



BRIEFING PAPER:

HOW GOVERNMENT CAN USE CONCESSIONAL FINANCE TO REDUCE EMISSIONS

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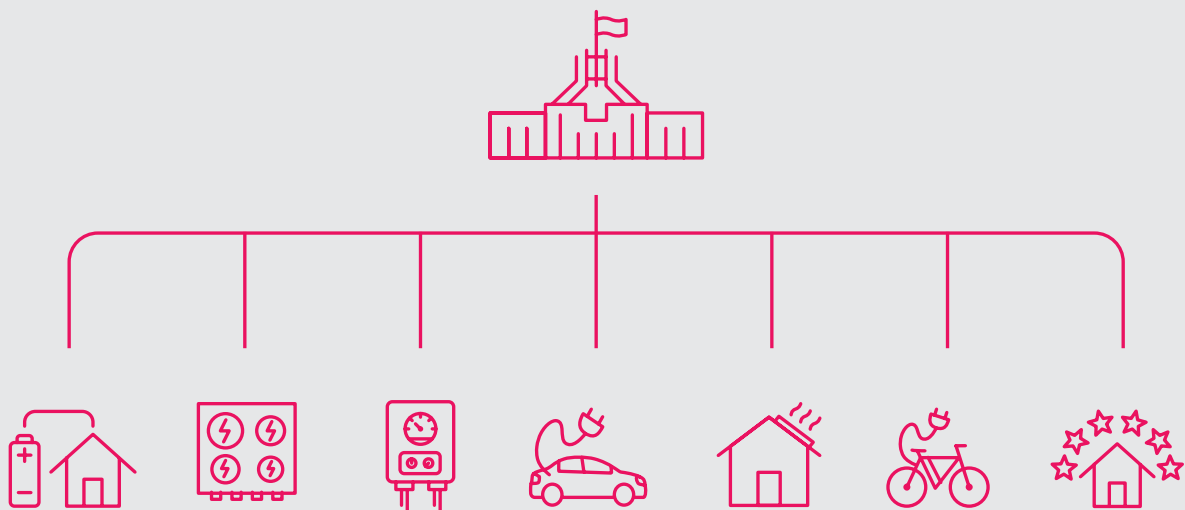
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1 EXECUTIVE SUMMARY

A concessional financing scheme with an education campaign, in partnership with financial institutions, would have low costs, significant benefits and can be piloted first and expanded later.

- › There is an urgent need for governments across Australia to develop a comprehensive set of policies to drive down emissions from households and small businesses.
- › The biggest barriers to achieving emissions reductions are upfront cost and public understanding of the benefits.
- › A concessional finance program can be used by government to incentivise customers to invest in an area that reduces emissions. It would provide customers with access to cheaper finance, speeding up emissions reduction activities at a very low cost to government.
- › Concessional finance can be used to fund a wide range of emission reduction activities, including replacing inefficient gas and electric hot water and central heating systems with electric heat pumps, home batteries, insulation, electric car chargers and e-bikes.

Figure: Government concessional finance can be used to help households and small businesses reduce greenhouse gas emissions. This includes replacing inefficient appliances, and supporting uptake of electric vehicles, chargers and home batteries.



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- › Supporting appliance upgrades will have a range of secondary benefits, including better health outcomes, lower energy bills and job creation.
 - › A comprehensive education campaign led by government is absolutely essential to the success of the program to ensure the public are aware of the benefits of these upgrades, and the options available to them.
 - › A government partnership with one or more financial institutions will limit risk to government. Financial institutions have the expertise to ensure thorough risk assessment of potential loans and good governance, allowing the government to focus on educating consumers to generate interest in the program.
 - › The ACT Government's Sustainable Household Scheme is an excellent template for other governments to follow. The ACT Government offers zero interest loans to households for energy efficiency upgrades in partnership with sustainable finance platform Brighte. Loans range from \$2,000 to \$15,000 and can be repaid over 10 years. It includes heat pumps, space heating, electric cooktops, EV chargers, battery storage and rooftop solar.
 - › Rebates for energy efficiency upgrades should be rolled out to accompany a concessional financing program. Rebates will ensure that low income households and small businesses with low margins do not miss out on these upgrades.
 - › Planning rules may also need to be changed in some states and territories to increase the incentive for households to invest in emissions reduction activities. This includes introducing mandatory disclosure of home energy efficiency at point of sale, minimum rental standards, requiring new apartment blocks to be electric vehicle-ready and phasing out gas connections in new residential and apartment developments.



2 UNDERSTANDING THE POLICY PROBLEM

Australia needs to rapidly reduce greenhouse gas emissions over the next decade to avoid catastrophic climate change.

A large portion of Australia's emissions are released in large facilities such as power stations and manufacturing plants. However, a substantial proportion of Australia's emissions are produced in disaggregated settings, such as households and commercial businesses. Each household or business on its own is not a large emitter but collectively they make a sizeable contribution to climate change, especially through the use of inefficient gas and electric appliances. For example, in New South Wales, 55% of the state's gas is used in households, commercial businesses and food and beverage businesses.¹

There is an urgent need for governments across Australia to develop a comprehensive set of policies to drive down emissions from these sources.

Up-front cost is the major barrier to households and businesses undertaking energy efficiency and appliance upgrades, as well as uptake of other technologies like electric vehicles. Another significant barrier is public awareness of the benefits of these upgrades (including payback periods) and the lack of guidance on the types of upgrades they should be undertaking.

The most economically efficient way to change behaviour is to put a price on carbon. In the absence of a price on carbon, and acknowledging that not all households or businesses can afford the upfront costs of investment in more energy efficient and lower emissions appliances, the next best option is for government to support change through financial incentives and education.

A comprehensive policy response from government would involve the following:

1. Ensure that households and businesses have access to zero interest finance.
2. Provide financial incentives (eg. rebates) to low income households and small businesses.
3. Educate households and businesses about the benefits of these policies and the urgent and important role they can play in reducing emissions (as well as the costs of not doing so).

This briefing paper is focused on finance, but strong consideration should be given to all three elements to maximise policy success.

3 HOW CONCESSIONAL FINANCING CAN HELP

Concessional financing is the provision of loans below the prevailing market interest rate. It is an ideal policy solution for government when there is higher demand for loans than financial institutions are willing to provide, or the interest rate for loans from financial institutions is at a level that discourages borrowing.

Low or zero interest finance can also be used by government to incentivise customers to invest in an area that provides wider societal benefits (eg. reducing emissions).

Successful climate finance policy should lead to high uptake, be low cost to the taxpayer, be accessible to a wide range of stakeholders and deliver real additional emissions reductions. This is summarised in Table 1.

Some of the benefits of climate finance policies are:

- › Enables customers access to cheaper finance, facilitating emissions reduction activities that otherwise would not occur and/or speeding up emission reduction activities (eg. inefficient appliances are replaced before they expire).
- › Enables bundling of a number of different types of emissions reduction activities into one loan.
- › Very low cost to taxpayers.
- › Can be administered by independent financial institutions.

Using government finance to reduce emissions would have a range of secondary benefits²:

- › Better energy efficiency means better health outcomes. More efficient heating and cooling and better insulation will lead to fewer deaths,³ while removing gas appliances from the home will reduce exposure to pollutants including nitrous oxide in the home, which has been linked to higher rates of asthma in children.⁴
- › Lower energy bills. In an average home, a basic energy efficiency upgrade would reduce energy use by 18-31%. In less efficient homes or with more extensive efficiency upgrades (eg. new appliances, insulation, solar and batteries), the reduction in energy bills could be as high as 100%.⁵
- › Creating jobs. 9.8-12.8 jobs are created for every \$1 million in public spending on home energy efficiency upgrades.⁶ This range is reinforced by the findings of the Climate Council's *Clean Jobs Plan*, which found that investment in energy efficiency is consistently one of the highest creators of jobs per dollar invested.⁷

Table 1: Criteria for evaluating effective climate finance policy.⁸

Criteria	Metric or indicator
Mobilization effectiveness	Volume of finance mobilized; term of finance (long or short); cost of capital
Economic efficiency	Net cost of policy to government or public (cost minus benefit), leverage ratio, additionality.
Environmental integrity	Emissions reductions, measurable adaptation benefit
Equity	Access to finance by all targeted stakeholders, especially small and medium size enterprises and even individuals or households



4 WHERE IT CAN BE USED

A climate finance scheme, once established, can be used to fund a wide range of emissions reduction activities.

This includes:



› Replacing inefficient gas and electric hot water and central heating systems with electric heat pumps



› Electric vehicle chargers



› Replacing gas cooktops with induction



› Home batteries



› Draught sealing/proofing



› Rooftop solar



› Insulation (roof, wall and floor)



› Replacement of inefficient fridges, washing machine, dryers and dishwashers



› Electric cars and e-bikes



› Glazing windows



› Electric rigid trucks for small businesses



› Disconnecting from gas network

5 ADMINISTERING A FINANCE PROGRAM

A range of state and federal government financing initiatives, for example Victoria's Solar Homes Program, have shown that these can be highly successful. But there is a high risk to both the government and taxpayers if the governance structure is not set up and administered correctly.

For household and small business loans, a government partnership with one or more financial institutions is a less risky approach. Financial institutions have the expertise to ensure thorough risk assessment of potential loans and good governance, enabling the government to focus on educating consumers to generate interest in the program. This is critical to ensure sufficient uptake (more below).

Some financial institutions have already set up their own financing schemes.

Commonwealth Bank offers a green loan program for home energy efficiency upgrades that is available to 600,000 customers. This followed a pilot scheme launched in February 2021, that saw just under 1,000 homes invest in \$4 million of upgrades. Most of the loans in the pilot phase were used to install solar panels.⁹

Relatedly, Bank Australia is offering a home loan product discounted 0.2% to households that make energy efficiency upgrades, including rooftop solar, insulation or adding double-glazed windows.¹⁰ This pilot scheme saw 140 applicants, twice the expected level.¹¹

These programs will not be enough to achieve widespread uptake to rapidly reduce emissions as they are not accessible to all households or businesses. But given financial institutions are already rolling out loans focused on emissions reduction, it makes sense for government to partner with a financial institution rather than create its own body, thereby reducing administrative costs and also risk.

6 MAXIMISING PROGRAM EFFECTIVENESS

International evidence suggests there are some key barriers stopping households from undertaking home upgrades. Major barriers are the high upfront costs, lack of access to capital and lack of understanding as to how upgrades will save a household money. Households may also have low awareness of how their homes are impacting climate change and perceive undertaking upgrades as complex and difficult.¹²

When these barriers are overcome, households have significantly increased appetite to upgrade their homes.¹³ A 2018 national poll found 88% of voters supported government investment in energy efficiency, 88% support strengthening minimum standards for new homes, and 80% support minimum standards for rental homes.¹⁴

To overcome these barriers, there are four elements that are critical for a financing program to succeed:

- › Education
- › Setting the cost of finance at an appropriate level
- › Administrative simplicity balanced with appropriate risk mitigation
- › Where appropriate, additional targeted financial incentives.

Many potential customers are households and businesses that are not aware of the secondary or even the primary benefits of appliance upgrades, and those who are aware identify cost as a major barrier. They may also not be sure what upgrades they should undertake and prioritise. Having a comprehensive education campaign that explains the emissions, cost and health benefits is absolutely essential to the success of the program. This has been done particularly successfully for the ACT Government's new Sustainable Household Scheme (refer to next section).

Ensuring strong participation from low income households and small businesses in a finance program could be challenging. Low income households are less likely to be in a financial position to be approved for any loans. For small businesses, unless an essential piece of equipment actually breaks or the business' customer base is increasing, even a generous concessional financing regime may struggle to attract much interest.

These challenges can be overcome by offering financial incentives, such as rebates, in addition to finance.

To further refine the finance regime for business, rolling out a pilot program could help to gauge interest, identify where policy can best be directed (i.e. what size small and medium-sized enterprises, which sectors, etc.) and the size of rebates that may be needed. Consulting with small business bodies like the Australian Chamber of Commerce and Industry will be valuable.

Planning rules may also need to be changed in some states and territories to support behaviour change. This includes

introducing mandatory disclosure of home energy efficiency at point of sale, mandatory minimum rental standards, requiring new apartment blocks to be electric vehicle-ready and phase out gas connections in new residential developments. These regulatory changes will increase the uptake of investment in emissions reduction activities. Consideration should also be given to waste policies to ensure old appliances are recycled and do not end up in landfill.



7 LESSONS FROM OTHER GOVERNMENT PROGRAMS

There are a number of concessional financing schemes that have been undertaken in the past, including but not limited to the ACT Government, the Victorian Government and the Federal Government.

ACT Government Sustainable Household Scheme¹⁵

This is a new, well-designed program that could be replicated across Australia.

The ACT Government offers zero interest loans to households for energy efficiency upgrades in partnership with sustainable finance platform Brighte. Loans range from \$2,000 to \$15,000 and can be repaid over 10 years. It includes heat pumps, space heating, electric cooktops, EV chargers, battery storage and rooftop solar.

The program was piloted in early 2021 with the full program beginning in September. So far it has been oversubscribed, with strong interest and awareness from the public. As of early December 2021, 2,000 households had applied for a loan and been approved through the scheme, to the total value of \$22 million. 306 installations have already been completed. So far, the majority of the loans have been for rooftop solar and battery systems, while 432 have been for energy efficiency upgrades (250 for space heating and cooling, 166 for heat pumps and 16 for stoves).

The program is means tested but criteria for eligibility are easy to understand - an important factor in ensuring strong uptake. The program is revenue neutral.

Other key components of the ACT rollout included:

- › The program went out with a request for proposal (rather than a request for tender), enabling input from industry into how the program could be designed.
- › 800 participants were involved in the pilot after taking part in a workshop. These workshops were really important as they provided an opportunity for participants to learn about the benefits of a range of appliance upgrades (for example, many participants joined the program to get solar, but ended up also adding batteries and efficiency upgrades).
- › Brighte administers the loans so all loan decisions are made at arms length from government, limiting risk.
- › The Government signed a year-to-year contract with Brighte, ensuring the government can find a new partner if issues arise.

Zero-interest loans are unlikely to be enough to attract interest from low income households. As such, the ACT Government has recently launched a \$50m Vulnerable Household Energy Support Scheme¹⁶, which provides funding for low-income households and social housing tenants to replace their appliances. The ACT Government has also set up a separate rebate scheme for home batteries, as they continue to be relatively expensive.

Victorian Government interest free loans for solar¹⁷

In 2020, the Victorian Government set up a solar rebate and loan scheme for owner-occupiers. The loans are zero-interest and can be up to \$1,400, which must be repaid within four years. Eligibility includes having a household income below \$180,000. The zero-interest loans do not apply to other capital upgrades, although the government does provide rebates of up to \$1,000 for households to replace ageing and inefficient gas and electric heating and cooling.¹⁸

Federal Government Accelerated Depreciation¹⁹

In 2020, the Federal Government introduced a program of accelerated depreciation for businesses with a turnover of under \$500 million. This enables them to claim a tax deduction on new assets. There is no limit on the cost of eligible assets (except vehicles). This generous program has had strong uptake but much of the funding has gone to cars and laptops - not emissions reduction activities.

Federal Government Green Loans program²⁰

Under the Green Loans program, which ran from 2009-10, eligible households could apply for a subsidised home efficiency assessment and low-interest loans of up to \$10,000 to purchase items such as solar panels, water tanks and efficient lighting.

This program was plagued by low uptake, despite substantial initial interest in assessments. As at July 2010, 360,000 assessments had been completed - a little over a year into what was originally a four-year program - and yet householders had taken-up just 7,300 loans. This program had poor governance and there were not enough trained assessors for households to get assessments in a timely and efficient manner.



8 RECOMMENDATIONS

1. Rollout a concessional financing program for emissions reduction activities

Pilot a concessional financing program, partnering with a financial institution, for households and small businesses to undertake emission reduction activities. This should include replacing inefficient gas and electric appliance upgrades, home thermal upgrades, electric vehicle infrastructure, batteries and solar panels (for households that don't already have these). Once the pilot is complete, introduce a full rollout. This could be modelled on the ACT's *Sustainable Household Scheme*.

2. Rollout a comprehensive education program on household emissions

The success of any government policy on household emissions, whether it is financing or rebates, relies on participants understanding that their appliance choices have an impact on climate change. They also need to be informed of the range of secondary benefits from appliance upgrades including lower energy bills, better health outcomes and job creation. Government must take the lead in this work by rolling out a comprehensive education campaign.

3. Rollout a rebate scheme to support targeted households and small businesses to replace inefficient gas and electric appliances with electric alternatives

This program could be modelled on the Victorian Government's *Home Heating and Cooling Upgrades Program*, launched in 2020, which provides rebates of up to \$1,000 to households to install reverse-cycle air conditioners. Eligibility is restricted to concession card holders and households with a combined income of under \$90,000. This should be accompanied by an advertising campaign to inform the community of the benefits of new electric appliances.



4. Introduce policy changes to incentivise investment in climate solutions. This includes:

- › Mandatory disclosure of home energy efficiency at point of sale
- › Mandatory minimum energy efficiency standards for rentals
- › Require new apartment blocks to be electric vehicle-ready
- › Remove requirements for new residential developments to be connected to gas, and phase out gas connections in new residential and apartment developments by 2025.

5. Rollout an energy efficiency program for social and community housing

Social and community housing should be overhauled with a comprehensive retrofit program to improve thermal performance, replace inefficient appliances and add solar panels.

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