



Helping Homes and Businesses transition off gas

Party:

Australian Greens

Summary of proposal:

This proposal consists of 5 components.

The proposal would provide financial assistance to households and small businesses (with less than \$10 million in turnover in the previous financial year) to disconnect from the gas network, and prevent new residential developments from connecting to the gas grid.

Financial assistance would be available for any of the following upgrades:

- Upgrading from single to 3-phase power.
- Replacing gas space heating with an electric heat pump.
- Replacing gas hot water heating with an electric heat pump or solar hot water.
- Replacing gas stovetop ovens and other gas-based kitchen appliances with induction or other electric alternatives.
- Installing level-2 electric vehicle (EV) chargers, with a limit of one for households and 5 for business, including any existing chargers.
- Replacing gas-reliant industrial technologies (such as boilers, furnaces or other industrial scale energy systems) with electrical alternatives, such as heat pumps (business only).

Component 1 would provide grants of up to \$10,000 to households. Grants would be limited to 20% of the total upgrade cost, or 50% if the applicant disconnects from the gas grid within 6 months of completion of all eligible works.

Component 2 would provide loans of up to \$20,000 to households. Loans would be offered at the rate of the Reserve Bank of Australia (RBA) overnight cash rate with a maximum 10-year fixed term.

Component 3 would ban the connection of any new residential development to the domestic gas network.

Component 4 would provide grants of up to \$25,000 to small business. Grants would be limited to 20% of the total upgrade cost or 50% if the applicant disconnects from the gas grid within 6 months of completion of all eligible works.

Component 5 would provide loans of up to \$100,000 to small business at the rate of the RBA overnight cash rate with a maximum 10-year fixed term.

The proposal would have effect from 1 July 2022.

Costing overview

The proposal would be expected to decrease the fiscal balance by around \$3.67 billion, the underlying cash balance by around \$3.17 billion and the headline cash balance by \$5.83 billion over the 2022-23 Budget forward estimates period.

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

The financial implications of this proposal are uncertain and highly sensitive to assumptions around the number of households and small businesses that would access grants and loans, the composition and cost of upgrades undertaken, and the way in which the grant and loan programs would interact with one another. This includes potential crowding-out effects with other similar schemes. The Parliamentary Budget Office (PBO) has not made any assessments of how this proposal would interact with other subsidies or schemes.

Further uncertainty exists regarding negotiations with the states and territories to ban the connection of new residential developments to the domestic gas grid. The PBO has not undertaken any assessment of the speed at which this would be able to be achieved.

The PBO has not made any assessment of the impact this proposal would have on the Australian gas industry or the solar and electricity industries more broadly, as it is difficult to determine the net impact on industry profits, employment, and the Australian Government budget.

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.

Table 1: Financial implications (\$m)^(a)

	2022-23	2023-24	2024-25	2025-26	Total to 2025-26
Fiscal balance	-443.2	-792.5	-1,201.2	-1,232.7	-3,669.6
Underlying cash balance	-366.6	-673.3	-1,037.1	-1,089.7	-3,166.7
Headline cash balance	-687.6	-1,292.3	-1,935.1	-1,914.7	-5,829.7

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

Key assumptions

The Parliamentary Budget Office (PBO) has made the following assumptions in costing this proposal.

- Uptake of the grant and loan programs in this proposal would be similar to annual uptake by households of the Small-scale Renewable Energy Scheme.
- Around 90% of households and small businesses undertaking upgrades would elect to disconnect from the domestic gas grid within 6 months of works completing, in order to maximise the amount of grant funding received.
- All households and small businesses undertaking upgrades would access the proposal’s concessional loan component to fund any costs not covered by the grant program, given the high level of concessionality.

- The number of households and small businesses accessing grants and loans would grow substantially over the first 3 years of the proposal's operation. It would then experience a steady increase in use year-on-year as electric technologies, including solar and battery storage, become more affordable and accessible.
- Installation of level-2 EV chargers would grow proportionally to projections of the number of electric vehicles to be sold in Australia for households.
- A much smaller proportion of small business would uptake the electric vehicle charging upgrades, due to a lack of clear business incentive.
- The uptake of 3-phase power upgrades would follow a similar trend to that of level-2 EV charger installations.
- Under the ban on the connection of any new residential developments to the domestic gas network from 1 July 2022, any residential developments already commenced would remain able to connect to the gas grid. These developments would all be concluded by 30 June 2024.
- The number of disconnections from the gas grid due to demolitions would continue proportionally to the projected number of demolitions of all dwellings in Australia.
- The share of small businesses connected to the gas grid would be similar to the share of households connected to the grid.
- The departmental staffing profile to deliver this proposal would reflect a service delivery profile similar to the structure of Services Australia.
- The proposal would be delivered by the Department of Industry, Science, Energy and Resources, utilising and expanding existing ICT systems and frameworks for grants and service delivery.

Methodology

The financial implications of providing grants and loans to households and businesses were derived by calculating the appliance upgrades that a typical gas-connected household or small business would be expected to undertake in accessing the scheme. The cost of these upgrades was multiplied by the estimated number of households or businesses that would access the scheme in each year.

The cost and number of level-2 EV chargers installed in a given year were estimated based on the current cost of an average level-2 EV charger, and the PBO's projections of the number of EVs purchased in the Australian market over the medium term.¹

The number of 3-phase power upgrades were based on a subset of total upgrades. Costs were based on the current average cost of an upgrade and grown in line with the consumer price index. Demand was grown similarly to that of the number of level-2 EV chargers installed.

Approximately half of the total upgrade cost was treated as a grant, reflecting the assumption that households would maximise their access to grant funding by electing to disconnect from the gas grid within 6 months of works being completed, therefore qualifying for a grant equal to 50% of the total upgrade cost.

The remaining upgrade cost was then treated as a concessional loan. The impact on the fiscal, underlying cash and headline cash balances of the loan funding provided was calculated using a

¹ Projections of the number of EVs sold in Australia were informed by research from the Department of Infrastructure, Transport, Regional Development and Communications.

concessional loan model, with interest payments at the specified Reserve Bank of Australia cash rate, and repayments spread evenly over the maximum 10-year period.

Departmental impacts were calculated by estimating the workforce required to deliver this proposal, the costs of which were determined using the Department of Finance's standard departmental costing template. Additional funding of double the required departmental cost in 2022-23 was provisioned, reflecting additional establishment costs.

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 indexation parameters, RBA cash rate projections and motor vehicle sales 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*.

The Australian Taxation Office provided data on electric vehicle sales.

Information on electric hot water, electric heating and electric kitchen appliances was sourced from The Good Guys, Harvey Norman and 1st Choice Hot Water as at 28 April 2022.

Information on the cost of electric vehicle chargers was sourced from EVSE as at 28 April 2022.

Alternative Technology Association (2018) *Household fuel choice in the National Energy Market*, Alternative Technology Association.

Australian Bureau of Statistics (2019) [Household and Family Projections, Australia](#), accessed 28 April 2022.

Australian Bureau of Statistics (2021) [National, state and territory level dwelling demolition approvals](#), accessed 28 April 2022.

Australian Capital Territory Environment, Planning and Sustainable Development Directorate (n.d.) [Choosing a heating system](#), accessed 28 April 2022.

Australian Government Clean Energy Regulator (2022) [Solar water heater STC calculator](#), accessed 27 April 2022.

Australian Government Department of Infrastructure, Transport, Regional Development and Communications (2019) *Electric Vehicle Update: Modelling a Global Phenomenon*, Australian Government.

Australian Small Business and Family Enterprise Ombudsman (2020) *Small Business Counts December 2020*, Australian Government.

David Bonnici (2020) [EV charging levels and plugs explained](#), accessed 28 April 2022.

Ecosave (2021) [Spot Trade Market Update: Environmental Certificate Scheme Prices – STCs, LGCs, VEECs and ESCs \(March 2022\)](#), accessed 28 April 2022.

Energy Networks Australia (2017) [Reliable and clean gas for Australian Homes](#), accessed 28 April 2022.

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

EVSE Australia (2019) [How much does it cost to set up an EV Charging Station?](#), accessed 28 April 2022.

Green Energy Markets (2021) *STC Data modelling 2021-2023, Report to the Clean Energy Regulator*, Green Energy Markets.

Jacobs (2021) *SRES and Small-scale PV Projections*, Jacobs Australia Pty Limited.

Attachment A – Helping Homes and Businesses transition off gas – financial implications

Table A1: Helping Homes and Businesses transition off gas – 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>Component 2 - Income from unwinding concessional loan discounts - household</i>	10.0	26.0	49.0	72.0	93.0	115.0	136.0	156.0	175.0	193.0	208.0	157.0	1,233.0
<i>Component 5 - Income from unwinding concessional loan discounts - small business</i>	4.1	10.4	19.5	27.8	35.4	42.6	49.3	55.6	61.1	65.9	69.7	61.8	441.4
<i>Component 2 - Loan interest accrued - household</i>	3.0	12.0	27.0	41.0	54.0	66.0	78.0	88.0	96.0	104.0	110.0	83.0	679.0
<i>Component 5 - Loan interest accrued - small business</i>	1.4	6.7	14.9	22.3	28.9	34.7	39.5	43.5	46.6	48.8	50.1	45.3	337.4
Total – revenue	18.5	55.1	110.4	163.1	211.3	258.3	302.8	343.1	378.7	411.7	437.8	347.1	2,690.8
Expenses													
Administered													
<i>Component 1 - Grant payments - household</i>	-190.0	-383.0	-587.0	-617.0	-645.0	-675.0	-705.0	-736.0	-767.0	-797.0	-814.0	-1,777.0	-6,916.0
<i>Component 4 - Grant payments - small business</i>	-101.0	-211.0	-325.0	-328.0	-331.0	-333.0	-335.0	-336.0	-337.0	-338.0	-339.0	-965.0	-3,314.0
<i>Component 2 - Concessional loan discount expense - household</i>	-60.0	-102.0	-153.0	-161.0	-168.0	-182.0	-196.0	-211.0	-226.0	-242.0	-253.0	-476.0	-1,954.0
<i>Component 5 - Concessional loan discount expense - small business</i>	-24.3	-39.7	-58.8	-59.5	-60.0	-63.6	-67.1	-70.5	-74.0	-77.3	-80.4	-182.3	-675.2
<i>Component 2 - Other financing costs - household</i>	-3.5	-7.0	-10.8	-11.3	-11.8	-12.4	-12.9	-13.5	-14.1	-14.6	-14.9	-32.6	-126.8
<i>Component 5 - Other financing costs - small business</i>	-1.9	-3.9	-6.0	-6.0	-6.1	-6.1	-6.1	-6.2	-6.2	-6.2	-6.2	-17.8	-60.9
Total – administered	-380.7	-746.6	-1,140.6	-1,182.8	-1,221.9	-1,272.1	-1,322.1	-1,373.2	-1,424.3	-1,475.1	-1,507.5	-3,450.7	-13,046.9

	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
Departmental													
<i>Departmental costs</i>	-73.0	-71.0	-105.0	-104.0	-104.0	-103.0	-102.0	-102.0	-101.0	-100.0	-100.0	-353.0	-1,065.0
Total – departmental	-73.0	-71.0	-105.0	-104.0	-104.0	-103.0	-102.0	-102.0	-101.0	-100.0	-100.0	-353.0	-1,065.0
Total – expenses	-453.7	-817.6	-1,245.6	-1,286.8	-1,325.9	-1,375.1	-1,424.1	-1,475.2	-1,525.3	-1,575.1	-1,607.5	-3,803.7	-14,111.9
Total (excluding PDI)	-435.2	-762.5	-1,135.2	-1,123.7	-1,114.6	-1,116.8	-1,121.3	-1,132.1	-1,146.6	-1,163.4	-1,169.7	-3,456.6	-11,421.1
<i>PDI impacts</i>	-8.0	-30.0	-66.0	-109.0	-154.0	-202.0	-253.0	-307.0	-364.0	-424.0	-491.0	-213.0	-2,408.0
Total (including PDI)	-443.2	-792.5	-1,201.2	-1,232.7	-1,268.6	-1,318.8	-1,374.3	-1,439.1	-1,510.6	-1,587.4	-1,660.7	-3,669.6	-13,829.1

(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.

Table A2: Helping Homes and Businesses transition off gas – 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>Component 2 - Loan interest accrued - household</i>	3.0	12.0	27.0	41.0	54.0	66.0	78.0	88.0	96.0	104.0	110.0	83.0	679.0
<i>Component 5 - Loan interest accrued - small business</i>	1.4	6.7	14.9	22.3	28.9	34.7	39.5	43.5	46.6	48.8	50.1	45.3	337.4
Total – receipts	4.4	18.7	41.9	63.3	82.9	100.7	117.5	131.5	142.6	152.8	160.1	128.3	1,016.4
Payments													
Administered													
<i>Component 1 - Grant payments - household</i>	-190.0	-383.0	-587.0	-617.0	-645.0	-675.0	-705.0	-736.0	-767.0	-797.0	-814.0	-1,777.0	-6,916.0
<i>Component 4 - Grant payments - small business</i>	-101.0	-211.0	-325.0	-328.0	-331.0	-333.0	-335.0	-336.0	-337.0	-338.0	-339.0	-965.0	-3,314.0
Total – administered	-291.0	-594.0	-912.0	-945.0	-976.0	-1,008.0	-1,040.0	-1,072.0	-1,104.0	-1,135.0	-1,153.0	-2,742.0	-10,230.0
Departmental													
<i>Departmental costs</i>	-73.0	-71.0	-105.0	-104.0	-104.0	-103.0	-102.0	-102.0	-101.0	-100.0	-100.0	-353.0	-1,065.0
Total – departmental	-73.0	-71.0	-105.0	-104.0	-104.0	-103.0	-102.0	-102.0	-101.0	-100.0	-100.0	-353.0	-1,065.0
Total – payments	-364.0	-665.0	-1,017.0	-1,049.0	-1,080.0	-1,111.0	-1,142.0	-1,174.0	-1,205.0	-1,235.0	-1,253.0	-3,095.0	-11,295.0
Total (excluding PDI)	-359.6	-646.3	-975.1	-985.7	-997.1	-1,010.3	-1,024.5	-1,042.5	-1,062.4	-1,082.2	-1,092.9	-2,966.7	-10,278.6
PDI impacts	-7.0	-27.0	-62.0	-104.0	-149.0	-196.0	-247.0	-300.0	-357.0	-416.0	-483.0	-200.0	-2,348.0
Total (including PDI)	-366.6	-673.3	-1,037.1	-1,089.7	-1,146.1	-1,206.3	-1,271.5	-1,342.5	-1,419.4	-1,498.2	-1,575.9	-3,166.7	-12,626.6

(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.

Table A3: Helping Homes and Businesses transition off gas – 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													
Administered non-tax													
<i>Component 2 - Loan interest accrued - household</i>	3.0	12.0	27.0	41.0	54.0	66.0	78.0	88.0	96.0	104.0	110.0	83.0	679.0
<i>Component 5 - Loan interest accrued - small business</i>	1.4	6.7	14.9	22.3	28.9	34.7	39.5	43.5	46.6	48.8	50.1	45.3	337.4
<i>Component 2 - Loan repayments - household</i>	23.0	69.0	140.0	214.0	292.0	373.0	458.0	546.0	639.0	735.0	810.0	446.0	4,299.0
<i>Component 5 - Loan repayments - small business</i>	12.0	38.0	77.0	116.0	156.0	196.0	237.0	277.0	318.0	358.0	387.0	243.0	2,172.0
Total – receipts	39.4	125.7	258.9	393.3	530.9	669.7	812.5	954.5	1,099.6	1,245.8	1,357.1	817.3	7,487.4
Payments													
Administered													
<i>Component 1 - Grant payments - household</i>	-190.0	-383.0	-587.0	-617.0	-645.0	-675.0	-705.0	-736.0	-767.0	-797.0	-814.0	-1,777.0	-6,916.0
<i>Component 4 - Grant payments - small business</i>	-101.0	-211.0	-325.0	-328.0	-331.0	-333.0	-335.0	-336.0	-337.0	-338.0	-339.0	-965.0	-3,314.0
<i>Component 2 - Loans made - household</i>	-232.0	-468.0	-718.0	-754.0	-788.0	-825.0	-862.0	-900.0	-938.0	-974.0	-995.0	-2,172.0	-8,454.0
<i>Component 5 - Loans made - small business</i>	-124.0	-258.0	-397.0	-401.0	-405.0	-407.0	-409.0	-411.0	-412.0	-413.0	-414.0	-1,180.0	-4,051.0
Total – administered	-647.0	-1,320.0	-2,027.0	-2,100.0	-2,169.0	-2,240.0	-2,311.0	-2,383.0	-2,454.0	-2,522.0	-2,562.0	-6,094.0	-22,735.0
Departmental													
<i>Departmental costs</i>	-73.0	-71.0	-105.0	-104.0	-104.0	-103.0	-102.0	-102.0	-101.0	-100.0	-100.0	-353.0	-1,065.0
Total – departmental	-73.0	-71.0	-105.0	-104.0	-104.0	-103.0	-102.0	-102.0	-101.0	-100.0	-100.0	-353.0	-1,065.0
Total – payments	-720.0	-1,391.0	-2,132.0	-2,204.0	-2,273.0	-2,343.0	-2,413.0	-2,485.0	-2,555.0	-2,622.0	-2,662.0	-6,447.0	-23,800.0
Total (excluding PDI)	-680.6	-1,265.3	-1,873.1	-1,810.7	-1,742.1	-1,673.3	-1,600.5	-1,530.5	-1,455.4	-1,376.2	-1,304.9	-5,629.7	-16,312.6
PDI impacts	-7.0	-27.0	-62.0	-104.0	-149.0	-196.0	-247.0	-300.0	-357.0	-416.0	-483.0	-200.0	-2,348.0
Total (including PDI)	-687.6	-1,292.3	-1,935.1	-1,914.7	-1,891.1	-1,869.3	-1,847.5	-1,830.5	-1,812.4	-1,792.2	-1,787.9	-5,829.7	-18,660.6

(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.

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.