsmart for Business program provided: Actsmart Business Energy and Water assessments for 122 organisations; 52 rebates to support energy efficiency upgrades, with a total estimated saving of 267MWh of energy and $69,780; and accreditation of 582 sites by the Actmart Business Recycling Program, which diverted an estimated 45,655 cubic metres of material from landfill, saving an estimated 8453 tonnes CO_2-e in greenhouse gas emissions.

Support for households

During 2019–20, the ACT Government's Actsmart sustainability program provided 2533 households—including 1284 low income households—with information and assistance to reduce their energy use and greenhouse gas emissions. Activities undertaken included home energy assessments and education, workshops and information sessions, installation of energy efficient appliances, draught proofing, and subsidies for low income households to install solar systems through the Actsmart solar for low income program.

Next Generation Energy Storage (Next Gen) program

The ACT Government continued its staged roll-out of solar battery storage in homes and small businesses in the ACT through the Next Generation Energy Storage (Next Gen) program and developed options to extend the program to support larger batteries. 340 solar battery storage systems were installed over the course of 2019–20, bringing the total number of systems supported by the program to over 1500.

Energy Efficiency Improvement Scheme

The ACT Government supports households and businesses to reduce energy demand and carbon emissions through the Energy Efficiency Improvement Scheme (EEIS). In 2019–20 the Government legislated to extend the scheme for a further 10 years to 31 December 2030 and switched from an emissions reduction metric to an energy savings metric to account for achieving 100% renewable electricity.


ENERGY
RATING

EFFECTIVENESS OF GOVERNMENT ACTIONS

ACT GREENHOUSE GAS INVENTORY

Every year, the ACT Government publishes the Territory's greenhouse gas emissions. This year marks a significant milestone for the ACT, with the Territory meeting two of its 2020 targets under the Act:

- to reduce ACT emissions to 40% below 1989-90 levels
- to supply 100% of the Territory's electricity supply from renewable sources.

The most significant contribution to meeting the ACT's emissions reduction target was the ACT's 100% renewable electricity supply. The COVID-19 pandemic has also resulted in greater than expected reductions in transport emissions. Emissions from transport are expected to rise in future inventories. Below are the ACT's total emissions between 1989–90 and 2019–20, as well as the Territory's next reduction target.

Total greenhouse gas emissions for the ACT in 2019–20 were 1684 kt CO_2-e, a 45.3% reduction from 1989–90 levels. Per capita emissions were 3.94 kt CO_2-e in 2019–20 compared to 11.02 kt CO_2-e in 1989–90 and 9.27 kt CO_2-e in 2018–19.

Table 3: ACT emissions over time, and 2025 target (kt CO_2-e)

1989–90	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2024–25 (TARGET)
3077	4204	4158	4169	3967	3924	1684	1231-1539

ACT RENEWABLE ENERGY TARGET COMPLIANCE

The ACT Government committed to deliver 100% renewable electricity for the Territory from 2020 under the Climate Change and Greenhouse Gas Reduction Act 2010. The ACT Government published a methodology (the acquittal methodology) for assessing compliance with this 100% renewable electricity target (RET).
The acquittal methodology outlines the sources of renewable electricity that may be counted towards the target, and how they are to be counted. Sources of renewable energy that can be counted are:

1. Feed-in-tariff (FiT) contracts with large-scale renewable generators
2. The ACT's share of Commonwealth renewables policies
3. Greenpower purchases in the ACT
4. Grid connected renewable generation within the ACT (such as rooftop solar)
5. The ACT's share of Below Baseline NSW region NEM renewable generation.

This methodology establishes that the first compliance period is 1 January 2020 to 30 June 2020, however the ACT Government has acquitted 100% renewable electricity for the entire 2019–20 financial year, in order to align with delivery of the ACT's emissions reduction target. The ACT Government surrendered 2,258,677 large-scale generation certificates (LGCs) in 2019–20 on behalf of ACT electricity users, in order to meet this target. This was the largest voluntary surrender in Australian history.

In the acquittal methodology, electricity consumption is taken as the electricity imported into the ACT electricity grid from where it connects to the NSW transmission grid. This means that electricity generated in the ACT (such as from rooftop solar, large-scale solar farms and landfill gas generators) acts to reduce electricity consumption as measured under the methodology, as it reduces the amount of electricity required to be imported from the transmission grid.

The acquittal of the 100% renewable electricity target is shown in Table 1. This table outlines ACT electricity consumption and all sources of renewable electricity generation that have been counted in the acquittal. As rooftop solar has already contributed to the target by reducing demand, it is not also counted as renewable electricity supply. Similarly, the generation from the three FiT-supported solar farms in the ACT is also counted through their reduction in demand. The ACT Government has determined that output from the landfill gas generators would not be counted towards delivery of the target and this is reflected in the acquittal.

This table also includes acquittal based on an alternative methodology, which measures electricity consumption as the electricity required to meet the total demand by ACT consumers (including electricity lost in the Evoenergy distribution network). Under this alternative methodology, rooftop solar generation has been included as electricity supply, large-scale solar is counted in section (i), and landfill gas is not counted. The ACT Government may in future years update the prescribed methodology to reflect this alternative methodology.

Table 4: 100% renewable target acquittal

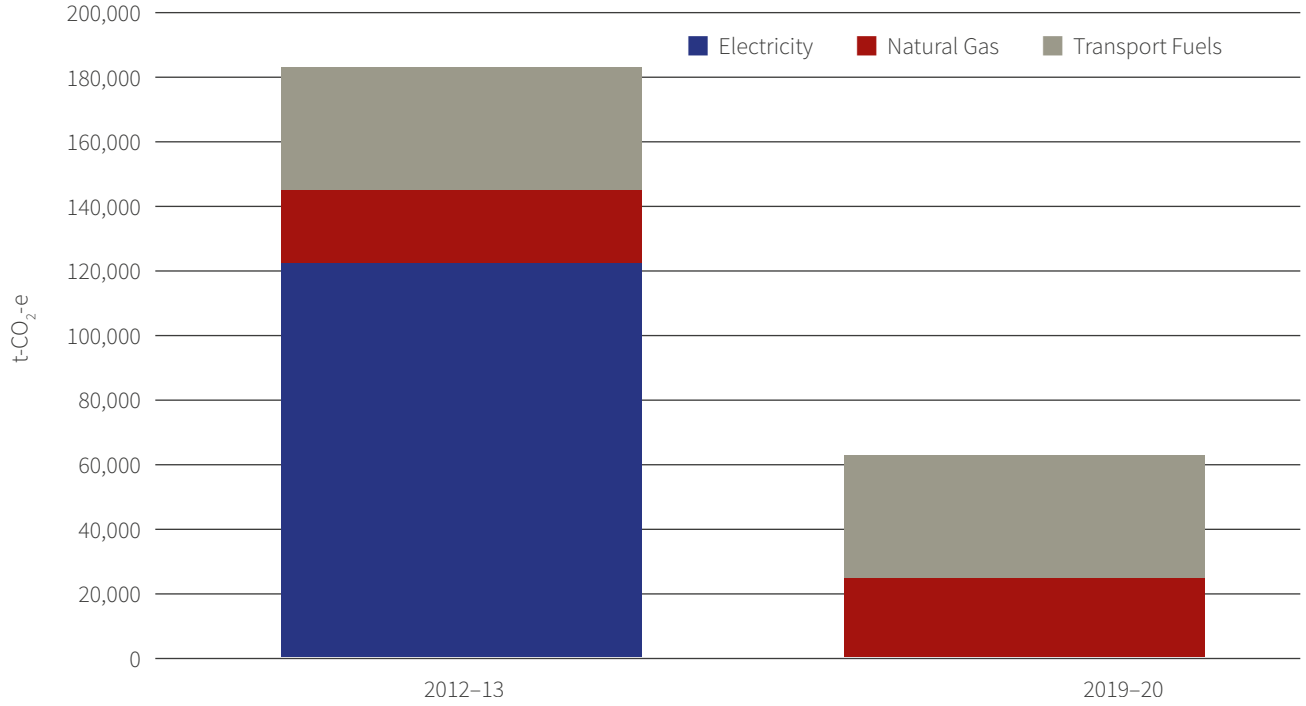
SOURCES OF RENEWABLE ENERGY	QUANTITY FOR 1/7/2019 - 30/6/2020 (GWH)	ALTERNATIVE METHODOLOGY ACQUITTAL
Feed in tariff contracts with large-scale generators (LGCs surrendered)	2,127.6	2,227.5
The ACT's share of Commonwealth policies	541.2	541.2
Greenpower purchases in the ACT[1]	0	0
Grid connected generation within the ACT	0	127
The ACT's share of below baseline NSW region NEM renewable generation	93.2	93.2
Renewable electricity supply	2,762	2,989
ACT electricity consumption	2,762	2,989
Renewable electricity percentage	100%	100%
LGCs surrendered ('000)	2,258.7	2,258.7
LGCs carried forward to future year ('000)	31.2	31.2

1 The electricity methodology allows the ACT Government to count Greenpower towards meeting the target. However, a decision has been made not to count Greenpower, so that ACT electricity consumers can choose to purchase Greenpower to support further uptake of renewable electricity in Australia above the ACT's already ambitious target.

ACT GOVERNMENT GREENHOUSE GAS INVENTORY

The ACT Government reports emissions from Government operations annually. In 2019–20, emissions from Government operations were 63.7 kt CO_2-e, 40% lower than the previous year and a 65% decrease from 2012–13. Most of the decrease in emissions is due to the transition to 100% renewable electricity in the ACT. The ACT Government will maintain its robust monitoring and reporting regime to track progress towards zero emissions in Government operations by 2040. Figure 2 below shows ACT Government greenhouse gas emissions by source in 2019–20 compared with 2012–13.

Figure 2: ACT Government greenhouse gas emissions by emissions source, 2012–13 and 2019–20



Data extracted from ESP 21 Oct 2020. Emissions data may vary slightly between reports due to the timing of emissions data uploaded to the ESP and revisions to electricity emissions factors.


Summer energy-saving tips

COST OF LIVING STATEMENT

INTRODUCTION

Section 15 of the Act requires the ACT Government to report on the findings of a cost-benefit analysis of policies and programs implemented to meet the climate change targets in the Act. This document represents the statement under this commitment for 2019–20.

Key ACT Government climate change measures are estimated to have cost a representative ACT household around $178.60 in 2019–20. The EEIS program alone is estimated to have delivered annual energy cost savings of more than $300 on average for ACT households in 2019–20.

Other programs have delivered additional savings for households and businesses, and the ACT's large-scale feed-in tariff system has protected ACT residents from some electricity market price volatility.

TOTAL ENERGY CONSUMPTION

The Australian Energy Market Commission (AEMC) identifies a representative ACT household as one with two inhabitants using electric water heating, with no gas heating or cooking and with no swimming pool, that consumes 7,151 kilowatt hours of electricity per year. The AEMC predicted that a customer with this level of electricity consumption, on a default standing offer, would pay an annual electricity GST exclusive bill of $1,967 in 2019–20. In 2018–19, the representative consumer on a market offer had an annual GST exclusive bill of $1,937[1].

Retail electricity prices paid by ACT households compare favourably with other jurisdictions. The ACT has among the lowest electricity prices nationally. However, electricity consumption tends to be higher in the ACT due to a combination of a colder climate and significantly higher average incomes. This means ACT households, on average, have relatively high electricity spend.

1 Residential Electricity Price Trends 2019
A report by the Australian Energy Market Commission (December 2019).

CLIMATE CHANGE POLICY COST IMPACT

There were two climate change policies that had a direct cost of living impact in 2019–20. These were the Energy Efficiency Improvement Scheme and the small-scale and large-scale feed in tariff schemes. Together, these schemes contributed $178.65 to a representative household electricity bill in 2019–20. This is approximately nine per cent of the total cost of electricity to a representative ACT household during the year.

ENERGY EFFICIENCY IMPROVEMENT SCHEME

The compliance cost of the EEIS is passed through to customers in the form of higher electricity tariffs. In 2019–20, the average pass-through cost for a two-person household was $28.60 per annum compared to $29.39 per annum in 2018–19. This price reduction is due to a small decline in the costs of the scheme. Activities completed under the EEIS in 2019–20 will deliver around $73 million in lifetime energy savings.

Table 5: Climate change policy cost impact per household per year

2019–20	AVERAGE LARGE AND SMALL-SCALE FEED IN TARIFF PASS THROUGH COST	AVERAGE EEIS PASS THROUGH COST	AVERAGE COST OF ENERGY
Cost	$150.05 [1]	$28.60	$1,967

1 2018–19 small-scale feed in tariff costs used as 2019–20 data not available

LARGE AND SMALL-SCALE FEED IN TARIFF (FIT) SCHEMES

The ACT large-scale FiT scheme supports the operation of large renewable energy generation capacity to help achieve the ACT Government's 100% renewable electricity target on and from 1 January 2020. Under the scheme, generators are provided a FiT for the eligible electricity generated. This FiT cost is passed through to customers in the form of higher electricity tariffs.

2019–20 saw the commencement of FiT supported generation by the 109 MW Hornsdale 3 Wind Farm in October 2019.

The contract mechanism the ACT Government has used to secure large-scale renewable electricity is helping offset the impact of rising wholesale costs. The ACT pays the difference between the feed-in tariff price and the wholesale market price. If wholesale prices rise, then ACT consumers pay a proportionally smaller feed-in tariff support payment.

The ACT small-and-medium scale FiT scheme supports the generation of electricity by eligible solar systems with less than 200 kW capacity. A total of 10,170 solar systems were registered as FiT generators in 2018–19, with a combined capacity of 35 MW. (Data for 2019–20 is not available at the time of writing this report). Like the large-scale FiT scheme, the small-scale FiT scheme contributes to the ACT's 100% by 2020 renewable electricity target.

The average small-scale FiT scheme pass-through costs for a typical two-person household in 2018–19 was $44.05 compared to $50.13 in 2017–18. (Pass-through costs for 2019–20 are not available at the time of writing this report). The large FiT scheme pass-through costs for a typical two-person household was $106 in 2019–20, compared to $91 in 2018–19, reflecting the increase in renewable electricity supported by the scheme as the ACT achieved 100% renewable electricity.

SOCIAL EQUITY

The impact of climate change measures, while being marginal on the community as a whole, may have disproportionate impacts on lower income households. To address this, a number of Government policies are in place to help vulnerable households suffering financial stress due to energy bills. These include Actsmart programs for households, utility concessions, and requirements on energy retailers to assist consumers suffering financial hardship. 1284 low income household participated in the Actsmart Home Energy Efficiency Programs in 2019–20, which were funded through Tier 2 EEIS contributions. Assistance through these programs includes home energy assessments and information, installation of energy efficient appliances, provision of other energy efficient items, draught proofing, and no interest loans for energy efficient appliance purchase. In 2019–20 the ACT Government also implemented two measures to support energy consumers impacted by the Covid-19 pandemic. These were: the Utilities Hardship Fund—providing $100 vouchers to electricity consumers in hardship—and an additional rebate of $200 for households already receiving the Utilities Concession.

The EEIS also includes a specific focus on vulnerable households. To ensure that low-income households benefit from the Scheme, Tier 1 retailers are obliged to deliver a proportion of their energy saving obligations from eligible activities in priority low-income households. The Priority Household Target (PHT) was increased from 20% from 2017 to 2019, to 30% for 2020 which will be maintained into 2021. In 2019–20, the EEIS delivered energy savings in 1774 low income, priority households, delivering annual bill savings estimated at around $1100 per household. The EEIS is supporting the installation of Energy Efficiency Improvements in Public Housing, improving the energy efficiency of 2200 public houses from 1 July 2018 to 30 June 2021.