



Policy costing

Suburb Zero pilot in the ACT	
Person/party requesting the costing:	Senator David Pocock, Senator for the Australian Capital Territory
Date costing completed:	1 September 2022
Expiry date of the costing:	Release of the next economic and fiscal outlook report.
Status at time of request:	Submitted outside the caretaker period
	<input checked="" type="checkbox"/> Confidential <i>Authorised for public release 24 February 2023</i> <input type="checkbox"/> Not confidential
<p>Summary of proposal:</p> <p>The proposal would electrify a suburb of Canberra, resulting in net zero greenhouse gas emissions for that community. The proposal consists of 2 options:</p> <ul style="list-style-type: none"> • Option 1 would provide financial support for 500 households within a small geographical area. • Option 2 would provide financial support for 1,000 households within a small geographical area. <p>Households would be able to apply for subsidies and/or concessional loans for the following aspects of electrification:</p> <ul style="list-style-type: none"> • Installing solar PV. • Installing a solar battery. • Replacing a gas heating system with an electric reverse-cycle air-conditioning system. • Replacing a gas hot water heater with a heat pump water heater. • Replacing a gas cooktop with an induction cooktop. • Acquiring a 2-year lease for an electric vehicle (EV) with an option to purchase at the end of the lease. <p>The pilot program would be on an opt-in basis and households who participate in the program would not be required to opt-in to all components.</p> <p>The proposal would have effect from 1 October 2022, with a 2-year timeframe for the pilot.</p> <p>The request also asked for an assessment of the energy cost savings for households and the change in greenhouse gas emissions arising from the pilot scheme.</p>	

Costing overview

Operation of the pilot scheme

In consultation with the requestor, the Parliamentary Budget Office (PBO) has specified the following subsidies available to households under the pilot scheme:

- 50% of the estimated capital and installation costs for solar PV systems, electric reverse-cycle air-conditioning systems and heat pump water heaters.
- 20% of the estimated cost for a 2-year EV lease, 20% of an EV's remaining value after its 2-year lease period, and 20% of the estimated cost of EV home-charging equipment. Households would be able to apply for a voucher during the 2-year pilot period, which they would be able to redeem up to 2 years beyond the end of the trial.

In addition to subsidies, concessional loans would be available for households to cover the remaining upfront costs of solar panels, batteries, electric air-conditioning systems, heat pump water heaters, induction cooktops, EV home-charging equipment and EV purchases. The concessional loans would be uncapped at the rate of the 10-year government bond rate, with a maximum 10-year fixed term.

The size of subsidies and concessions on loans have been developed so that most household appliances have an average payback period of around 4 years, incorporating existing incentives available such as the Sustainable Household Scheme.¹ For EVs, the subsidies and concessions on loans are expected to make EVs more cost-effective over the lifetime of the vehicle relative to a similar new internal-combustion engine vehicle. While these incentives are significant, individual circumstances will differ and not all eligible households would be expected to opt into the scheme.

The PBO has not made a definitive assessment of whether the scheme could be administered by the Australian Government or whether it would need to be administered by the ACT Government (with funds provided by the Australian Government). For the purposes of the costing the PBO has attributed the staffing costs associated with implementing the program as administered costs.

Financial implications

Option 1 of this proposal would be expected to decrease the fiscal balance by \$6.4 million, the underlying cash balance by \$5.8 million and the headline cash balance by \$8.8 million over the 2022-23 Budget forward estimates period.

Option 2 of this proposal would be expected to decrease the fiscal balance by \$12.7 million, the underlying cash balance by \$11.3 million and the headline cash balance by \$17.4 million over the 2022-23 Budget forward estimates period.

The options in the proposal would have an ongoing impact beyond the 2022-23 Budget forward estimates period. A breakdown of the financial implications over the period to 2032-33 is provided at Attachment A.

The financial implications of this proposal are uncertain and highly sensitive to assumptions around the number of households that would participate in the program, the composition of purchases and upgrades undertaken, and the price trajectory for electric appliances and EVs.

¹ That is, it would take around 4 years for the savings on energy usage costs to cover the capital and installation costs of the appliances.

Consistent with *PBO Guidance 02/2015*, public debt interest (PDI) expense impacts have been included in this costing because the concessional loans provided under this proposal involve financial asset transactions.

The fiscal, underlying cash and headline cash balance impacts differ in the treatment of interest payments and the flow of loan principal. In particular, only the fiscal balance reflects the concessional loan discount expense, associated unwinding income and loan write-downs, and only the headline cash balance includes transactions related to loan principal amounts. The impact on net debt will be broadly consistent with movements in the headline cash balance. A note on the accounting treatment of concessional loans is included at Attachment B.

Additional analysis on the average change in costs of energy use and reduction in greenhouse gas emission for households who opt into this program is provided at Attachment C.

Table 1: Suburb Zero pilot in the ACT – Financial implications (\$m)^(a)

	2022-23	2023-24	2024-25	2025-26	Total to 2025-26
Option 1: 500 households					
Fiscal balance	-1.5	-2.2	-1.4	-1.3	-6.4
Underlying cash balance	-1.5	-2.2	-1.2	-0.9	-5.8
Headline cash balance	-1.5	-2.2	-2.5	-2.6	-8.8
Option 2: 1,000 households					
Fiscal balance	-3.0	-4.3	-2.9	-2.5	-12.7
Underlying cash balance	-3.0	-4.2	-2.3	-1.8	-11.3
Headline cash balance	-3.0	-4.2	-4.9	-5.3	-17.4

(a) A positive number represents an increase in the relevant budget balance; a negative number represents a decrease.

Key assumptions

The PBO has made the following assumptions in costing this proposal.

General

- All households who access a subsidy through the program would access a concessional loan for any costs not covered by the subsidy. Households would first apply for a loan under the ACT Sustainable Household Scheme, and would then access a loan under the pilot scheme for any upfront costs exceeding the borrowing limit of \$15,000 under the ACT Sustainable Household Scheme.
- On average 1.5% of loans issues would not be repaid.
- Repayment of the initial loan principal amount would be evenly spread over 10 years.
- The uptake of solar panels, batteries, air-conditioning systems, heat pump water heaters and induction cooktops would be evenly spread over the 2-year rollout period of the pilot program.
- Landlords would respond in the same manner as owner-occupiers.
 - This reflects that landlords would be likely to charge higher rents to recover their capital outlays, with renters saving on their energy use costs.

Solar panels & battery

- Around 90% of households who participate in the program would install solar panels.
 - This includes households that do not currently have solar panels, as well as those that already have solar panels installed but would like to upgrade their energy generation capacity.

- The remaining 10% accounts for households who currently have enough solar generation capacity to meet their energy needs but would still wish to replace gas appliances with electrical appliances. Such households would not need to install additional solar panels.
- An average household in the ACT would need around 4,000 kWh of electricity per year to run an electric air-conditioning system, heat pump water heater, induction cooktop and an EV.
- Around 6,300 kWh of additional renewable electricity would need to be generated per year to offset the amount of greenhouse gas emissions from an average internal combustion vehicle.
- On average, eligible households would need to install a 6.6kW solar panel system to cover their additional electricity requirements.
 - This calculation is based on a weighted average of the energy requirements listed above, factoring in that some households would not upgrade all appliances, and not all households would lease an EV. This calculation includes the additional renewable electricity required to offset greenhouse gas emissions for households that do not lease/purchase an EV under the pilot.
 - Energy use by other household electrical appliances such as microwave, fridge and lighting is not accounted for in the above calculation because the analysis only considers the *additional* amount of energy required by switching from gas to electrical appliances. Given net-zero electricity generation in the ACT, there is no need to offset emissions for the electricity used by such appliances.
- Around 20% of households who participate in the program would take up a solar battery.

Home appliances

- The proportions of participating households who would replace their existing gas appliances would reflect the proportions of households across the ACT who own these gas appliances.

Electric vehicle

- The uptake of EV leases was calculated as a combination of 3 different groups:
 - The baseline group: households who would take up an EV lease without any policy incentive. The uptake of EV leases in the absence of the proposal is assumed to be similar to the ACT in 2021-22, growing by 1 percentage point every year as people’s preferences adjust to trend changes.
 - Households who would otherwise have purchased an internal combustion vehicle in the next 4 years, but would instead take up an EV lease given the incentives under the pilot. The number of households in this group was estimated using the assumption that a 1% decrease in the cost of leasing an EV would induce a 1.4% increase in the number of households who would take up a lease.
 - Households who would not otherwise acquire a new vehicle in the next 4 years, but would instead take up an EV lease given the incentives under the pilot. The number of households in this group was assumed to be around 2.5% of the total number of households within the suburb, grown by 0.5 percentage points every year to account for people’s changing preferences.
- The dollar cost of a 2-year EV lease would stay constant over the next 6 years. This assumes that price reductions due to technological advances and inflation offset each other.

- The assumed purchase price of the EV at the end of the lease was derived using a straight-line depreciation approach, assuming that the EV would have 6 years of useful life left after the 2-year lease term.
- All households who take up the 2-year EV lease would install EV home-charging equipment.
- All households who take up the 2-year EV lease would purchase the EV when the lease term ends.
- The unit cost of EV home-charging equipment would stay constant over the next 6 years. This assumes that price reductions due to technological advances and inflation offset each other.
- The labour cost of installing EV home-charging equipment would increase based on the consumer price index (CPI).
- The uptake of EV leases would be evenly spread over 4 years.

Methodology

Subsidy

The total amount of subsidy required for this program was calculated as the sum of the average subsidies required for solar panels, electric air-conditioning, heat pump water heater, EV lease, EV purchase (at the end of the 2-year lease) and EV home-charging equipment multiplied by the number of households participating in scheme.

Loan

The loan amount was calculated on the average loan needed per household after taking into account subsidies and loans available under the ACT Sustainable Household Scheme and the number of households that would be required to take out a loan. The impact on the fiscal, underlying cash and headline cash balances of the loan funding provided was calculated using a concessional loan model, with interest payments at the 10-year Australian Government bond rate, and repayments spread evenly over the maximum 10-year period.

Staffing cost

The staffing cost was calculated by estimating the workforce required to deliver this proposal, through using the Department of Finance's standard departmental costing template.

Financial implications were rounded consistent with the PBO's rounding rules as outlined on the PBO Costings and budget information webpage.²

Data sources

The Treasury provided CPI and 10-year Government bond rate projections as at the *2022-23 Pre-election Economic and Fiscal Outlook*.

The Department of Finance provided the standard departmental costing template as at the *2022-23 Pre-election Economic and Fiscal Outlook*.

Information on electric air-conditioning, heat pump water heater and induction cooktops was sourced from The Good Guys, Harvey Norman and 1st Choice Hot Water as at 4 August 2022.

² https://www.apb.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Budget_Office/Costings_and_budget_information

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Attachment A – Suburb Zero Pilot in the ACT – financial implications

Table A1: Suburb Zero pilot in the ACT – Option 1: 500 households – Fiscal balance (\$m)^(a)

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total to 2025-26	Total to 2032-33
Revenue													
Administered non-tax													
<i>Income from unwinding concessional loan discounts</i>	-	-	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	1.8
<i>Interest accrued from loans</i>	-	-	..	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.0
Total – revenue	-	-	0.1	0.2	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.3	2.8
Expenses													
Administered													
<i>Household subsidies</i>	-1.4	-1.9	-1.0	-0.8	-0.6	-0.6	-0.2	-	-	-	-	-5.1	-6.5
<i>Concessional loan discount expense</i>	-	-	-0.3	-0.5	-0.5	-0.6	-0.1	-	-	-	-	-0.8	-2.0
<i>Loan write downs</i>	-	-	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-0.1	-0.1
<i>Staffing cost for implementing the program</i>	-0.1	-0.2	-0.1	..	..	..	..	-	-	-	-	-0.4	-0.4
Total – administered	-1.5	-2.1	-1.4	-1.3	-1.1	-1.2	-0.3	-	-	-	-	-6.3	-9.0
Total – expenses	-1.5	-2.1	-1.4	-1.3	-1.1	-1.2	-0.3	-	-	-	-	-6.3	-9.0
Total (excluding PDI)	-1.5	-2.1	-1.3	-1.1	-0.8	-0.7	0.2	0.3	0.3	0.3	0.3	-6.0	-6.2
PDI impacts	..	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-2.4
Total (including PDI)	-1.5	-2.2	-1.4	-1.3	-1.0	-1.0	-0.1	-	-	-	-	-6.4	-8.6

(a) A positive number for the fiscal balance indicates an increase in revenue or a decrease in expenses or net capital investment in accrual terms. A negative number for the fiscal balance indicates a decrease in revenue or an increase in expenses or net capital investment in accrual terms.

.. Not zero but rounded to zero.

- Indicates nil.

Table A2: Suburb Zero pilot in the ACT – Option 1: 500 households – Underlying cash balance (\$m)^(a)

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total to 2025-26	Total to 2032-33
Receipts													
Administered non-tax													
<i>Interest receipts</i>	-	-	..	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.0
Total – receipts	-	-	..	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.0
Payments													
Administered													
<i>Household subsidies</i>	-1.4	-1.9	-1.0	-0.8	-0.6	-0.6	-0.2	-	-	-	-	-5.1	-6.5
<i>Staffing cost for implementing the program</i>	-0.1	-0.2	-0.1	..	..	..	..	-	-	-	-	-0.4	-0.4
Total – administered	-1.5	-2.1	-1.1	-0.8	-0.6	-0.6	-0.2	-	-	-	-	-5.5	-6.9
Total – payments	-1.5	-2.1	-1.1	-0.8	-0.6	-0.6	-0.2	-	-	-	-	-5.5	-6.9
Total (excluding PDI)	-1.5	-2.1	-1.1	-0.7	-0.5	-0.4	0.0	0.1	0.1	0.1	0.1	-5.4	-5.9
PDI impacts	..	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-2.4
Total (including PDI)	-1.5	-2.2	-1.2	-0.9	-0.7	-0.7	-0.3	-0.2	-0.2	-0.2	-0.2	-5.8	-8.3

(a) A positive number for the underlying cash balance indicates an increase in receipts or a decrease in payments or net capital investment in cash terms. A negative number for the underlying cash balance indicates a decrease in receipts or an increase in payments or net capital investment in cash terms.

.. Not zero but rounded to zero.

- Indicates nil.

Table A3: Suburb Zero pilot in the ACT – Option 1: 500 households – Headline cash balance (\$m)^(a)

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total to 2025-26	Total to 2032-33
Receipts													
<i>Administered non-tax</i>													
Loan repayments	-	-	0.1	0.4	0.6	0.8	0.9	0.9	0.9	0.9	0.9	0.5	6.4
Interest receipts	-	-	..	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.0
Total – receipts	-	-	0.1	0.5	0.7	1.0	1.1	1.0	1.0	1.0	1.0	0.6	7.4
Payments													
<i>Administered</i>													
Household subsidies	-1.4	-1.9	-1.0	-0.8	-0.6	-0.6	-0.2	-	-	-	-	-5.1	-6.5
Loans made to households	-	-	-1.4	-2.1	-2.3	-2.5	-0.7	-	-	-	-	-3.5	-9.0
Staffing cost for implementing the program	-0.1	-0.2	-0.1	..	..	..	..	-	-	-	-	-0.4	-0.4
Total – administered	-1.5	-2.1	-2.5	-2.9	-2.9	-3.1	-0.9	-	-	-	-	-9.0	-15.9
Total – payments	-1.5	-2.1	-2.5	-2.9	-2.9	-3.1	-0.9	-	-	-	-	-9.0	-15.9
Total (excluding PDI)	-1.5	-2.1	-2.4	-2.4	-2.2	-2.1	0.2	1.0	1.0	1.0	1.0	-8.4	-8.5
<i>PDI impacts</i>	..	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-2.4
Total (including PDI)	-1.5	-2.2	-2.5	-2.6	-2.4	-2.4	-0.1	0.7	0.7	0.7	0.7	-8.8	-10.9

(a) A positive number for the headline cash balance indicates an increase in receipts or a decrease in payments or net capital investment in headline cash terms. A negative number for the headline cash balance indicates a decrease in receipts or an increase in payments or net capital investment in headline cash terms.

.. Not zero but rounded to zero.

- Indicates nil.

Table A4: Suburb Zero pilot in the ACT – Option 2: 1,000 households – Fiscal balance (\$m)^(a)

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total to 2025-26	Total to 2032-33
Revenue													
Administered non-tax													
<i>Income from unwinding concessional loan discounts</i>	-	-	0.1	0.3	0.4	0.6	0.6	0.5	0.4	0.4	0.3	0.4	3.6
<i>Interest accrued from loans</i>	-	-	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	2.1
Total – revenue	-	-	0.2	0.5	0.6	0.9	0.9	0.8	0.7	0.6	0.5	0.7	5.7
Expenses													
Administered													
<i>Household subsidies</i>	-2.7	-3.8	-2.1	-1.6	-1.3	-1.2	-0.3	-	-	-	-	-10.2	-13.0
<i>Concessional loan discount expense</i>	-	-	-0.6	-0.9	-1.0	-1.1	-0.3	-	-	-	-	-1.5	-3.9
<i>Loan write downs</i>	..	-0.1	-0.1	-0.1	..	-	-	-	-	-	-	-0.3	-0.3
<i>Staffing cost for implementing the program</i>	-0.3	-0.3	-0.1	-0.1	-0.1	..	..	-	-	-	-	-0.8	-0.9
Total – administered	-3.0	-4.2	-2.9	-2.7	-2.4	-2.3	-0.6	-	-	-	-	-12.8	-18.1
Total – expenses	-3.0	-4.2	-2.9	-2.7	-2.4	-2.3	-0.6	-	-	-	-	-12.8	-18.1
Total (excluding PDI)	-3.0	-4.2	-2.7	-2.2	-1.8	-1.4	0.3	0.8	0.7	0.6	0.5	-12.1	-12.4
<i>PDI impacts</i>	..	-0.1	-0.2	-0.3	-0.5	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.6	-4.5
Total (including PDI)	-3.0	-4.3	-2.9	-2.5	-2.3	-2.0	-0.3	0.2	0.1	0.1	-	-12.7	-16.9

(a) A positive number for the fiscal balance indicates an increase in revenue or a decrease in expenses or net capital investment in accrual terms. A negative number for the fiscal balance indicates a decrease in revenue or an increase in expenses or net capital investment in accrual terms.

.. Not zero but rounded to zero.

- Indicates nil.

Table A5: Suburb Zero pilot in the ACT – Option 2: 1,000 households – Underlying cash balance (\$m)^(a)

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total to 2025-26	Total to 2032-33
Receipts													
Administered non-tax													
<i>Interest receipts</i>	-	-	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	2.1
Total – receipts	-	-	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	2.1
Payments													
Administered													
<i>Household subsidies</i>	-2.7	-3.8	-2.1	-1.6	-1.3	-1.2	-0.3	-	-	-	-	-10.2	-13.0
<i>Staffing cost for implementing the program</i>	-0.3	-0.3	-0.1	-0.1	-0.1	..	..	-	-	-	-	-0.8	-0.9
Total – administered	-3.0	-4.1	-2.2	-1.7	-1.4	-1.2	-0.3	-	-	-	-	-11.0	-13.9
Total – payments	-3.0	-4.1	-2.2	-1.7	-1.4	-1.2	-0.3	-	-	-	-	-11.0	-13.9
Total (excluding PDI)	-3.0	-4.1	-2.1	-1.5	-1.2	-0.9	0.0	0.3	0.3	0.2	0.2	-10.7	-11.8
<i>PDI impacts</i>	..	-0.1	-0.2	-0.3	-0.4	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.6	-4.4
Total (including PDI)	-3.0	-4.2	-2.3	-1.8	-1.6	-1.5	-0.6	-0.3	-0.3	-0.3	-0.3	-11.3	-16.2

(a) A positive number for the underlying cash balance indicates an increase in receipts or a decrease in payments or net capital investment in cash terms. A negative number for the underlying cash balance indicates a decrease in receipts or an increase in payments or net capital investment in cash terms.

.. Not zero but rounded to zero.

- Indicates nil.

Table A6: Suburb Zero pilot in the ACT – Option 2: 1,000 households – Headline cash balance (\$m)^(a)

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total to 2025-26	Total to 2032-33
Receipts													
<i>Administered non-tax</i>													
<i>Loan repayments</i>	-	-	0.3	0.7	1.2	1.6	1.8	1.8	1.8	1.8	1.8	1.0	12.8
<i>Interest receipts</i>	-	-	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	2.1
Total – receipts	-	-	0.4	0.9	1.4	1.9	2.1	2.1	2.1	2.0	2.0	1.3	14.9
Payments													
<i>Administered</i>													
<i>Household subsidies</i>	-2.7	-3.8	-2.1	-1.6	-1.3	-1.2	-0.3	-	-	-	-	-10.2	-13.0
<i>Loans made to households</i>	-	-	-2.9	-4.2	-4.6	-5.0	-1.3	-	-	-	-	-7.1	-18.0
<i>Staffing cost for implementing the program</i>	-0.3	-0.3	-0.1	-0.1	-0.1	..	..	-	-	-	-	-0.8	-0.9
Total – administered	-3.0	-4.1	-5.1	-5.9	-6.0	-6.2	-1.6	-	-	-	-	-18.1	-31.9
Total – payments	-3.0	-4.1	-5.1	-5.9	-6.0	-6.2	-1.6	-	-	-	-	-18.1	-31.9
Total (excluding PDI)	-3.0	-4.1	-4.7	-5.0	-4.6	-4.3	0.5	2.1	2.1	2.0	2.0	-16.8	-17.0
<i>PDI impacts</i>	..	-0.1	-0.2	-0.3	-0.4	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.6	-4.4
Total (including PDI)	-3.0	-4.2	-4.9	-5.3	-5.0	-4.9	-0.1	1.5	1.5	1.5	1.5	-17.4	-21.4

(a) A positive number for the headline cash balance indicates an increase in receipts or a decrease in payments or net capital investment in headline cash terms. A negative number for the headline cash balance indicates a decrease in receipts or an increase in payments or net capital investment in headline cash terms.

.. Not zero but rounded to zero.

- Indicates nil.

Attachment B – Accounting treatment of concessional loans

A concessional loan is a loan provided on more favourable terms than the borrower could obtain in the financial market. The most common concession is a below-market interest rate, but concessions can also include favourable repayment conditions. The income contingent loans available through the Higher Education Loan Program are an example of concessional loans offered by the Australian Government.

Budget impact³

The accounting treatment of concessional loans differs across each budget aggregate. The underlying cash balance only captures actual flows of interest related to the loans. The headline cash balance captures actual flows of principal as well as interest. The fiscal balance captures accrued interest, the value of the concession and any write-offs related to the loans. The interest cost of financing these loans is captured in all budget aggregates, and is separately identified by the PBO.⁴ Table B1 provides information about the detail provided in a costing. The provision of concessional loans decreases the Australian Government's net worth if the liabilities issued (the value of Australian Government Securities issued to finance the loans) are greater than the assets created (measured at their 'fair value' or price at which the loans could be sold).

Treatment of debt not expected to be repaid

All budget aggregates take into account estimates of the share of loans not expected to be repaid when calculating interest flows and estimating the value of the concession that is being provided. None of the measures capture the direct impact on net worth of the loans not expected to be repaid. If a portion of loans are not expected to be repaid, estimates of the 'fair value' of the loans outstanding will be reduced. Such reductions, both when loans are issued and if loans are subsequently re-valued, are recorded in the budget under 'other economic flows' which are reflected in net worth but not in the budget aggregates.

Table B1: Components of concessional loan financial impacts in costing proposals

Budget item	Appears in	Comments
Interest accrued or received	All budget aggregates	Captures the interest accrued or expected to be received on the fair value of the debt. (The budget cannot include interest income on a debt that is not expected to be repaid.)
Concessional loan discount expense and unwinding revenue	Fiscal balance	The net present value of the concession (based on the difference between the market and concessional interest rates) is captured as an expense in the fiscal balance. As loans are repaid, the remaining value of the concession reduces, so this expense is 'unwound' with a positive impact on the fiscal balance. The concessional discount and its unwinding are not recognised in cash balances as there is no cash inflow or outflow.
Write-offs	Fiscal balance	Debt forgiveness, also known as mutually agreed write-downs (for example in the case of the death of the borrower of a HELP loan) are expensed when they occur, reducing the fiscal balance. These transactions do not affect the cash balances as no cash flows occur.
Initial loan; principal repayments	Headline cash balance	Higher estimates of loans not expected to be repaid lowers principal repayments. These transactions are not included in the fiscal balance or underlying cash balance as they involve the exchange of one financial asset (loan) for another (cash).
Public debt interest (PDI)	All budget aggregates	The PDI impact is the cost of the change in the government's borrowing requirements to fund the loans. The net headline cash balance impact excluding PDI is used to estimate the proposal's impact on PDI payments.

³ The PBO's treatment of these loans is consistent with the Department of Finance costing guidelines.

⁴ This is in accordance with *PBO Guidance 02/2015* and the Charter of Budget Honesty Policy Costing Guidelines which specify that costings of proposals that 'involve transactions of financial assets' need to take into account the impact on PDI payments.

Attachment C – Suburb Zero Pilot in the ACT – additional information

Figure C1: Total yearly energy cost savings from electrification for an average household within the suburb (\$AUD/year)^{(a)(b)(c)(d)(e)}

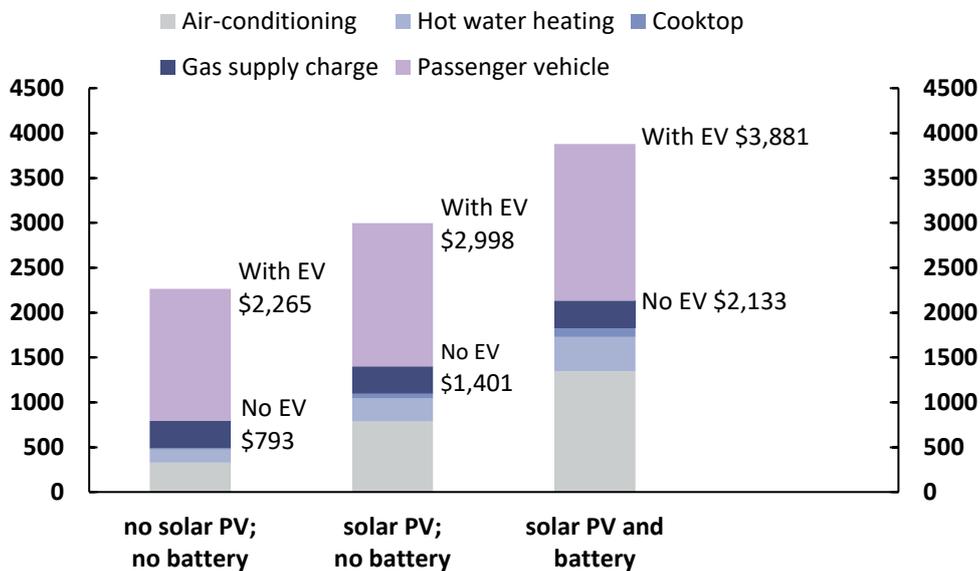


Figure C2: Average yearly household energy costs for air-conditioning (\$AUD/year)^{(a)(c)(d)}

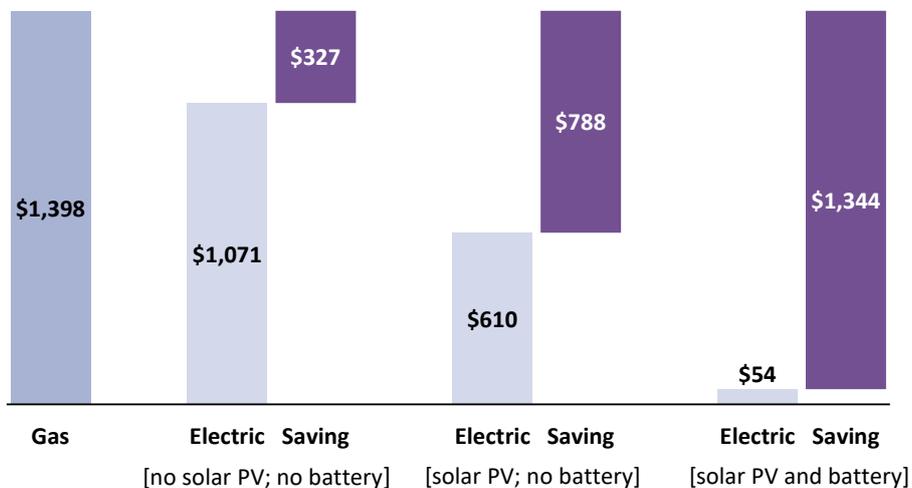


Figure C3: Average yearly household energy costs for hot water heating (\$AUD/year)^{(a)(c)(d)}

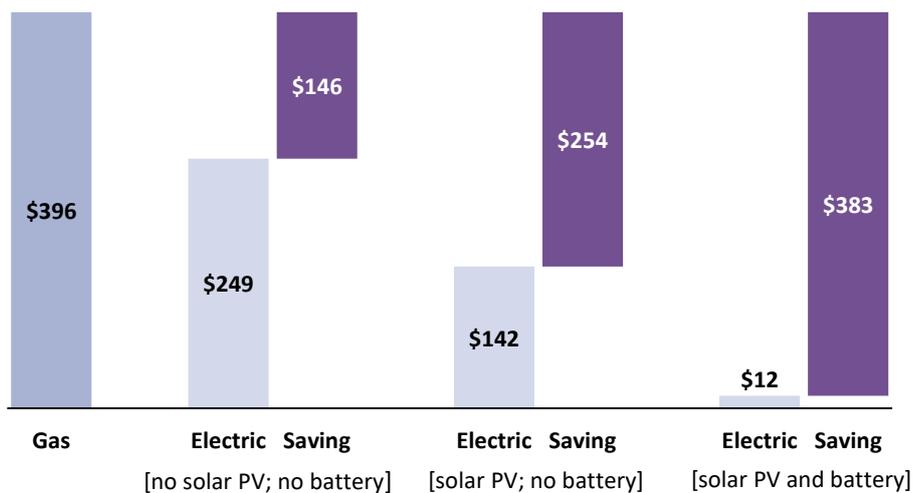


Figure C4: Average yearly household energy costs for cooktop (\$AUD/year)^{(a)(c)(d)}

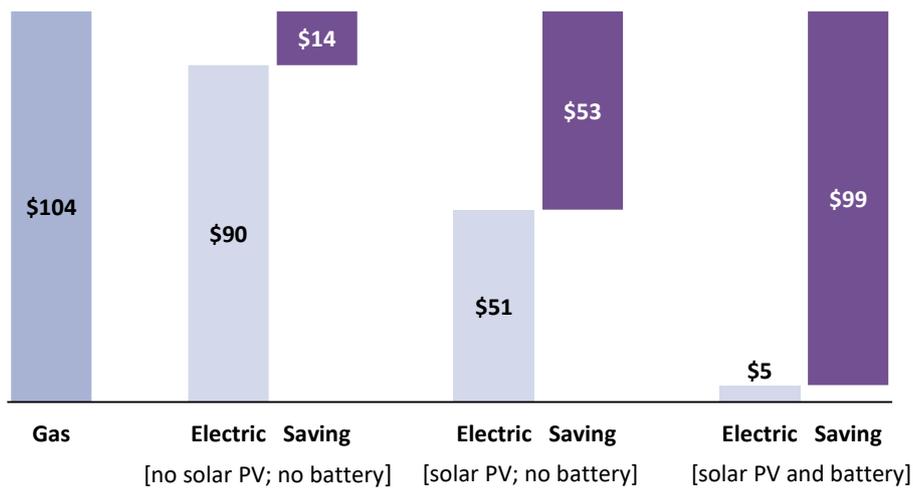
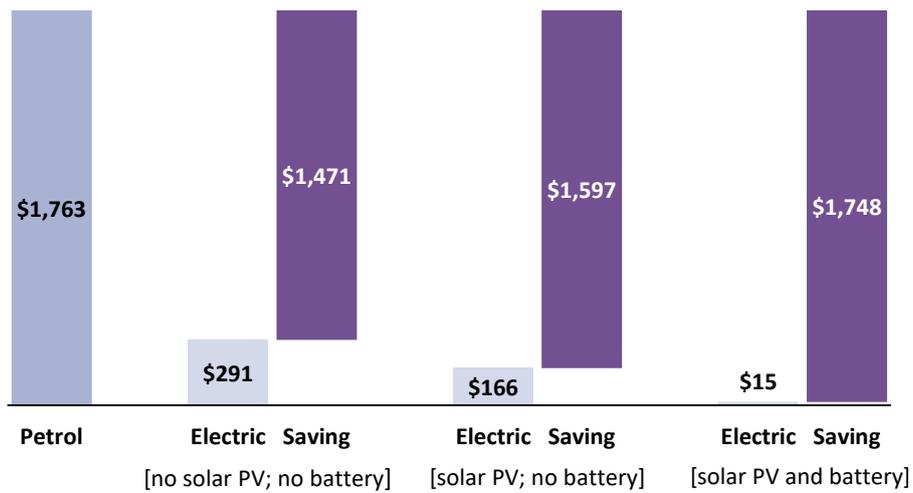


Figure C5: Average yearly household energy costs for passenger vehicle (\$AUD/year)^{(a)(c)(d)}



- (a) The above costs of energy use are based on prices for gas and electricity, as well as solar feed-in tariff in the ACT as of August 2022.
- (b) The average saving in gas supply charge per year for a household in the ACT is \$305.
- (c) For households that have solar PV installed but do not have solar batteries, it has been assumed that they would still need to source part of their energy use from the electricity grid, especially electricity needed for air conditioning, hot water heating, cooking and EV charging, because these appliances are most likely to be used during times when there is limited solar energy available. These calculations incorporate the opportunity cost of foregone revenue from the solar feed-in tariff as these households would consume more electricity when gas appliances are replaced.
- (d) For households that have both solar PV and battery installed, it has been assumed that 5% of their household energy requirements would be sourced from the electricity grid.
- (e) Figure C1 shows the energy cost savings for households that electrify all appliances and upgrade their vehicle. Not all households that participate in the pilot would be expected to electrify all appliances and their vehicle, either by choice or because they have already electrified some appliances prior to participating in the pilot scheme.

Table C6: Suburb Zero pilot in the ACT – Average reduction in Scope 1 greenhouse gas emissions for a household within the suburb (kg CO₂-e/year)

	Reduction in greenhouse gas emission (Scope 1)
<i>Air-conditioning</i>	2,511
<i>Hot water heating</i>	721
<i>Cooktop</i>	75
Total (excluding vehicle)	3,307
<i>Passenger vehicle</i>	2,041
Total (including vehicle)	5,348