Assessing impacts of changes to Australian Electricity Concessions

FINAL REPORT

ALVISS CONSULTING

SACOSS
South Australian Council of Social Service

A report prepared by Alviss Consulting for the South Australian Council of Social Service(SACOSS) and Australian Council of Social Service (ACOSS)

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Executive Summary

Across Australia, an estimated 2.9 million households receive rebates and concessions from state and territory governments to help cover the costs of electricity bills. This represents around 28 per cent of all customers.[1] While eligibility for electricity concessions varies between state and territories, they are generally available to people on low incomes, pensioners, and other concession card holders. Most state and territory electricity concession schemes comprise of a fixed dollar amount, where all eligible households receive the same value of concession per annum, irrespective of energy price, market or technology development, seasonal variation, household conditions and circumstances.

This project was carried out in two stages and sought to examine what a shift from a fixed (flat) rate concession amount to a hybrid model, or a percentage-based discount, would mean for Australian concession recipients. The first stage of this project found that the current fixed rate energy concession schemes do not support equity between households with different energy usage needs. Under current arrangements, the fixed concession amount is typically of less value to Health Care Card (HCC) holders compared to other concession recipients. This reflects the demographics of HCC holders, who are typically larger households and have higher average consumption compared to other concession card holders. On average, concession recipients with solar are receiving an effective rebate of between 39 and 100 per cent off their annual bills, depending on which network area and jurisdiction they reside in. This is largely because concession card holders with solar have significantly lower bills compared to other concession recipients (due to a combination of self-consumption, lower levels of electricity drawn from the grid, and feed-in tariffs earned for exporting electricity to the grid).

The second stage of this project found that a shift to a percentage-based or hybrid concession model could improve equity in concession schemes ***and*** contribute to jurisdictional budget savings for states and territories. The amount of savings would depend on the level at which the percentage-based concession is set and the structure of the hybrid concession, and are largely due to allocative efficiency between low consumption and high consumption households.

On balance, the percentage-based concession model was assessed as being more equitable and responsive to change in both energy price and energy consumption compared to current arrangements and the hybrid model. For the percentage-based concession model, the distributional impact on different households depends on the percentage level at which the concession is set. Whether a hybrid concession model would advantage low consumption households or higher consumption households would depend on the fixed versus variable combination. A hybrid concession structured as a combination of a high fixed component and a low variable component would be better for low consumption households, whereas a combination of a low fixed component and a high variable concession would benefit higher consumption households. A percentage-based concession, on the other hand, is “consumption level agnostic” as everyone will get the same percentage discount off the bill and the percentage itself can be determined by the budget alone.

Consumption band analysis of select jurisdictions suggests that there would need to be a relatively high percentage-based concession in Queensland in order to ensure that the majority concession recipients retain at least the same value of concession compared to current

1 ACCC (2021) Inquiry into the National Electricity Market, May 2021 report, p. 8

arrangements (i.e. are not “worse off”). In NSW and South Australia, there would be a reallocation of support that would benefit concession recipients with higher consumption, and higher bills, while disadvantaging low consumption/low bill households. The consumption bandwidth data suggests shows that a conservative estimate for a budget neutral percentage-based concession is around 20% in NSW, 26% in Queensland and 14% in South Australia.

Several policy options were canvassed to assist in the transition to new concession arrangements. To assist concession card holders with very low consumption in the transition to a percentage-based concession, a complimentary ‘service to property concession’ could be introduced as an alternative to the hybrid model, to ensure that customers do not pay more in supply charge than they do for electricity usage. For concession recipients using 1,000 kWh per annum or less, the introduction of a service to property concession would reduce the annual bill:

- by approximately $129 for around 20,000 NSW concession recipients at a 20% concession;
- by $135 for around 6,900 customers in South-East Queensland (the Energex network) at a 26% concession; and
- by $35 for approximately 7,550 South Australian households at a 14% concession.

The service to property concession is estimated to cost an additional $2,992,000 in NSW; an additional $1,276,000 in Queensland’s Energex network; and an additional $310,000 in South Australia. Depending on the level at which the percentage-based concession is set, the increases would be offset by overall savings in the budget.

A common argument against a percentage-based concession is that it does not provide consumers with a strong incentive to reduce consumption or introduce more energy efficient measures, as well as creating uncertainty for government budgets. Placing a maximum cap on the annual concession amount can, however, address these concerns. If a maximum cap on the value of the annual percentage-based concession was set at twice that of the current fixed amount, the cap would not be triggered at the lower levels of concession (i.e. on a 20% concession in NSW; on a 26% or 28% concession in South-East Queensland). However, a cap set at twice that of the current fixed amount would have the following impact:

- In NSW, a 22% concession, would cap customers with an annual consumption of more than 10,000 kWh while a 24% concession would cap approximately 80,000 concession households using more than 9,000 kWh per annum. The latter would reduce the annual concession budget by almost $5 million.
- In Queensland (Energex network), a 30% concession would cap approximately 18,000 customers with an annual consumption of more than 10,000 kWh, reducing the annual concession budget by around $430,000.
- In South Australia, where the current fixed concession is significantly lower, the cap would impact approximately 5,000 customers using more than 10,000 kWh per annum if the percentage concession were 14%. A 16% concession would cap customers with an annual consumption of more than 8,000 kWh while a 18% concession would cap approximately 16,000 customers using more than 7,000 kWh per annum. The latter would reduce the annual concession budget by approximately $1.3 million.

Finally, grandfathering of current concession arrangements for existing concession card holders who are less likely to benefit from new concession arrangements is a viable policy option to

assist in the transition to new concession arrangements. The costs of grandfathering would be more significant if the grandfathering option is open to all concession recipients, rather than limiting to non-solar concession card holders. In NSW, allowing grandfathering for a 20%, 22% and 24% concession would impose additional costs to the jurisdictional concession budget. However, in South-East Queensland, jurisdictional budget savings could still be achieved at a 26%, 28% and 30% concession if only non-solar recipients can opt-in to grandfather. In South Australia, jurisdictional budget savings of $2.9 million would still be achieved at a 14% concession if non-solar concession recipients could opt-in to grandfather. If all concession recipients can opt-in, based on a 14% concession, there would be an additional budget cost of $5.2 million.

Our analysis shows that there are a range of new concession models which are more responsive and equitable than current fixed rate arrangements. Percentage-based concessions could contribute to jurisdictional energy concession budget savings, even with the inclusion of policy options such as placing a maximum cap on concessions and grandfathering to mitigate any unintended consequences. Crucially, any budget savings achieved from redistributing expenditure could be re-invested into increasing the percentage of the overall concession or toward other complimentary policies. Further, state and government expenditures could be *reduced* under a percentage-based concession if household energy consumption trends downwards. Unlike the fixed rate concession, implementing a percentage-based concession (and to a lesser extent, the hybrid concession) may motivate governments to pursue policy measures to lower household consumption, such as improved thermal efficiency and encouraging the uptake of residential solar PV.

Future energy markets will require robust and responsive support mechanisms to protect against price shocks (e.g. with jurisdictions such as the ACT transitioning away from gas). This project adds to evidence that current fixed rate concession schemes are inequitable and limited in capacity to respond to changes due to price, usage, and technology changes. In the context of the ongoing energy market transformation, concessions reform may have a role in managing the impact of price shocks, particularly for those already experiencing financial disadvantage.

1. Purpose and approach

In its final report for the Retail Electricity Pricing Inquiry, the Australian Competition and Consumer Commission (ACCC) concluded that the state and territory electricity concession schemes are not fit for purpose and that urgent changes are required.[2] The majority of state and territory electricity concession schemes comprise of a fixed dollar amount, where all eligible households receive the same value of concession, irrespective of different circumstances and need. One exception is Victoria's Annual Electricity Concession that provides a 17.5 per cent discount off the household usage and supply costs (referred to as "percentage-based" concession in this report). The ACCC argued that while on face value, the percentage-based concession may appear more equitable, it would result in disproportionate support between low and high consumption households. Instead, the ACCC recommended a "hybrid" approach, consisting of a fixed dollar amount to offset daily supply charges, and a percentage-based discount to offset usage charges.

The ACCC did not make any recommendations on how the hybrid model should be structured, nor did they conduct modelling to assess the implications of a hybrid model compared to percentage-based models and current arrangements. The purpose of this project has therefore been to examine what a shift from a "fixed (flat) rate" concession amount to a hybrid model, or a percentage-based discount, would mean for Australian concession recipients.

This project has consisted of two stages.

Stage 1 modelled various concessions scenarios, including different levels of percentage-based electricity concessions and hybrid concessions[3] to identify potential concession models that are more equitable and responsive to change in both energy price and energy consumption compared to current arrangements. The model also analysed the potential financial impact on concession card holders.

Stage 1 produced an interim report which summarised the outputs from the concession modelling as well as an analysis of geographic and socioeconomic characteristics of postcodes with a high proportion of concession recipients (Health Care Card holders and Pensioners) in each electricity network area. The interim report was also accompanied by a concession modelling workbook.

Stage 2 of the project built on the modelling conducted in Stage 1 and identified policy options for shifting to a new concessions model, including policies to address the ACCC's concern of disproportionate support between low and high consumption households. The impact of the policy options on jurisdictional budgets was also assessed. This report summarises findings from the Stage 2 analysis, including:

- "Budget neutral" scenarios for percentage and hybrid concessions to assess the impact of the alternative concession models on state and territory government budgets; and
- Policy options for moving to a percentage-based concession: introducing an additional concession to ensure that customers do not pay more in supply charge than they do for

2 ACCC (2018) Restoring Electricity Affordability and Australia's Competitive Advantage, Retail Electricity Pricing Enquiry, Final Report, p. 299-303

3 The percentage-based concessions applied range from 5% to 35% off total bill (excluding GST) while the hybrid concessions range from $310 off supply charges and 5% off usage charges to $10 off supply charges and 35% off usage charges.

electricity usage; similar to Victoria's 'Service to Property Concession'; applying a cap to the percentage-based concession; and the option to grandfather current concession arrangements for existing concession recipients.

2. Budget neutral scenarios for percentage/hybrid models

The analysis in Stage 1 of this project did not consider the impact of the alternative concession models on state and territory government budgets, focusing instead on impacts at the household level. Clearly, setting the percentage and hybrid concession at generous levels is likely to result in a scenario where most households are nominally "better off" compared to the current concession arrangements. However, such scenarios risk substantial increases to the overall cost for state and territory governments to deliver concessions. While this may influence the appetite for concession reform, Stage 1 modelling suggests that there are inefficiencies in both allocation and effectiveness of the current concession arrangements in a number of jurisdictions. There is therefore a need to compare the costs of various model scenarios and the current costs of delivering concessions.

The following section presents "budget neutral"[4] scenarios for the alternative percentage and hybrid concession models in NSW, Queensland, and South Australia to analyse the impact of the alternative concession models on governments' budgets, as well as different household categories. It shows that there are a range of percentage-based and hybrid models which would result in budget savings, primarily by redistributing expenditure from low consumption households (typically households with solar as well as some pensioners) to households with higher consumption (typically Health Care Card holders).

2.1 NSW

In NSW, a hybrid model consisting of a $110 discount from the fixed supply charge (per annum) and a percentage discount of 16% from usage charges would reduce the annual concession budget by approximately $0.4 million. A straight percentage discount of 20% off the bill would reduce the annual concession budget by approximately $4.8 million.

Under both models, Health Care Card (HCC) holders on average would receive the greatest increase to the annual concession (between $30 and $40) while the value of the concession for households with solar would reduce due to differences in their electricity usage (See table 1).

4 For the purposes of this research, "budget neutral" refers to modelled concessions scheme costs is equal or less than the current scheme costs

TABLE 1 | NSW: Changes to value of annual concession with a hybrid concession of $110/16% and a percentage-based concession of 20%

Concession Category	$ Difference	
	Percentage 20%	Hybrid $110/16%
Pensioner[5]	$ 4	$ 1
Health CC[6]	$ 40	$ 30
Other Card[7]	$ 29	$ 21
Solar[8]	$ (160)	$ (68)

Table 2 below shows how these two alternative arrangements would result in jurisdictional budget savings from low consumption solar households and increased budget expenditure on concession recipients with higher consumption levels.

TABLE 2 | NSW: Implications for jurisdictional concession budgets if introducing a hybrid concession of $110/16% and a percentage-based concession of 20%

Concession Category	Budget implications	
	Percentage 20%	Hybrid $110/16%
Pensioner	$ 2,893,402	$ 689,712
Health CC	$ 5,060,692	$ 3,744,466
Other Card	$ 1,730,107	$ 1,239,965
Solar	$ (14,479,998)	$ (6,144,081)
Total	$ (4,795,796)	$ (469,936)

A hybrid model of $180/9% would also be budget neutral (estimated saving of $6.4 million). This scenario, however, would result in a less positive impact on pensioners, HCC holders and other card holders as well as a less negative impact on solar households compared to the $110/16% scenario outlined above (See tables 3 and 4 below).

5 The Pensioner Card holder includes: the age pension, carer payment, disability pension, single & dependents, parenting payment single
6 The Health Care Card holder category includes: abstudy/austudy; jobseeker; youth allowance; partner allowance/parenting payment; widow allowance; special benefit
7 The 'Other' eligible card holders category includes: Dept of Veterans' Affairs - War Widow (WW); Dept of Veterans' Affairs - Totally & Permanently Incapacitated (TPI); Dept of Veterans' Affairs - Extreme Disablement Adjustment (EDA); Dept of Communities - Commonwealth Seniors Health Card; QLD-Dept of Communities - QLD State Seniors Card; Dept of Immigration - Immigration Card; SA Concession Card holders; and Life Support
8 Includes the above concession groups with solar

TABLE 3 | NSW: Changes to value of annual concession with a hybrid concession of $180/9%

Concession Category	$ difference $180 + 9%
Pensioner	$ (6)
Health CC	$ 10
Other Card	$ 5
Solar	$ (45)

TABLE 4 | NSW: Implications for jurisdictional concession budgets if introducing a hybrid concession of $180/9%

Concession Category	Budget implications $180 + 9%
Pensioner	$ (4,013,861)
Health CC	$ 1,282,551
Other Card	$ 307,088
Solar	$ (4,051,201)
Total	**$ (6,475,424)**

1.1 Queensland

In Queensland, a hybrid model consisting of a $150 discount off the fixed supply charge (per annum) and a percentage discount of 23% off usage charges would reduce the annual concession budget by approximately $4.2 million. A straight percentage discount of 32% off the bill would reduce the annual concession budget by approximately $6.1 million.

Under both models, HCC holders would receive the greatest increase to the annual concession (between $88 and $154) while the value of the concession for households with solar would reduce (See table 5).

TABLE 5 | Queensland (Energex only): Changes to value of annual concession with a hybrid concession of $150/23% and a percentage-based concession of 32%

Concession Category	$ Difference Percentage 20%	Hybrid $110/16%
Pensioner	$ 78	$ 33
Health CC	$ 154	$ 88
Other Card	$ 55	$ 17
Solar	$ (224)	$ (104)

Table 6 below shows how these two alternative arrangements would result in jurisdictional budget savings from low consumption solar households and increased budget expenditure on concession recipients with higher consumption levels.

TABLE 6 | Queensland (Energex only): Implications for jurisdictional concession budgets if introducing a hybrid concession of $150/23% and a percentage-based concession of 32%

Concession Category	Budget implications	
	Percentage	Hybrid
	20%	$110/16%
Pensioner	$ 2,893,402	$ 689,712
Health CC	$ 5,060,692	$ 3,744,466
Other Card	$ 1,730,107	$ 1,239,965
Solar	$ (14,479,998)	$ (6,144,081)
Total	$ (4,795,796)	$ (469,936)

A hybrid model of $200/17% would also be budget neutral (estimated saving of $2.9 million). This scenario, however, would result in a less positive impact on pensioners, HCC holders and other card holders as well as a less negative impact on solar households compared to the $150/23% scenario outlined above (See tables 7 and 8 below).

TABLE 7 | Queensland (Energex only): Changes to value of annual concession with a hybrid concession of $200/17%

Concession Category	$ difference
	$200 + 17%
Pensioner	$ 25
Health CC	$ 65
Other Card	$ 13
Solar	$ (77)

TABLE 8 | Queensland (Energex only): Implications for jurisdictional concession budgets if introducing a hybrid concession of $200/17%

Concession Category	Budget implications $200 + 17%
Pensioner	$ 8,743,707
Health CC	$ 2,755,619
Other Card	$ 1,233,847
Solar	$ (15,683,892)
Total	**$ (2,950,719)**

2.2 South Australia

In South Australia, a hybrid model consisting of a $90 discount off the fixed supply charge (per annum) and a percentage discount of 13% off usage charges would reduce the annual concession budget by approximately $1.6 million. A straight percentage discount of 18% off the bill would reduce the annual concession budget by approximately $1.2 million.

Under both models, HCC holders would receive the greatest increase to the annual concession (between $39 and $75) while the value of the concession for households with solar would reduce (See table 9).

TABLE 9 | South Australia: Changes to value of annual concession with a hybrid concession of $90/13% and a percentage-based concession of 18%

Concession Category	$ Difference Percentage 18%	Hybrid $90 + 13%
Pensioner	$ 48	$ 20
Health CC	$ 75	$ 39
Other Card	$ 42	$ 15
Solar	$ (164)	$ (86)

Table 10 below shows how these two alternative arrangements would result in jurisdictional budget savings from low consumption solar households and increased budget expenditure on concession recipients with higher consumption levels.

TABLE 10 | South Australia: Implications for jurisdictional concession budgets if introducing a hybrid concession of $90/13% and a percentage-based concession of 18%

Concession Category	Budget implications	
	Percentage	Hybrid
	18%	$90 + 13%
Pensioner	$ 6,852,256	$ 2,832,782
Health CC	$ 557,270	$ 293,021
Other Card	$ 1,552,641	$ 574,093
Solar	$(10,185,666)	$ (5,312,623)
Total	**$ (1,223,499)**	**$ (1,612,728)**

A hybrid model of $150/7% would also be budget neutral (estimated saving of $2.2 million). This scenario, however, would result in a less positive impact on pensioners, HCC holders and other card holders as well as a less negative impact on solar households compared to the $90/13% scenario outlined above (See tables 11 and 12 below).

TABLE 11 | South Australia: Changes to value of annual concession with a hybrid concession of $150/7%

Concession Category	$ difference
	$150 + 7%
Pensioner	$ 5
Health CC	$ 16
Other Card	$ 3
Solar	$ (51)

TABLE 12 | South Australia: Implications for jurisdictional concession budgets if introducing a hybrid concession of $150/7%

Concession Category	Budget implications
	$150 + 7%
Pensioner	$ 766,691
Health CC	$ 118,540
Other Card	$ 112,923
Solar	$ (3,187,649)
Total	**$ (2,189,495)**

3. Assessment criteria to compare the alternative models

A Project Reference Group consisting of representatives from consumer organisations and two energy retailers provided extensive feedback on Stage 1 analysis and findings, which helped to shape scenarios for modelling in Stage 2.

Objective and principles (see Box 1 below) were developed by the Project Reference Group to guide any potential shift to new concessions models, drawing on earlier work from QCOSS.[9]

Box 1. The Objective and Principles of Energy Concessions & Rebates

Objective

To improve the ongoing affordability of energy bills for people who need additional financial support to access enough energy to sustain reasonable living standards.

Principles

Energy Concessions and rebates should be:

- **Adequate** to afford enough energy to sustain contemporary living standards in line with community expectations, which includes support for access to education, employment, social inclusion, health, and wellbeing and to guard against disconnection, debt, and restriction.
- **Equitable** to improve affordability of energy reflective to need
- **Responsive** to accommodate changing: energy price, market or technology development; seasonal variations; household conditions and circumstances.
- **Available** to people who need additional and ongoing financial support to access enough energy to sustain contemporary living standards.
- **Easily accessible** to people who are eligible
- **Available** to people who need additional and ongoing financial support to access enough energy to sustain contemporary living standards.
- **Complementary** to a package of measures (of governments, energy, and community sectors) to maximise their effectiveness and to promote equity in the standard of living of all people in Australia.

9 QCOSS (2014) Energising concessions policy in Australia: Best practice principles for energy concessions

The objective and principles were developed noting that very few jurisdictional energy concessions/rebate schemes had a stated policy objective detailing a desired purpose or policy outcome of concessions support. The NSW Audit Office[10] has previously suggested that without measurable objectives or outcomes, it is difficult to assess whether:

- Particular groups in the community require more or less assistance with the cost of energy bills compared to others (e.g., different household types, geographic areas);
- The level of assistance is adequate to prevent households being disconnected;
- The scheme budget is sufficient to meet program objectives; or
- The scheme budget is being expended in an efficient and sustainable way

The QCOSS research also noted that without clear and publicly stated objectives for concessions, it is difficult to assess the effectiveness of concessions or recommend improvements to ensure the schemes are meeting their intended purpose. The objectives and design principles above therefore formed the basis of assessment criteria to compare the alternative concession models to existing energy concession models and identify scenarios for modelling in Stage 2 of this project.

3.1 Adequacy

Adequacy of energy concessions relates to whether the rebate/concession amount is sufficient to address the ongoing affordability of energy bills for people who need additional financial support. A full assessment of adequacy would likely require analysis of household incomes, expenditure and usage which is out of scope of the current project. However, adequacy also relates to the ability of concessions to help sustain reasonable living standards, which necessarily change over time. While it may have been adequate (or even a luxury) to have a single personal computer per household once upon a time, the requirement for remote schooling and work necessitates having multiple devices connected at once.

Flat rate concessions, which operate in all jurisdictions except for Victoria and the Northern Territory, apply a fixed subsidy off energy bills, regardless of different energy needs and usage patterns between households. While the payment may have been considered adequate to address affordability concerns at the point of establishment, there is no in-built mechanism to ensure adequacy is maintained over time. If the concession amount is not adequate for some households to make energy affordable, this may lead to an increased demand on hardship supports, the need for debt management or drive the underuse of energy.

The ability of the percentage and hybrid concession to meet the adequacy test will in part depend on the level at which the percentage and/or fixed subsidy components are set. In reality, this may be constrained by jurisdictional budget considerations, which is explored further in Section 4.

3.2 Equity

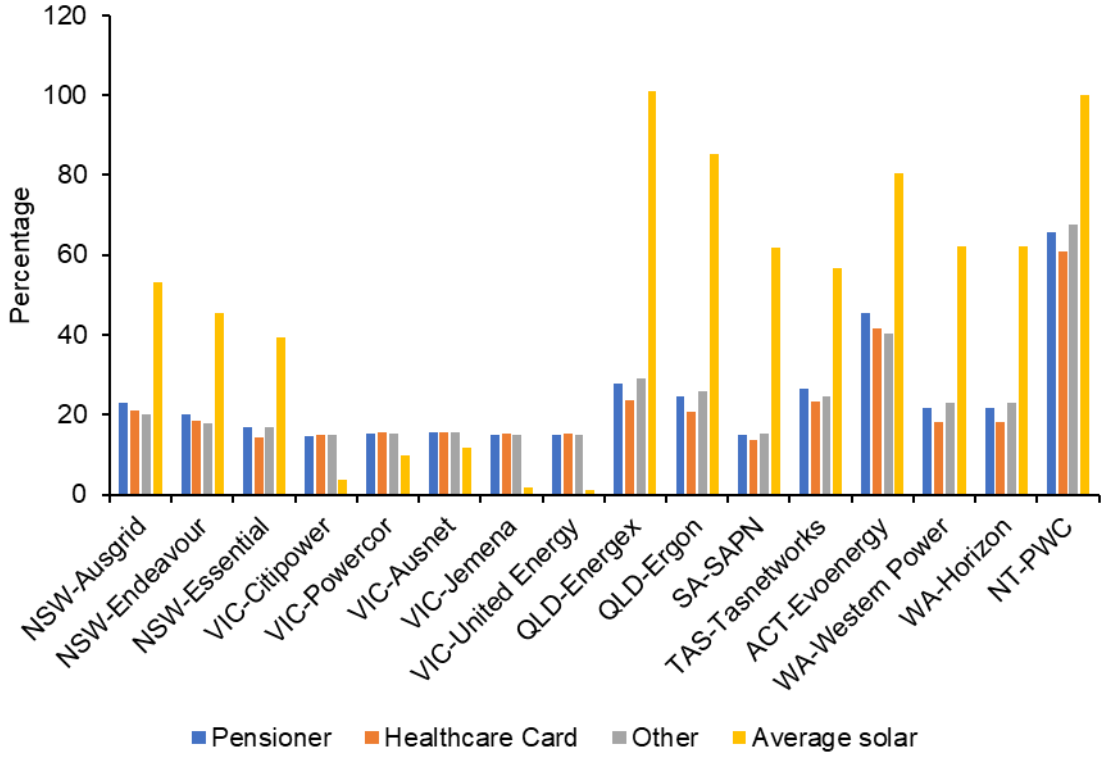
The equity principle investigated in this project relates to the different support needs of individuals and households in different circumstances (i.e. vertical equity). In practice, this

10 Audit Office of NSW (2017) Energy rebates for low income households

means that eligible households who have higher essential energy needs (e.g. due to living with disability, larger household size and composition) should receive a higher level of assistance, reflective of their energy usage needs.

The inequity between different households is starkly highlighted in the Stage 1 modelling, which showed that in jurisdictions with fixed concessions scheme, concession card holders with solar are on average getting an effective discount of between 39 and 100% off their annual bills depending on their network and jurisdiction (see Chart 1).

CHART 1 | The relative value of the **current concession** (excl GST) for **pensioners, Health Care Card holders, other card holders and concession recipients with solar** based on average market offer as of October 2020, single rate, inclusive of guaranteed and pay on time discounts11



In relation to the ACCC's concern that percentage-based concessions would result in disproportionate support between low consumption and high consumption households, it is worth noting that the current fixed rate arrangements *already* embed such inequities. Chart 1 shows that in Victoria (where the percentage-based concession operates), there is greater equity between different types of concession card holders.

While it is clear from the Stage 1 analysis that households with relatively low consumption are less likely to benefit from a move from fixed concession amounts to a percentage-based concession, it also may be that a fixed concession currently overcompensates households with a relatively low consumption while it undercompensates households with higher consumption. However, as energy is an essential service, the principle that access should not cost more than usage is important to protect households with relatively low consumption.

Whether a hybrid concession model would advantage low consumption households or higher

11 Note that this assessment is based on average consumption for each of the concession types and that individual customers will have lower or higher consumption than the average

consumption households would depend on the fixed versus variable combination. A hybrid concession structured with a high fixed component and a low variable component would be better for low consumption households, whereas a combination of a low fixed component and a high variable concession would benefit higher consumption households. A percentage-based concession, on the other hand, is "consumption level agnostic" as everyone will get the same percentage discount off the bill and the percentage itself can be determined by the budget alone.

While a hybrid model, consisting of a fixed discount off the supply (access) charge and a variable percentage-based discount off the usage charge, aims to make access and usage charges more equitable for concession card holders, the outcomes will still vary depending on overall amounts/discounts, the fixed versus variable split and households' consumption levels. Therefore, it may be that the principle of access not costing more than usage is better met using a separate additional concession to protect households with relatively low consumption while the main general electricity concession should be a percentage-based discount off the total bill. This alternative to the hybrid model is further investigated in Section 4.2, which examines a policy option for supporting concession recipients with very low consumption.

3.3 Responsive

A responsive concession scheme is one that adapts to changes in energy price, market or technology development (e.g. uptake of solar PV), seasonal variation, household conditions and circumstances. In practice, responsive energy concessions work both ways – not only does it adjust to deliver adequate assistance to keep pace with increasing energy prices, but it would also self-adjust to ensure that there is not an overallocation of support relative to need. For example, a family of five, eligible for Family Tax Benefit, with inflexible energy usage and large costs may require more support during the life stage of having children living at home, compared to an empty nest.

Future energy markets will require robust and responsive support mechanisms to protect against price shocks (e.g. with jurisdictions such as the ACT transitioning away from gas). This project adds to evidence that current flat rate concession schemes are inequitable and limited in capacity to respond to changes due to price, usage, and technology changes. In the context of the ongoing energy market transformation, concessions reform may have a role in managing the impact of price shocks, particularly for those already experiencing financial disadvantage. relative to need. For example, a family of five, eligible for Family Tax Benefit, with inflexible energy usage and large costs may require more support during the life stage of having children living at home, compared to an empty nest.

The percentage-based concession would "self-correct" support relative to need, as the energy market and technology changes. The hybrid model would self-correct to a lesser extent, by virtue of having a variable component, with the fixed component being less responsive. The percentage-based concession therefore becomes a protective mechanism which can help manage the risks of the energy market transition for those most in need.

This project commenced prior to the full impact of COVID-19, using 2019-20 as the baseline data. Since then, many jurisdictions have provided additional supports and supplements to better assist households struggling with energy affordability. For example, the ACT Government permanently increased the Utilities Concession by $50 to $750 from 1 July 2021, as well as applying an additional one-off $50 increase for the 2021-22 period in response to electricity price

increases.[12] Months later, a further “one-off” $200 rebate for 31,000 eligible households was announced in the 2021-22 budget, resulting in a total concession of $1,000.[13] While the additional support is no doubt welcome by those in the ACT struggling with the impact of COVID-19 (extended lockdowns, lost or forgone income) it is arguable whether this is an efficient targeting of expenditure to those most in need. Indeed, analysis by ACTCOSS suggests that while electricity prices in Canberra have decreased by 2.6 per cent over the 12-month period of 2019-2020, prices are due to rise due to a 12 per cent increase in regulated standing offers.[14]

It could be argued that the need for COVID-19 related supplements illustrates the inability of the fixed rate concession to respond to price increases or adjust support relative to need. This may take away from the reality that “one-off” concessions and rebates announcements are politically popular tools for Governments to demonstrate their commitment to addressing cost of living pressures. Indeed, Victoria, despite having a percentage-based concession, announced a $797 million energy efficiency package in their 2020/21 budget, which included $128 million for a one-off $250 Power Saving Bonus for eligible concession card holders.[15] Crucially, the rest of the energy efficiency package are *stimulus* measures (important in pandemic times and economic downturn), with the added bonus of reducing Victoria’s exposure from their concessions budget. $335 million of the $797 million package is allocated to install energy efficient heating and cooling upgrades for concession and low-income households. The remaining $112 million will go towards energy upgrades of social housing properties. The upgrades to heating and cooling are expected to save between $300 to $900 on energy bills per year, which, if adequately targeted will reduce the proportionate amount the Victorian government would need to spend on concessions.

3.4 Complementary to other supports

While analysis in this project focused only on the main electricity concession in each jurisdiction, the majority of jurisdictions have complex arrangements around additional concessions or rebates intended to provide support in varying circumstances. These include medical heating and cooling concessions, gas energy rebates, and winter energy concessions. Further research may be required to assess how the alternative concession models complement other supports. It may be that an effectively designed main electricity concession negates the need for separate schemes.

For example, the Audit Office of NSW review found that the structure of NSW energy rebates has become increasingly complex over time, without a review of the effectiveness of the overall package of support.[16] Similarly, a SACOSS review of concessions has found that the piecemeal nature of concessions in South Australia has resulted in poor targeting and inconsistencies in support to those in need.[17]

12 ACT Government (2021) Low income households to receive support
13 ACT Government (2021) Additional financial support during lockdown
14 ACTCOSS (2021) 2021 ACT Cost of living report
15 Victoria State Government (2022) Victoria's household energy savings package
16 Audit Office of New South Wales (2017), NSW Auditor-General's Report to Parliament: Energy Rebates for Low Income Households
17 Marks and Ogle (2021) The State of Concessions in South Australia: Poverty Premiums and Barriers to Access, South Australian Council of Social Service

3.5 Sustainable Budgets

A perceived limitation of the percentage and hybrid concession models compared to the fixed subsidy is that it provides less budget certainty for state and territory governments delivering the scheme. In theory, under a fixed rate concession, the maximum scheme costs could be determined by multiplying the number of *eligible* households by the fixed concession amount. To estimate future expenditure, the number of households *claiming* the energy concession in previous years acts as a benchmark for forward expenditure, accounting for CPI and changing uptake of concessions (e.g., by more households becoming eligible or increased awareness).

A cap on the percentage-based concession is modelled in section 4.3 to address concerns around percentage-based concessions creating uncertainty for government budgets and assess the likely impact of accommodating very high levels of consumption under new concession models.

The total cost of the main electricity concession across Australia was an estimated $718 million in 2019/20.[18] As discussed in Section 2 above, there are a range of percentage-based and hybrid scenarios which would result in jurisdictional energy concession budget savings. Any budget savings achieved from redistributing expenditure could be re-invested into increasing the percentage of the overall concession or toward complimentary policies, to mitigate any unintended impacts. This is explored further in Section 4.

Further, state and territory government expenditures could be *reduced* under a percentage-based concession if household energy consumption trends downwards. Unlike the fixed rate concession, implementing a percentage-based concession (and to a lesser extent, the hybrid concession) may motivate governments to pursue complimentary measures to lower household consumption.

Indeed, with the increased uptake of residential solar PV, there has been a decline in residential energy consumption over time. The latest ABS data suggests that residential energy use per household has decreased by 12 per cent in the ten-year period from 2010 to 2020.[19] Increased energy efficiency in household appliances and buildings should, in theory, further decrease residential usage, and in turn, government outlay on energy concessions. Percentage based concessions are, therefore, not only more responsive and equitable, they have the potential to reduce state and territory concessions budgets.

Considering the above, the percentage-based concession model was assessed as the most likely to meet the objectives of the energy concessions.

The remaining analysis for stage 2 of this project will therefore pertain to a percentage-based concession model only. As this decision is also partly informed by resource constraints, there would be merit in further research being conducted on alternative hybrid models.

18 Calculation based on Government and Territory budget and annual reporting data
19 Australian Bureau of Statistics (2021) Energy Account, Australia 2019-20 financial year

4. Policy options for moving to percentage-based concession

4.1 Methodology

When assessing the impact of the alternative concession models in the Stage 1 report, the analysis was based on average consumption levels for each concession type. Following concerns from the Project Reference Group around the limitations of using average consumption for each customer segment, additional consumption bandwidth data was sourced to test variations in customer outcomes according to levels of consumption.

The analysis presented in this section is based on data that shows the proportion of customers within 11 consumption bandwidths ranging from an annual consumption below 1,000 kWh to more than 10,000 kWh in NSW, Queensland (Energex network only) and South Australia. Further, as this analysis examines implications for state governments' concession budgets, customer numbers in the bandwidth data have been re-weighted to reflect the concession recipient numbers reported by the relevant state government agencies for 2019-20.

This section assesses three different policy options (an additional 'service to property concession', capping the concession, and grandfathering) which can assist in mediating any adverse impacts of shifting to a percentage-based concession. The policy options have been developed so they can be implemented either in conjunction, or separately.

4.2 Supporting customers with very low consumption levels

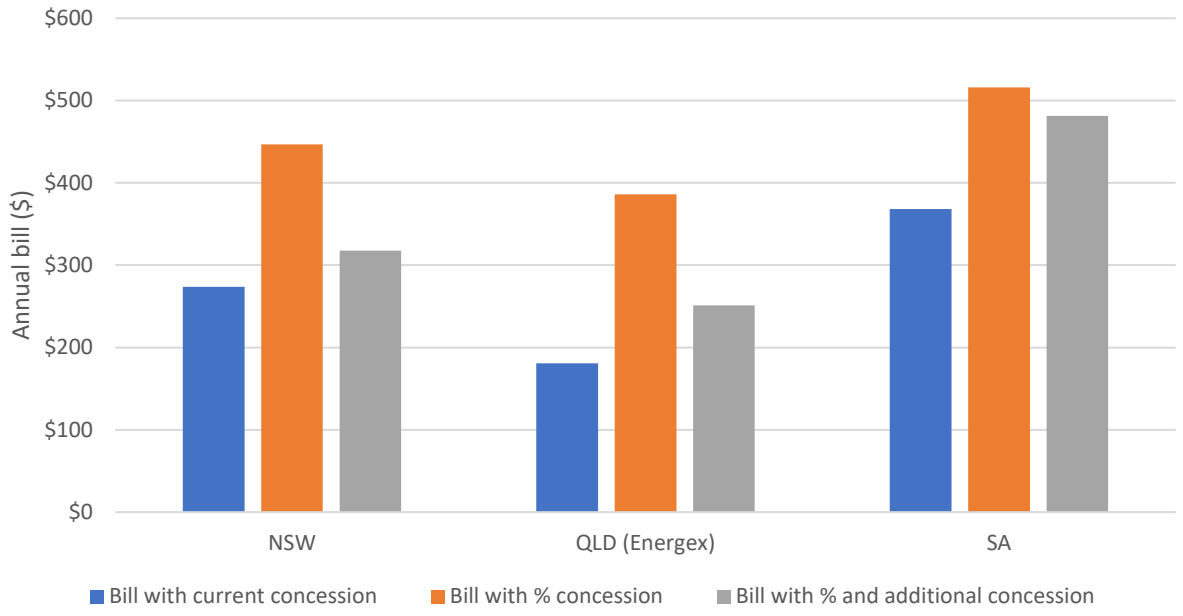
To assist concession card holders with very low consumption in the transition to a percentage-based concession, an additional concession could be introduced to ensure that customers do not pay more in supply charge than they do for electricity usage. The additional concession could draw on examples from jurisdictions like Victoria where there is currently a 'service to property charge concession' that applies to concession recipients with very low usage. If the supply charge component of bills is greater than the usage charge, the supply charge is reduced to the cost of the usage. For solar customers, the concession is based on usage costs prior to any feed-in credits being applied.

Chart 2 below shows annual bills for concession recipients that use 1,000 kWh per annum or less on the current concession, on a percentage-based concession (20% in NSW, 26% in Queensland and 14% in South Australia) and on a percentage-based concession as well as an additional concession. For concession recipients using 1,000 kWh per annum or less, the additional concession reduces the annual bill by approximately $129 for around 20,000 NSW concession recipients compared to a straight 20% concession; by $135 for around 6,900 customers on the Queensland Energex network compared to a straight 26% concession; and by $35 for approximately 7,550 South Australian households compared to a straight 14% concession. The additional concession ensures that customers do not pay more in supply charge than they do for electricity usage. While concession recipients on very low consumption would still be better off on the current concession, the additional concession does reduce the amount customers would be worse off by.

NSW is a jurisdiction where this additional concession would be particularly advantageous for low consumption customers, as the average fixed supply charge is higher in NSW's Essential

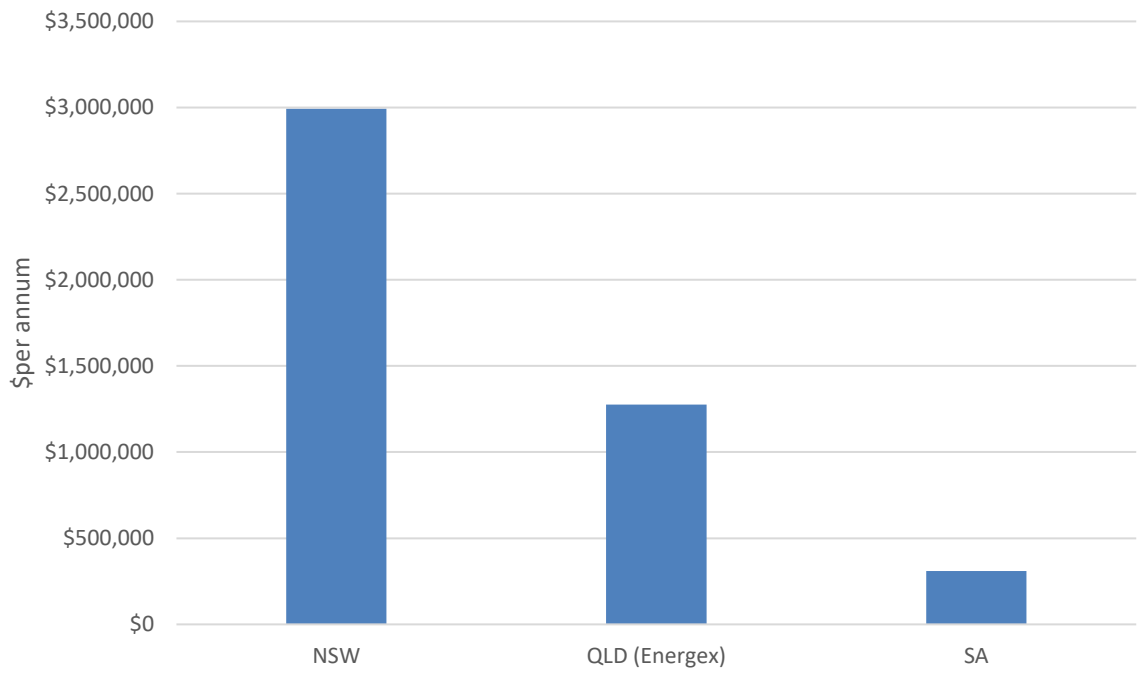
Energy network than in other networks. Customers in the Essential network using between 1,000 and 2,000 kWh per annum would benefit from an additional supply charge concession. We estimate that an additional supply charge concession would reduce the annual bills by approximately $40 for around 20,000 concession recipients using between 1,000 and 2,000 kWh/annum in this network area.

CHART 2 | Annual bills with current concession, percentage concession only (20% in NSW, 26% in Queensland and 14% in south Australia) and percentage-based concession plus additional supply charge concession for customers **using less than 1,000 kWh/annum**



The impact of this additional concession on states' concession budgets would vary due to the average supply charge (greatest in the NSW's Essential network), number of customers with very low consumption levels as well as the overall percentage-based concession applied. In NSW, an additional concession is estimated to cost $2,992,000, in Queensland's Energex network the budget impact would be $1,276,000 and in South Australia, there would be an additional cost of $310,000. See chart 3 below.

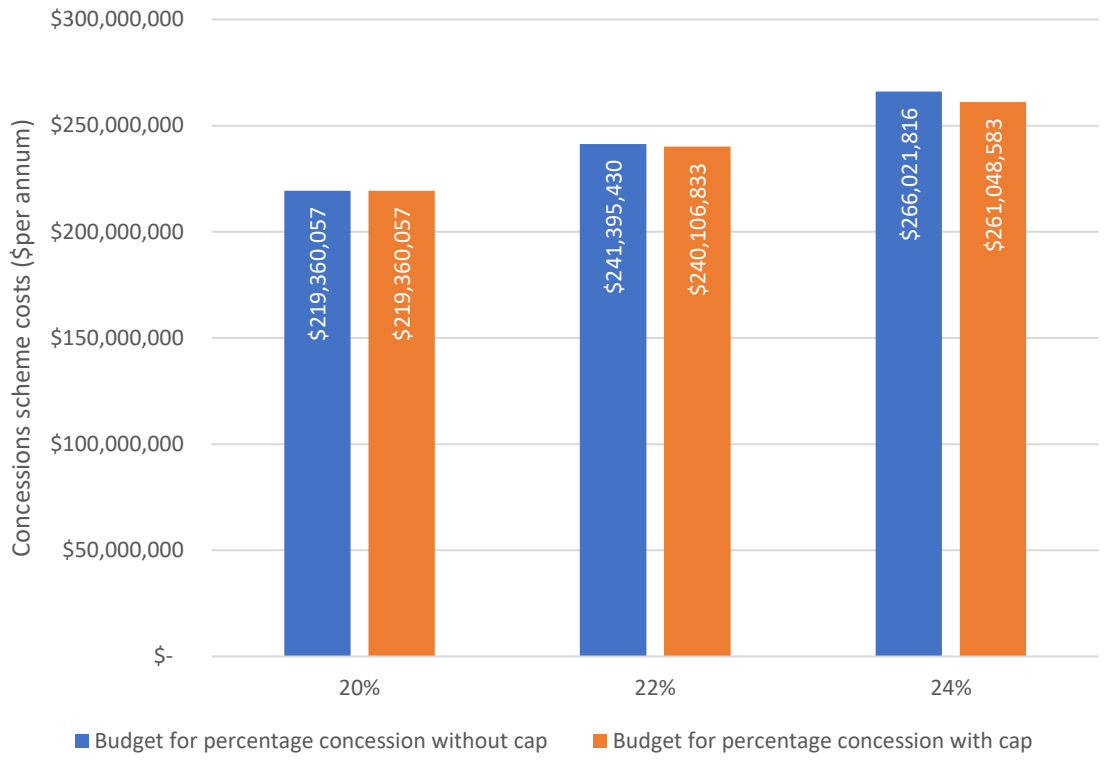
CHART 3 | Estimated jurisdictional concessions budget costs associated with an additional supply charge concession for customers using less than 1,000 kWh per annum



4.3 Applying a cap to the percentage-based concession

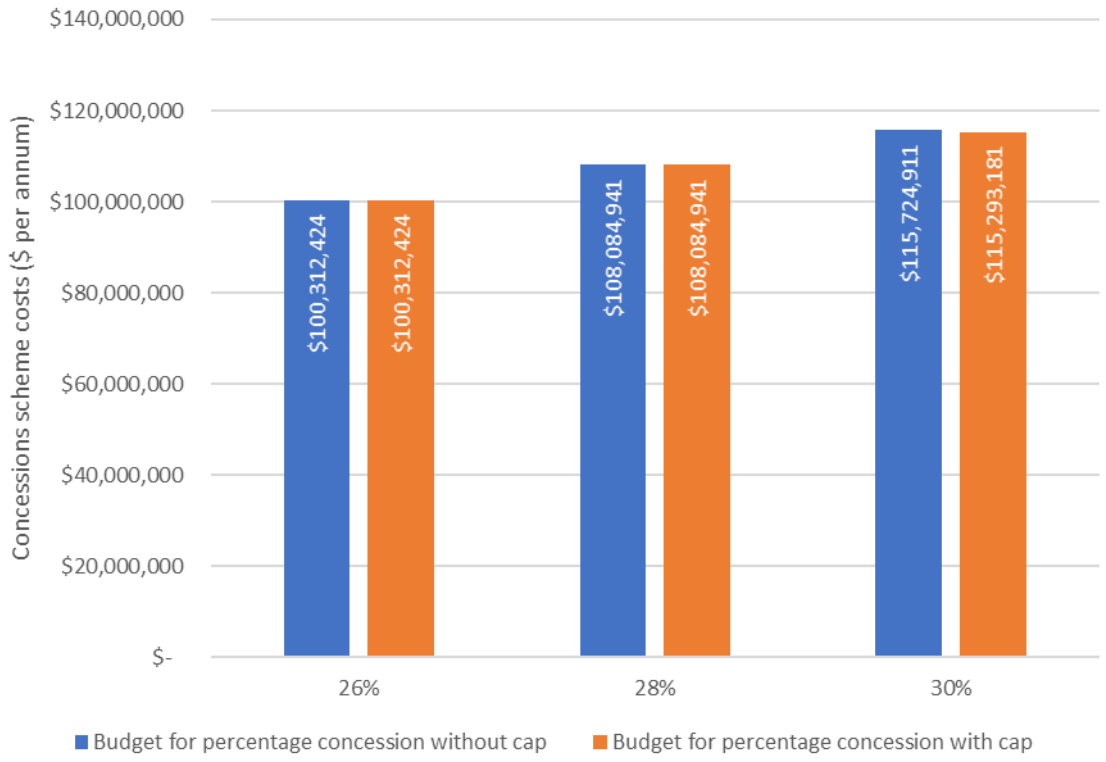
Common arguments against a percentage-based concession are that it does not provide consumers with a strong incentive to reduce consumption or introduce more energy efficient measures, as well as creating uncertainty for government budgets. Placing a maximum cap on the annual concession amount can, however, address these concerns. In this section we have modelled the impact of capping the maximum annual concession amount at twice that of the current fixed amount. The cap would therefore be $570 in NSW, $681.70 in Queensland and $467.20 in South Australia. In NSW, the cap would not impact customers if the percentage concession were 20%. A 22% concession, however, would cap customers with an annual consumption of more than 10,000 kWh while a 24% concession would cap customers using more than 9,000 kWh per annum. If the concession were 24%, we estimate that approximately 80,000 customers would reach the maximum amount and the cap can therefore reduce the annual concession budget by almost $5 million. Chart 4 shows total concession budgets for 20%, 22% and 24% concessions with and without a cap.

CHART 4 | Estimated annual concession budgets for 20%, 22% and 24% concessions with and without a cap in NSW



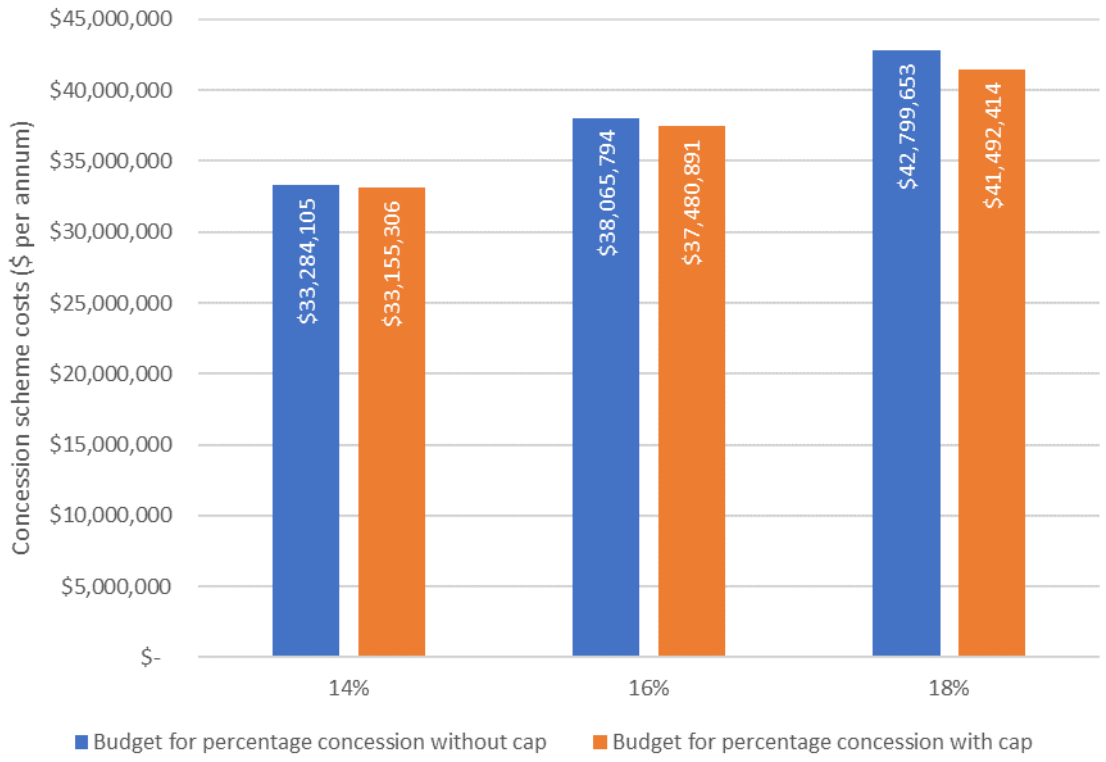
In South-East Queensland (the Energex network), the cap would not impact customers if the percentage concession were 26% or 28%. A 30% concession, however, would cap customers with an annual consumption of more than 10,000 kWh. If the concession were 30%, we estimate that approximately 18,000 customers would reach the maximum amount and the cap can therefore reduce the annual concession budget by around $430,000. Chart 5 shows total concession budgets for 26%, 28% and 30% concessions with and without a cap.

CHART 5 | Estimated concession budgets for 26%, 28% and 30% concessions with and without a cap in Queensland's Energex network



In South Australia, where the current fixed concession is significantly lower, the cap would impact almost 5,000 customers using more than 10,000 kWh per annum if the percentage concession were 14%. A 16% concession would cap customers with an annual consumption of more than 8,000 kWh while a 18% concession would cap customers using more than 7,000 kWh per annum. If the concession were 18%, we estimate that approximately 16,000 customers would reach the maximum amount and the cap can therefore reduce the annual concession budget by approximately $1.3 million. Chart 6 shows total concession budgets for 14%, 16% and 18% concessions with and without a cap.

CHART 6 | Estimated concession budgets for 14%, 16% and 18% concessions with and without a cap in South Australia



4.4 Grandfathering current concession arrangements

Another policy option that jurisdictions may want to consider as part of a shift to percentage-based concessions is the grandfathering of current concession arrangements for existing concession card holders who are less likely to benefit from new concession arrangements. To assess the additional costs associated with grandfathering, a combination of the consumption bandwidth data and the Stage 1 average consumption data (for solar only) were used to estimate the number of concession card holders likely to be grandfathered. Two grandfathering options were tested:

- Option 1: All concession card holders can opt-in to grandfather current concession rates; and
- Option 2: Only non-solar concession card holders can opt-in to grandfather current concession rates

To assess the potential budget implications of these two grandfathering options, the following assumptions were applied:

- All concessions recipients nominally "worse off" under the new concession scenario would want to stay on current concession arrangements (i.e., be grandfathered)
- All concession recipients nominally "better off" under the new concession scenario would want to move to the new concession arrangement
- The State/Territory reported budget expenditures for 2019/20 were used as the

benchmark for current scheme expenditure (to align with Stage 1 modelling)

- Current concession values were used to calculate current costs to grandfather
- The relative value of concession was calculated for each percentage scenario modelled by consumption band. See table 13 below.

TABLE 13 | Grandfathering scenarios modelled

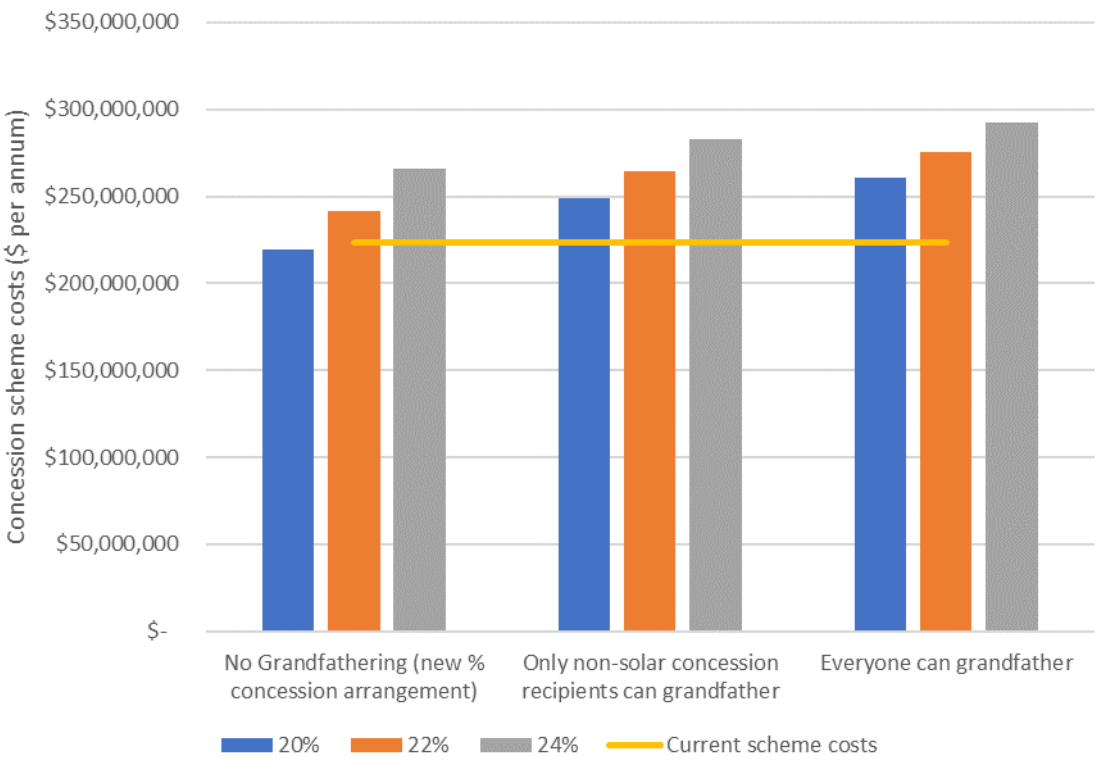
State/Territory	% Scenario Modelled	Concession Value Modelled
NSW	20%, 22%, 24%	$ 285.00
QLD	26%, 28%, 30%	$ 340.85
SA	14%, 16%, 18%	$ 233.60

The budget impact per customer at each percentage scenario was calculated compared to the current concession for each of the different consumption band levels. If the difference to concession budget for the customer segment was negative (i.e., less is being spent on them), the customer numbers in these segments were multiplied by the current concession value. If the difference to concession budget for the customer segment was positive, it was assumed these concession recipients would want to move to the new concession arrangement, with the associated budget cost being the relative value of concession for each of the different consumption band levels.

4.4.1 NSW

In NSW, the cost to deliver the main energy concession in 2019-20 was approximately $224 million. As per Chart 7, the 20% concession results in approximately $4.4 million of budget savings compared to current scheme costs. The costs to grandfather at a 20% concession would be $25 million if non-solar concession recipients could opt-in, and $37 million if all concession recipients are able to grandfather. At a 22% concession, it would cost an additional $40 million if non-solar concession recipients could opt-in, and $59 million to grandfather all concession recipients. At a 24% concession, the additional costs to grandfather non-solar concession recipients would be $59 million, and $69 million if all concession card recipients could opt-in.

CHART 7 | NSW: Total energy concession scheme costs under different grandfathering scenarios

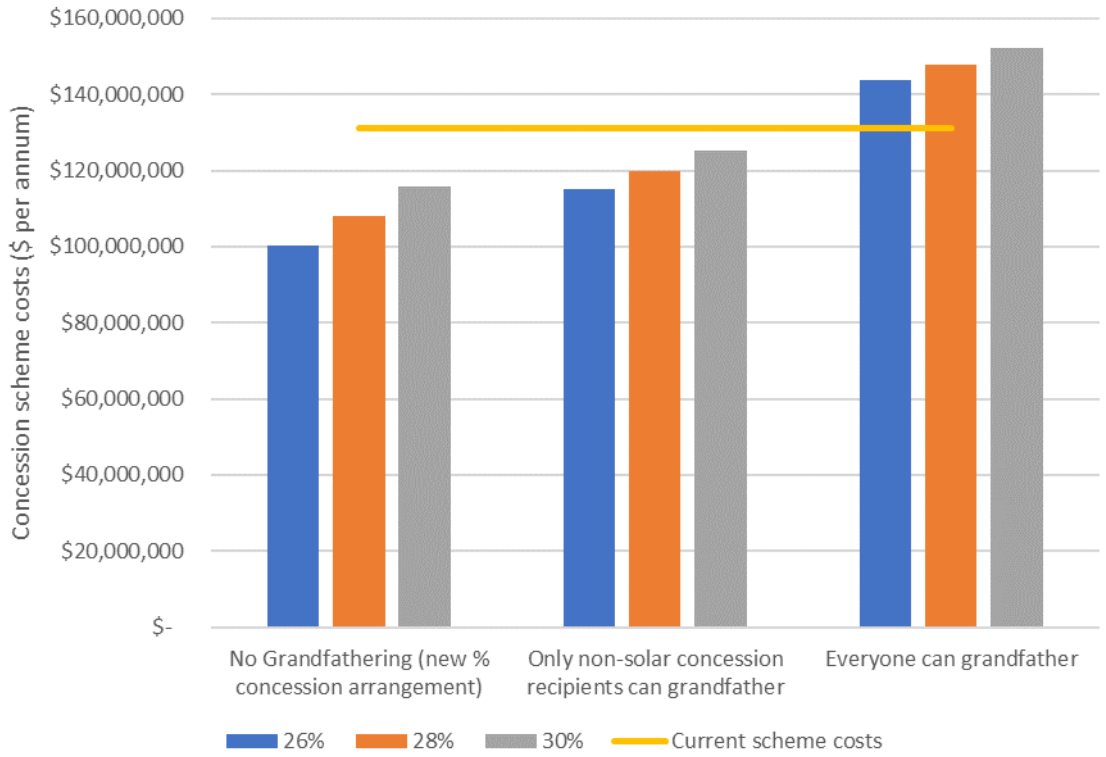


4.4.2 Queensland

In Queensland, the cost to deliver the main energy concession in 2019-20 for residential customers in the Energex network was calculated at $131 million.[20] As per Chart 8, the 26%, 28% and 30% concession results in budget savings of approximately $30.7 million, $22.9 million, and $15.3 million respectively, compared to current scheme costs. A budget saving of approximately $15.8 million would still be achieved at a 26% concession if non-solar concession recipients could opt-in to grandfather. If all concession recipients can opt-in, based on a 26% concession, there would be an additional budget cost of $12.8 million. This reflects the high uptake of rooftop solar amongst concession card holders in South-East Queensland. At a 28% concession, there would be a budget saving of $11.1 million compared to current scheme costs if non-solar concession recipients could opt-in, and an additional budget cost of $16.7 million if all concession recipients could opt-in. At a 30% concession, there would be a budget saving of $5.8 million compared to current scheme costs if non-solar concession recipients could opt-in, and an additional budget cost of $21.3 million if all concession recipients could opt-in.

20 Based on the state reported figures (https://budget.qld.gov.au/files/BP2_Appendix_A_Concessions_Statement.pdf, p. 185) and published network data indicating that approximately 69 per cent of residential customers in Queensland reside in the Energex network (based on Regulatory Information Notices (RIN) data).

CHART 8 | Queensland Total energy concession scheme costs under different grandfathering scenarios

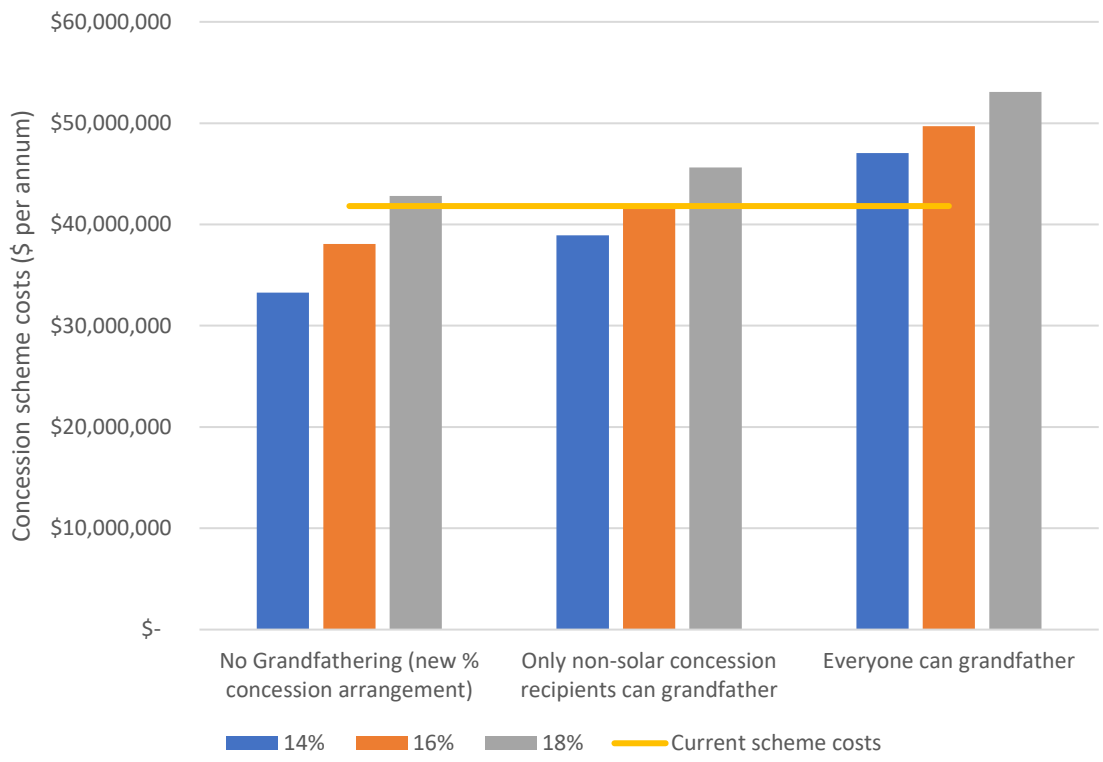


4.4.3 South Australia

In South Australia, the cost to deliver the main energy concession in 2019-20 was approximately $42 million.[21] As per Chart 9, the 14% and 16% concession results in budget savings of approximately $8.5 million and $3.8 million respectively, compared to current scheme costs. A budget saving of approximately $2.9 million would still be achieved at a 14% concession if non-solar concession recipients could opt-in to grandfather. If all concession recipients can opt-in, based on a 14% concession, there would be an additional budget cost of $5.2 million. At a 16% concession, there would be a modest additional cost of $136,560 to current scheme costs if non-solar concession recipients could opt-in, and an additional budget cost of $7.9 million if all concession recipients could opt-in. At a 18% concession, the additional costs to grandfather non-solar concession recipients would be $3.8 million, and $11.3 million if all concession recipients could opt-in.

21 https://dhs.sa.gov.au/__data/assets/pdf_file/0010/107569/Department-of-Human-Services-Annual-Report-2020-21.pdf, p. 13

CHART 9 | South Australia Total energy concession scheme costs under different grandfathering scenarios



Allowing concession recipients to opt-in to grandfather the current arrangements will clearly have implications for the concession budgets. The low consumption households are those less likely to benefit from moving to a percentage-based concession, and are therefore likely to opt-in to grandfather, while higher consumption households, will benefit from a percentage-based concession, and will likely choose to move to the new arrangement. Where the 'cut-off' point sits for choosing to grandfather or shifting to the percentage-based concession, depends on the level at which the concession is set. At lower levels of the percentage-based concession, fewer concession households would be inclined to shift to a percentage-based concession, compared to a higher percentage level, where a greater proportion of concession recipients would be better off.

It is also worth noting that any additional costs associated with grandfathering will be transitional. As people cease being concession recipients, due to changed financial or personal circumstances, and others become concession recipients for the first time, there are likely to be fewer people on the old (current) arrangement over time.