2024 – 2025 Pre-Budget Submission to the Australian Government

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Summary

Overview

A fixed-income couple in Mackay could be saving thousands of dollars a year by switching their water heater to an electric heat pump, installing an electric cooktop, and running the house with a mix of grid and rooftop solar. A single mother living in the outer suburbs of Perth could be saving an additional $1800 per year by commuting in an electric, not petrol car. A renter in the La Trobe Valley could be lowering their cost-of-living if their landlord installed rooftop solar and electric appliances and passed through some of the savings.

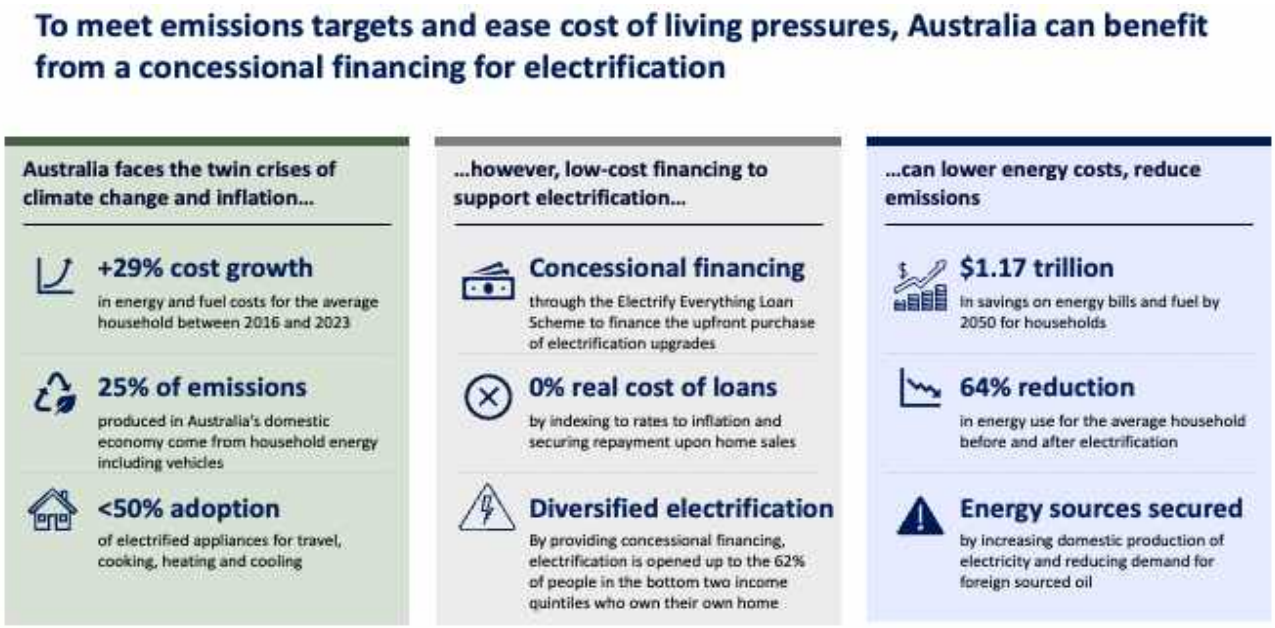
All of these Australians would be saving money while eliminating critical carbon emissions.

The opportunity is the electrification of our domestic economy. The tens of millions of fossil-fuel-powered machines in Australian homes need to be replaced with electric alternatives as quickly as possible to reach net zero, and doing that will save consumers money.

Given that household energy emissions (including vehicles) are 25% of Australia's emissions, it is imperative that Australia provides an accessible, feasible, and cost-efficient pathway for property owners to electrify their properties and the vehicles that park at them. It is also important that this shift is accelerated to ensure that the benefits can be shared across the community and that efficiencies are delivered to businesses. Australia's Paris Agreement commitments depend on it.

A well-designed financing scheme supporting complete household electrification could save Australian consumers $1.17 trillion on energy bills and petrol by 2050, at a cost to government of around $5,000 per home. Without support, Australia will fail to electrify in the timeframe needed and would jeopardise its desired climate outcomes.

Figure 1: The case for the Electrify Everything Loans Scheme (EELS)



In this submission we outline a new finance model that treats household electrification as nation-building infrastructure. The new Electrify Everything Loan Scheme (EELS) we propose could pay the full cost of

electrifying an average of one car per household, install maximum rooftop solar on residential buildings, replace gas appliances with efficient electric ones and provide 10 million household batteries. The modelled total cost to the budget over the scheme lifetime would be in the order of $40 - 50 billion.

To increase the cost-of-living relief for consumers we also propose the urgent delivery of “household-centred” rules for the energy market to cut red tape and complementary policies to accelerate electrification, with an estimated cost over the forward estimates of $350-500 million.

About Rewiring Australia

Rewiring Australia is a non-profit research and advocacy organisation dedicated to representing the people, households and communities in the energy system. We deliver practical climate progress by working with government, industry, and communities to electrify everything.

Payments

Total payments for electrification measures 2024 – 2027 would be around $2,050 - 2,800 million on budget. There would also be new borrowings of up to $100 - 160 billion off budget over this period.

Table 1: summary of proposed electrification measures 2024 – 2027

Measures	**Payments ($m)**
On budget measures	
Create an Office of Electrification to build momentum around electrification policy development and implementation	15 - 25
Electrify Everything Loans Scheme (EELS) administration	200 - 300
EELS loan concessionality	1500 - 2000
Public education, workforce engagement and thought leadership	30
Review of National Electricity Market and writing new “household centred” rules	10
Zero Emissions Communities	200 - 340
Community-integrated EV charging infrastructure	95
Total of all budget measures	2,050 - 2,800

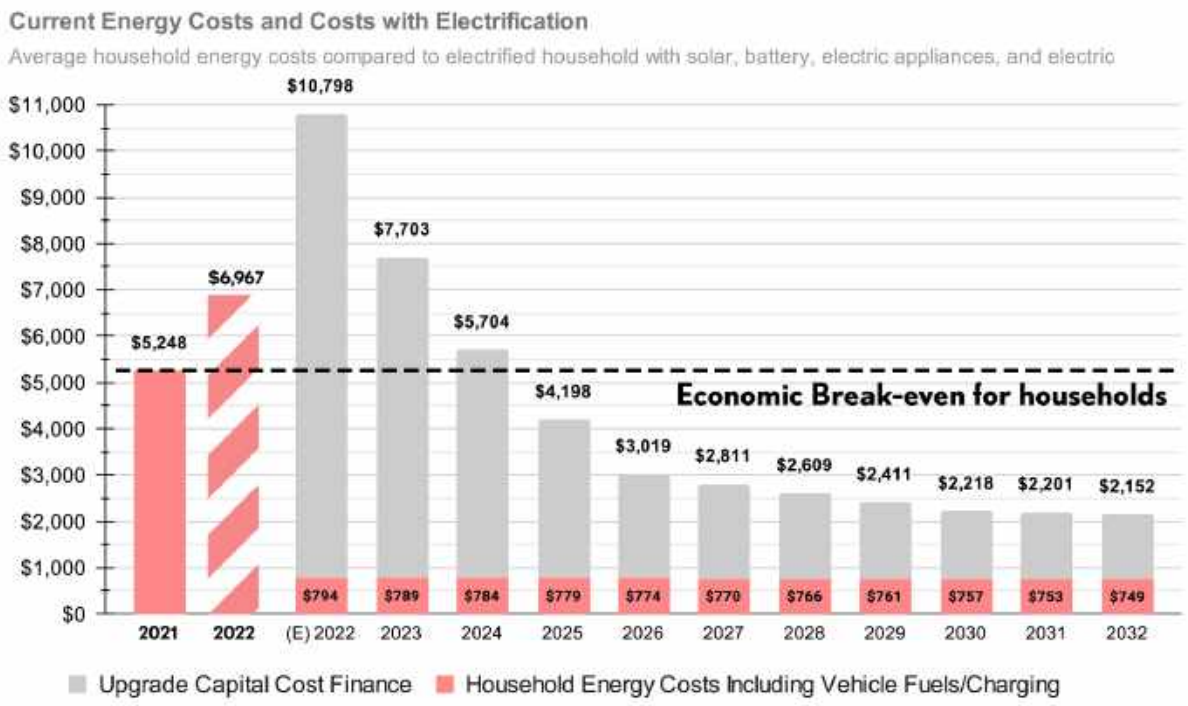
Off-budget measures	
Electrify Everything Loans Scheme (EELS)	100,000 - 160,000

The electrification solution to the cost-of-living crisis and climate emergency

Australians face a cost-of-living crisis and a climate emergency. There is a significant cost to inaction in the face of both challenges. If we don't decarbonise quickly, we fail our children, and if we don't reduce the cost-of-living we fail struggling households today.

Household electrification permanently reduces energy and automobile costs for consumers. Electrification involves the replacement of fossil fuel machines with efficient electric alternatives (vehicles, space heating, water heating and cooking) paired with rooftop solar and a battery. If the Australian Government provides the finance and regulatory support to accelerate electrification, this would be the fastest and most popular way to reduce emissions in the Australian economy. In this submission we sketch a new model to finance the electrification of millions of households - including their vehicles - which we call the Electrify Everything Loan Scheme (EELS). EELS would cost around $40 - 50 billion over the lifetime of the scheme in concessionality (and a much smaller amount for administration). The total cost would be less than the cost of the Fuel Tax Credit over just the next four years.[1] Alternatively, it is about one-sixth of the $313 billion cost of the Stage 3 tax cuts (in just the first decade) or the total $368 billion cost of the AUKUS submarines.

Figure 2: Electric and fossil energy and vehicle costs 2021 to 2023



[1] Campbell (2023) Fossil Fuel Subsidies in the 2023-24 Federal Budget.

Electric cars, batteries, solar, heat pumps and induction stoves are already or soon will be cheaper than fossil-fuelled machines. In 2021 Rewiring Australia published modelling (Figure 2) which showed that the total financed cost of buying and using electric appliances and vehicles and rooftop solar for the average Australian household would break-even with fossil-fuelled machines around 2025. By 2030 electrification will generate savings in the order of $5,000 per household per year[2]. Subsequent research by governments and other organisations has quantified the immediate cost-of-living benefits of electrification which support our results.[3]

Electrification is nation-building infrastructure

This is a national investment on the same scale as public infrastructure like education, health or defence. The philosophical proposition we are making to the Treasury is to see consumer-owned energy assets (including EVs) as a credible alternative to conventional energy infrastructure such as transmission lines and power stations. As we show below, these distributed, consumer energy technologies can deliver public and private benefits at the scale that qualifies household electrification as a nation-building infrastructure priority.

Between now and 2050, Australians will spend around $2 trillion dollars on the purchase of cars and appliances - regardless of government interventions. The EELS scheme would entail a relatively modest public investment of around 1.6% of the total car and appliance spend. It would shape these consumer purchasing decisions - in conjunction with regulatory reforms - to lock in permanent bill relief and eliminate energy emissions in line with national and global targets. The national savings realised by such a public finance investment would be in the order of $1.7 trillion by 2050.

The EELS model we outline in this submission is an aggressive public finance policy conceived to suit the times. Compared to other approaches (Table 2 below) it would accelerate cost-of-living relief, maximise equity, rapidly deploy batteries to support the grid as coal-fired power stations retire (and fail) and reduce administrative costs and complexity. We have previously outlined a 'HECS for Households' finance model and there are other approaches.

Electrification is anti-inflationary

The remarkable thing about these investments is that they should be anti-inflationary. The switch to electrification from a world of fossil fuels is ultimately the substitution of finance for fuels. Or stated simply - when you buy solar cells, you are purchasing 20 years of zero-emission energy up-front. Figure 3 examines the 30-year history and future of household energy costs, including all fuels - petrol, diesel, LPG, gas, and electricity. Household energy costs are subject to inflation (and volatility). By comparison, the ongoing costs of an all-electric, rooftop solar-enabled household financed at 4% interest has fixed energy costs, largely determined by the cost of finance.

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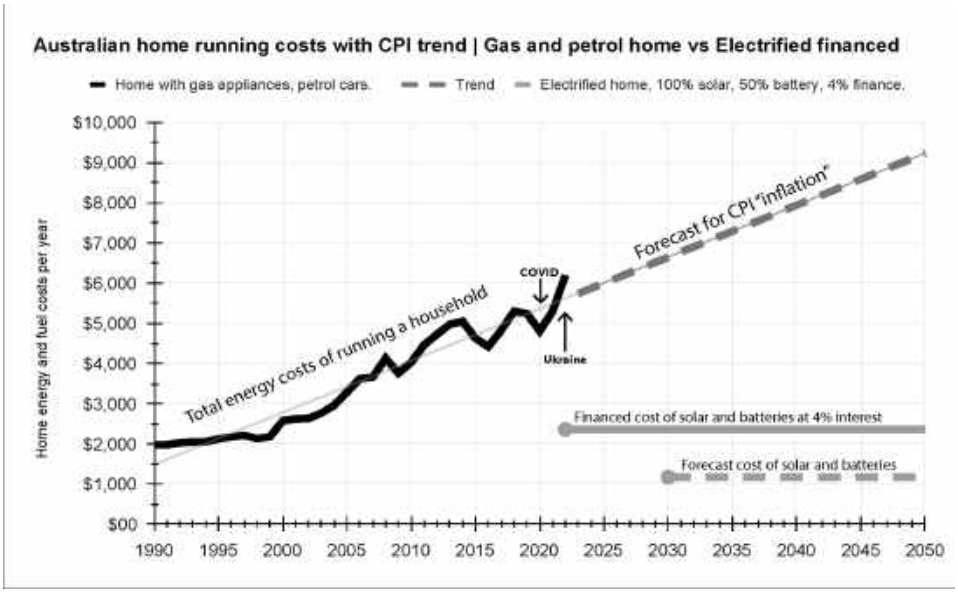
[2] Rewiring Australia (2021), Castles and Cars Discussion Paper.

[3] Energy Consumers Australia/CSIRO (2003), *Stepping Up: A smoother pathway to decarbonising homes.* ($1250 in savings from solar + battery, another $1440 from EV ownership); Climateworks Centre (2023),*Climate Ready Homes: Building the case for a renovation wave.* ($1845 in savings for household electrification and efficiency, another $1642 in savings from solar); ACIL Allen (2020), *Household Energy Choice in the ACT.* ($450 per year in solar savings in ACT from appliance electrification); Victorian government (2023), *Embracing electricity to cut your bills at home.* ($1405 from electrifying the household with a further saving of $385 if using solar energy); Grattan Institute (2023) *Getting off gas: why and who should pay?* (with savings per state ranging from hundreds to thousands of dollars for appliance electrification); Climate Council (2022) *Switch and save: how gas is costing households.*($1000 per year in savings by electrification with additional savings of $800 if with solar).

Figure 3: Historic and future energy costs for household using grid, gas and ICE vehicle versus financed electrification

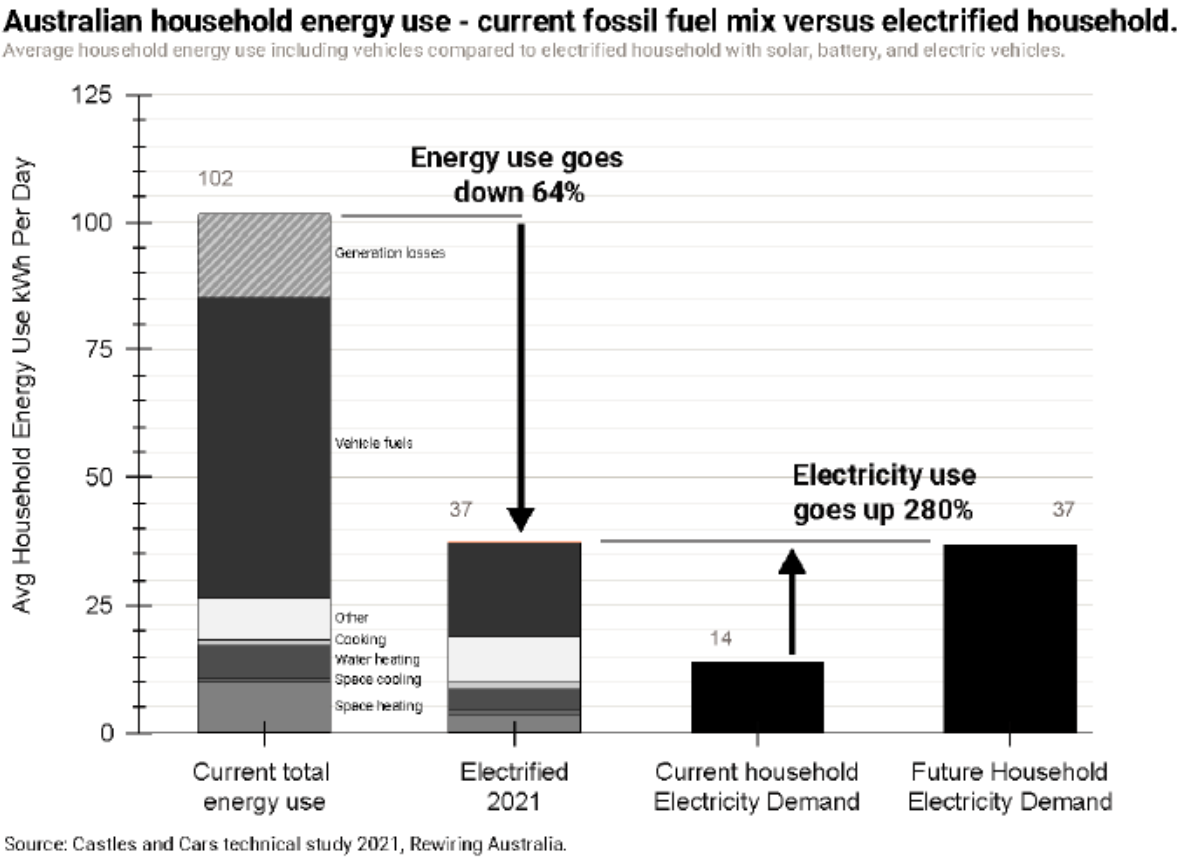


Electrification improves energy productivity

Electric machines powered by renewables are vastly more efficient than their fossil fuel counterparts. An electric cooktop uses approximately half the energy of a gas cooktop. A heat pump uses around ¼ of the energy to heat an equivalent amount of water to gas. Heat pumps also lower the energy cost of heating homes by about ⅓ and electric cars use about ¼ of the energy of their electric counterparts.

In Figure 4 we show this efficiency gain. When the average Australian household goes all-electric, the total primary energy use per day reduces from 102kWh to 37kWh, an efficiency gain of 275%. Electricity use does increase close to threefold to compensate. Australian energy productivity (GDP/unit of energy) has been improving at around 2.8% per year. The electrification of our households and their vehicles would represent a 25% improvement.

Figure 4: Electricity and total energy use for an average household before and after electrification



Source: Castles and Cars technical study 2021, Rewiring Australia.

The key role of the world's cheapest energy - Australian rooftop solar - and batteries

Solar is already the hero. Rooftop solar has been the stand-out for delivering emissions reductions in Australia, and there is no reason not to further accelerate this trend. It is underappreciated that rooftop solar does not require expensive transmission and distribution networks and consequently delivers electricity to the consumer at 3-6c/kWh, a small fraction of the 30c/kWh of electricity from the grid. An electric car charging off that rooftop solar costs just 1c/km to drive, or expressed differently, is the equivalent of paying 20c/Litre for petrol.

Home batteries - and later on, electric vehicles - can play a major role in the energy transition. Storage is the crucial new frontier in the renewables transition. Battery prices are expected to fall 40% over the next two years, vastly improving the economics for households, where batteries of enough size already drive electricity bills close to zero. The existing rooftop solar workforce is already delivering home batteries all over the nation.

Electrification will reduce energy and vehicle expenditure by $1.17 trillion by 2050

The national energy and vehicle running cost savings of household electrification are in the order of $1.17 trillion by 2050. This is due to the solar resource, technology learning curves and the costs associated with coal, oil and gas; the zero cost of solar insolation, the low and declining costs of solar electricity, battery storage and EVs and the constantly inflating costs of fossil fuels.

The Electrify Everything Loan Scheme: a finance model to maximise cost-of-living relief, equity, scheme efficiency and emissions reduction

The Electrify Everything Loan Scheme (EELS) would provide financing at purchase for electrification upgrades. The loan would be secured on property title, indexed to inflation and repaid on the sale of the property - giving every property owner a simple and attractive way to unlock the cost-of-living savings offered by electrification.

The Electrify Everything Loan Scheme (EELS) builds on the $1 billion Home Energy Upgrade Fund (HEUF) announced by the Federal Government in the 2023-24 Budget. Rewiring Australia commends the government on the work to date on the HEUF and believes the concessional interest rates provided through the commercial lenders fund will support a substantial number of middle income home owners electrify sooner.

Australia invests in education at a national scale with the Higher Education Contribution Scheme (HECS-HELP), income-contingent loans that provide a finance option for everyone who wants to study regardless of income: repayments are only collected when someone is earning enough income. Inspired by this world-leading and nation-building example, Rewiring Australia, working alongside the ANU and key HECS architect Professor Bruce Chapman, has been modelling similar finance options for more flexible loans for electrification that provide options for repayment when the borrower is best able to repay.

There are diverse options for electrification finance

Electrification requires a significant initial investment by property owners, especially where retrofitting is required. Finance for upgrades can play a crucial role in bridging this ‘upgrade gap’ for the higher upfront cost of electrified appliances and retrofitting. The government has recognised this with the $1 billion Household Energy Upgrades Fund (HEUF), and this financing will help thousands of households to electrify. The HEUF is expected to be invested via conventional lenders as a discounted ‘green loan’ credit product. Rewiring Australia applauds this crucial first investment in home electrification at a national scale. However, a conventional credit product may not be a suitable or attractive option for large numbers of Australian households, especially those on low incomes.

Constraints and design features for an optimal electrification finance model

Home-ownership is spread widely across incomes in Australia. 62% of people in the bottom two quintiles own their own home. This compares to 77% of people in the highest two income quintiles. However, mortgages are much more common for higher-income owners. Only 35% of lower-income home owners have a mortgage, while 65% of them own their house outright. In contrast, 66% of owners in the higher income quintiles have a mortgage. As such, credit products like green loans, and mortgages, where private green loan products are often attached - are more likely to be available and accessed by higher-income homes.

Addressing the needs of these low-income homes is crucial. If electrification is left to the open market, high-income homes will electrify, while low-income homes will be left with higher gas bills on the widely discussed “death spiral”. The HEUF needs to be expanded to include an additional program that offers finance better-suited across the full range of households and incomes in Australia that need electrification - especially the lower-income homes that could benefit the most, where energy bills are over 6% of income and rising.

Parallels and differences between electrification investment and HECS

Electrification needs to be accessible for low incomes, just like student loans. Access to HECS finance does not depend on disposable income levels. This makes it well suited to students who aren’t working yet. It also means it’s well suited to the range of low-income households, whether on precarious wages, government payments or retirement pensions, that can benefit from electrification.

HECS is for students with no assets. In general, students are earning low or no income, and have few assets that could secure a loan. They are younger than the general population and expect to enter the workforce and earn income later.

HECS loans are unsecured. Some students never earn enough to repay the debt, and the debt is not recovered on death. This means HECS has a high cost to the government relating to loans never repaid. In 2020-21, this cost was estimated at 15.1% of loans originated (about $0.95 billion of $6.27 billion loaned out).

Electrification finance is for property owners. This is a crucial difference to HECS. Property owners, whether owner-occupiers or landlords, choose and purchase the major appliances for a property. Owners are older than the general population, and property ownership has a weak correlation with income levels; in the bottom 20% of Australian household incomes, 60% own their own home (vs 67% of the population), and even 8% are landlords (vs 15% of the population).

If electrification finance is secured on the upgraded property, this avoids loan write-offs and slashes the cost to government. The modelling done by Rewiring Australia shows that Australia could extend the HEUF with a more flexible loan product that can electrify every dwelling - and at a much lower cost to government budgets than the HECS-HELP loan program. If the borrowers are property owners, this means that the loans can be secured on the home and repaid when the home is next sold, driving the fiscal impact of unpaid loans for electrification finance close to zero.

The Australian Government can assist all Australian property owners from all income levels cross the upgrade gap to electrified homes and access lower costs of living with a simple offer: the government finances the full upfront purchase of electrification upgrades, and gets repaid when the home next sells.

Our primary modelling case, to electrify home appliances and add solar and battery, and purchase one EV, makes the assumptions that:

- the average household accesses a loan of around $60,000,
- no repayments are made during the loan,
- loans are repaid on 99.5% of property sales,
- loans are indexed at an average CPI averages 3% and
- Government borrowing costs average 3.5%

Under these assumptions, our modelling suggests that the fiscal cost of interest concessions and bad debts would average $5,000 per home - meaning we could electrify all 10 million households in Australia over 14 years (within the next 15-year appliance life-cycle) at a cumulative cost to government of about $40 - 50

billion spread over the duration of the scheme, while also driving large consumer cost-of-living benefits and decarbonisation impacts.

There are lots of policy variations available to consider:

- Don't include EVs: If the average loan was reduced to $20,000 (assuming $40,000 for an EV purchase), but the other original primary assumptions were the same, the cost of the scheme over the long term would be around $1,500 per home.
- Implement 2% income-contingent repayments: If the government decides to implement income-contingent repayments that average a 2% repayment rate (HECS-HELP is around 5%) as well as collecting on property sale, the cost of the scheme for a $20,000 loan, assuming no voluntary repayments, over the extended life of the policy would decrease to about $1,100 per home; however there would be some small increase in administrative and economic overheads.
- Unsecured loan similar to HECS: If the government decided not to require property security and instead implemented a scheme with similar repayment and default rates to HECS (5% repayments and 15% defaults), the cost of the scheme would increase to $3,200 per home.

What about apartments?

An upgrade finance scheme plays a particularly crucial role in electrifying strata properties.

Because electrification is the future, it will be important for apartment buildings to be able to take action to disconnect from gas at some point in the coming decades. We see two crucial barriers that especially affect strata owners, where often a shared strata decision is required to perform upgrades on gas-powered shared hot water, add solar, or enable EV charging.

1. Initiating action: driving action from strata groups is a co-ordination challenge. Even if several owners are interested in electrification, it is difficult to get the basic first steps of getting quotes for works, or understanding what steps are needed and what costs or benefits are possible. A gradual mandate requiring strata committees to get quotes for building electrification may be an appropriate policy to help drive action. Once a quote and report on the building is done, it will be clear to everyone what the required investment is, and it can be dealt with in a similar way to other capital works regularly required by strata groups.
2. Agreeing to expenditure: to make the investment in actual electrification works, strata owners must agree to the expense in spite of having various incomes and savings to do so. A widely available finance scheme is crucial to addressing this. If a simple finance scheme makes the timing of investment a less important issue for owners, it will be much easier to get agreement.

What about renters?

Electrification finance policy is for owners, who make appliance purchase decisions. Every property in Australia has an owner. We assume that the clearest path forward to electrify rental homes is to enable and incentivise their landlords to do so.

Landlords should have access to any upgrade finance policy enacted for owner-occupiers. Australian landlords are not necessarily high-income; about 15% of Australians own one or more rental properties, including 8% of households in the lowest-income quintile.

Flexible financing is a key enabler, but does not overcome the core split incentive issue (most of the benefits of electrification upgrades flow to the renter as lower energy bills). Complementary policies will be needed to

encourage landlords to use a finance scheme. The important opportunities for complementary policies include:

- Mandatory energy performance disclosure. Disclosure and transparency are both the most important, and easiest to implement, opportunities to align market incentives with the policy goals of electrification upgrades. If prospective landlords are required to publish standardised estimated energy bills and electrification status alongside rent prices, the economic incentive for landlords to improve the running costs of their home will transform overnight.
- Minimum standards. Over time, every house should meet minimum energy performance standards. This could be achieved by mandating particular upgrades or requiring electrification. We believe this policy should be supported by a disclosure regime that ensures these upgrades are also motivated by delivering genuine savings and not just compliance.
- Tax incentives. Landlords have a variety of specific tax provisions applied and there are various opportunities to incentivise upgrades via tax measures.

Equity targeting

EELS finance would be available to all property owners. We propose that a national Office of Electrification would be created to deliver programs to maximise the equity of EELS or any other broad-scale electrification finance scheme. This would involve behavioural economics research, outreach, education and working with the welfare sector and the electrification industry to target households and communities experiencing energy poverty. The purpose would be to ensure that disadvantaged households and communities are among the first to receive electrification upgrades, whether they own their own homes, are in social housing or private rentals. A range of policies and programs would be developed by the Office of Electrification and it would also be used for other policy outcomes (see below).

Table 2: Options for electrification finance

Finance option	Description	Key benefits	Issues
1. Concessional green loans	Conventional credit at low interest rate with regular repayments - expected format of initial HEUF investments.	Widely available from private and public providers; well-understood.	Not accessible or appropriate for low-income homes. Risk of default. Interest concession costs.
2. Income contingent loan	Loan repayments triggered by income threshold (like HECS); indexed to inflation.	Universally accessible, including low-income homes	High cost of bad debts, interest concession.
3. Property contingent loan	Loan secured on property; repayment on property sale; indexed to inflation. Could also have voluntary or ICL-type repayments.	Like ICLs, accessible to low income Very low cost of bad debts (due to property security) Can bear very low/no repayments if secured.	Only available to property owners; best suited to property upgrades Interest concession costs.
4. Savings contingent loan, or “On-bill financing”.	Loan repayments triggered by energy savings. Could be administered through energy retailers and follow models of “On-bill financing” that have had some success in the US.	Repayments are collected at the same time as savings expected to be realised.	Same credit risks as conventional loans. Difficulties in measuring savings or assessing the financial position of customers. Admin challenges of deploying credit products via energy retailers.
5. Council rates-attached loan.	Loan repayments are made on the rates notice. Implemented as ‘EUAs’ for commercial property in some Aus LGAs.	Repayments are attached to the property and transferred to the new owner. Cashflow timing benefits particularly for commercial owners.	Same credit risks as conventional loans. Disclosure is required on property sale. Admin challenges of deploying credit products via the diversity of councils.
6. Grants to reduce energy bill prices	Direct cash payments to consumers to lower their energy bills.	Simple, popular.	High cost to taxpayers. No long-term benefits. Questionable efficiency, and likely to fund fossil fuel use.
7. Tax concessions	Like the (US) Inflation Reduction Act, comprehensive tax reform with built-in incentives for electrification.	Simple to implement and Australians love tax deductions.	Regressive - most benefits the wealthiest 20% of households with good cash flow and good credit.
8. Grants to reduce electric appliance costs	Direct cash payments to consumers to lower their energy bills. Existing schemes include federal SRES for solar and hot water, various state schemes	Simple, popular.	Significant cost to taxpayers, either via tax or energy bill recovery (as in SRES). Co-contribution drives higher participation from higher-income homes.

Complementary policies to maximise cost-of-living relief from electrification

Office of Electrification to deliver EELS and complementary electrification policy and programs: ($15 - 25 million)

An Office of Electrification would deliver EELS and ensure that it targets low-income and disadvantaged households and communities. It would also deliver vital coordination of electrification policy and implementation including working with states and territories through ECMC. Rewiring Australia notes the recent creation of an Electrification division within the Department of Climate Change, Energy, the Environment and Water (DCCEEW). As outlined in our 2023-24 pre-budget submission, we propose an expanded and elevated Office that leads cross portfolio and intergovernmental coordination and all demand-side issues. Key responsibilities of the office would include:

- Coordination and co-funding of subsidies provided by jurisdictions
- Integrate electrification policy with EV policy
- Coordination and guidance for local government programs supporting electrification
- Development of clear and effective household and industry communications campaigns
- Workforce planning with the Industrial Relations and Industry portfolios
- Supply chain planning with Trade and Tourism portfolio

In addition to the outputs for this unit that we proposed last year, we propose that the Electrification Section be expanded to manage the additional measures outlined in sections 3, 4 and 5 of this submission. We envisage this function might require in the range of $15 - $25 million over the forward estimates, but further work is required to design the measure and quantify its cost.

Public education and thought leadership ($14 million)

Australia is the global leader in rooftop solar because millions of people have enthusiastically embraced the technology and enjoy reduced energy bills as a result. Rapid adoption of electrification requires millions of people to make decisions to remove fossil fuel machines from their homes, replacing them with clean, efficient, electric alternatives. Government funded marketing and education campaigns can support households make informed decisions about electrification and connect them with the right government incentives and support including the HEUF.

We propose $30 million over the next 4 years to be administered by the Office of Electrification, for:

- Communications campaigns on the health, economic and environmental benefits
- Information on how to electrify including access to government supported incentives
- Funding for research and thought leadership around community ownership, public engagement and social licence
- Partnerships with community groups to amplify the message and facilitate householders to action.
- Partnerships and targeted education campaigns with business and industry to help promote electrification, including retailers of electric appliances and electricians and builders.

Review of the National Electricity Market ($5 million) to deliver new “household-centred” market rules ($5 million)

The National Electricity Market is not fit-for-purpose for the energy transition. Outdated market designs, rules and standards put up the cost of electricity by delaying and increasing the cost of investment by households

(in electrification assets) and by large investors (in large-scale storage, solar and wind). A review of governance and market design should be led by energy ministers, not the market bodies.

The Energy Security Board's 'Post 2025' electricity market design process was supposed to deliver a new market that would facilitate the clean energy transition at the lowest cost, while maintaining security and reliability. Despite years of work on this project, Australia will not be getting a new electricity market in 2025. While the two markets are different, Great Britain's 2021 review is an example for Australia on an efficient review of market operation and governance which resulted in the implementation of a Future System Operator (FSO). Budget funding is required for two urgent tasks.

Firstly, a review of NEM governance, design and operation and its ability to deliver the energy transition at the lowest cost to consumers. The budget would cover the cost of the secretariat, the appointment of a Chair, an expert working group, the establishment of an academic reference group, and costs for consultation. The review would be consistent with the 'National Energy Transition Partnership' (NETP) agreement.

Secondly, to fund DCCEEW to provide direction on market rules the NEM needs to support consumers to generate, store and trade energy on a level playing field with their retailers, large generators and networks. We propose that the ECMC-initiated 'CER Roadmap' process should be amended to include the design of new NEM rules. The Australian Government could work with the Energy and Climate Ministerial Council (ECMC) to use ministerial powers to then implement the new rules, as a priority of national microeconomic reform.

Zero Emissions Communities ($200- $340 million)

The "Zero Emissions Communities" (ZEC) is a proposal to drive innovation and build social licence for the clean energy transition through intense electrification projects in targeted communities. A series of "Shire Zeros" in regional areas and "Suburb Zeros" in cities would be funded by the Commonwealth Government. These deployments would provide important learnings on the most efficient and effective ways to deploy mass electrification.

Rewiring Australia proposes the Federal Government fund 17 Zero Emissions communities, one in each of the country's distribution network (DNSP) areas. The cost for each zone would be approximately $20 million over five years. The project would identify ways to accelerate the uptake of electrification including facilitating community generation and efficiency improvements in the energy system. Funding would cover costs of administration and build the community and collaboration infrastructure; create one-stop shops; help develop software and business models to facilitate consumers and suppliers through the quotations, rebates, and other green financing options, acquittals process; education, training and coordination of local contractors and businesses; establish and operate a 'Shared Community Benefit Fund' in regional areas of high renewable energy investment.[4]

ZEC's would be designed to result in economies of scale to unlock the cost-of-living benefits of electrification, develop the market, uncover system and technical solutions, refine workforce and community education programs, incubate new business models and deliver local economic development. ZECs would be a collaboration between the Australian Government, individual state and territory governments, local governments, local communities and investors.

[4] Shared Community Benefits Fund distributes contributions in a manner decided by the community. Principles of such a fund are outlined in the RE Alliance Building Stronger Communities – Community benefit funds report report.

The partnership with the local DNSP is important, as the proposal involves the rapid growth of consumer energy resources that must be well understood and managed by the DNSP. Regulatory sandboxing exemptions from the market bodies would support utility market innovation such as Distribution System Operator (DSO), Use of System tariffs (LUOS), local energy and demand flexibility trading. It would also support the development of other technology and business model innovations, such as Virtual Power Plants, Aggregators, community batteries, and Solar Banks. It is an opportunity to deploy the outcomes of the successful ARENA-funded pilots such as Project Edith and Project Edge, and achieve coordination between the distribution and transmission networks. Funding the capital cost for distribution network (DNSP) infrastructure such as Dynamic Operating Envelopes, EV charging stations, is not included.

Community-integrated EV charging infrastructure ($95 million)

Funding is needed to both plan and implement community-integrated EV charging around the country. This could include testing models for EV chargers that are co-located within community facilities and encourage charging during the solar window. The program would also explore the integration of EV charging and energy export at the community level and deploy the most appropriate and efficient charging speed[5]. Rewiring Australia made this proposal in our 2023-24 pre-budget submission. While there have been substantial public and private investments in charging infrastructure over the last 12 months, there remains a need to adequately integrate charging infrastructure to match community needs and maximise efficiency.

This work is not contingent on parliament's 'Inquiry into the transition to electric vehicles' but to respond to the current trends and levels of EV uptake.

[5] Very high-speed chargers have significantly higher capital costs (+1000%) and the cost per km is around double or triple compared to medium-speed chargers, where ten times as many could be deployed into places in communities where cars naturally park and charging does not need to happen within 15 minutes. There are significant cost-of-living and energy system benefits of solar soaking convenient community chargers.