



**Australian  
Gas Networks**

**Attachment 6.6**

## **Revisions to Future of Gas**

**Response to Victorian Gas Substitution Roadmap**

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September 2022

# 1 Revisions to Future of Gas

**We have increased our proposed acceleration of depreciation from \$144 million to \$175 million in response to the greater risks arising from the Gas Substitution Roadmap.**

## 1.1 Overview

This document provides an update to our accelerated depreciation modelling, based on the Victorian Government's recent Gas Substitution Roadmap (GSR), which was released one day after the submission of our Final Plan.

It is important to recall three key aspects of our modelling used in the Final Plan:

- The model uses scenarios. We do not try to predict which of these scenarios is most likely, but rather look to a set of feasible scenarios and the outcomes of different actions in each.
- The model does not find, but rather tests solutions. This is because the scope of uncertainty underpinning the model is too great for optimisation. Instead we take a depreciation proposal and test it in the modelling framework using a combination of assumptions to build each scenario.
- Our scenario modelling is not seeking to model demand or other impacts of the GSR over the next AA period. Demand forecasts are a separate exercise (see Attachment 13.4).

Prior to submitting our Final Plan, we asked stakeholders for their views on our approach to accelerated depreciation and the need to start dealing with the issues underpinning its motivation now. A key theme in responses was a desire to see what direction the GSR might provide. Although the GSR has provided a strong narrative in favour of electrification and outlines some policy initiatives that will have an impact in the next AA period, it is short on detail as to how the outcome the GSR seeks to achieve will occur in practice, particularly in the medium and longer term. The GSR does not supersede the scenarios in our Final Plan, but is rather an additional feasible outcome for our future which we explore in our revisions. Our approach in this paper has been to reshape a potential scenario as envisaged by the GSR, and ascertain whether this would cause us to change our view on the appropriate change to our depreciation schedule.

In summary, the GSR scenario does change our view; the nature of the policies adopted and ongoing policy debate in Victoria which sit behind the GSR certainly does not act to improve our risk profile. Testing higher levels of accelerated depreciation in our model shows that we are still far from any kind of "speed limit" where consumers would suffer in the long run from accelerated depreciation. Based on the work we have done, we have confidence that slightly higher levels would be in the long term interests of consumers. For AGN, our revised proposal is for \$175 million of accelerated depreciation, compared to \$144 million in the Final Plan. This is equivalent to 9% of AGN's RAB, compared to 7% proposed in the Final Plan.

As the analysis below shows, further acceleration of depreciation would be reasonable and in the still long-term interests of consumers. However, our objective of maintaining stable prices for current consumers remains a priority and we recognise the importance of this for customers as the energy sector transitions. Accordingly, our proposal in response to the GSR is to increase accelerated depreciation by a modest amount. This approach takes further small steps towards addressing the risks we and our customers face as we transition to net zero, while balancing the benefit of maintaining stable prices.

We now turn to the detail which led us to this conclusion covering:

- What the GSR actually says that is relevant for our scenarios;
- How we have incorporated the GSR into our scenarios;
- What the results of this process are.

## 1.2 Our Approach

We now turn to the detail of the approach we have followed to develop a “GSR Scenario” to add to the four we considered in our Final Plan, to ascertain whether this new scenario causes us to change the depreciation profiles we put forward in our Final Plan. We cover:

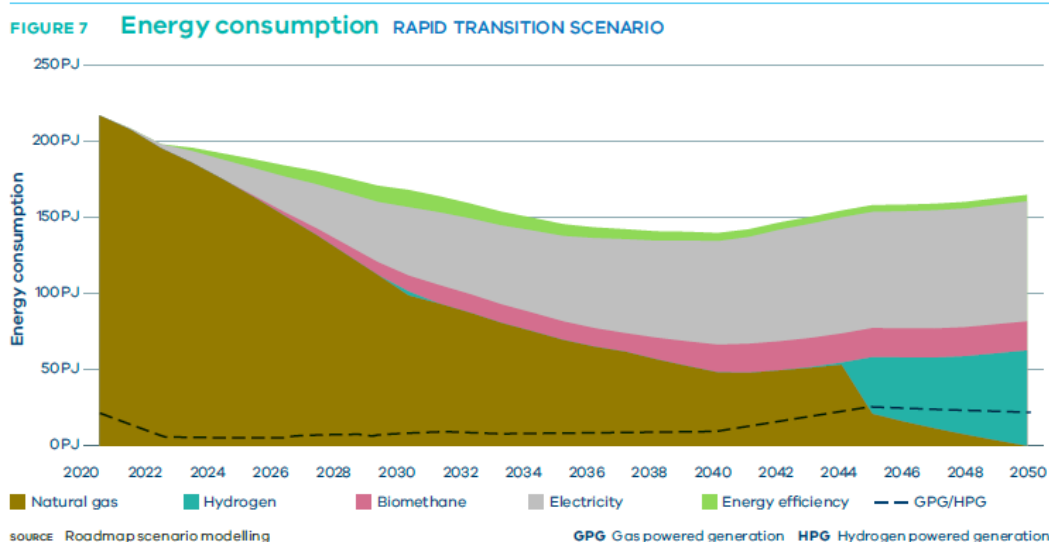
- What we have been able to take from the GSR
- How we have constructed our GSR Scenario using this information.
- The results from applying our existing and some new depreciation proposals within this GSR Scenario.

### 1.2.1 Our understanding of the GSR

The first thing to note in respect of the GSR is that it is very light on detail in respect of modelling demand outcomes, this is particularly important for the consumer choice modelling which underpins our proposal and considers how consumers behave in light of changing prices. In fact, according to the Department of Environment, Land, Water and Planning (DELWP), it is not a consumer choice model at all. We are therefore limited in what we can use to inform our scenario; and do not have the granular assumptions for the scenarios as were developed by the expert panel to derive the scenarios for our Final Plan.<sup>1</sup>

A key basis for our considerations is Figure 1.1 copied from the GSR below.

Figure 1.1: GSR energy consumption from Rapid Transition Scenario



Source: Victorian Gas Substitution Roadmap 2022, p59.

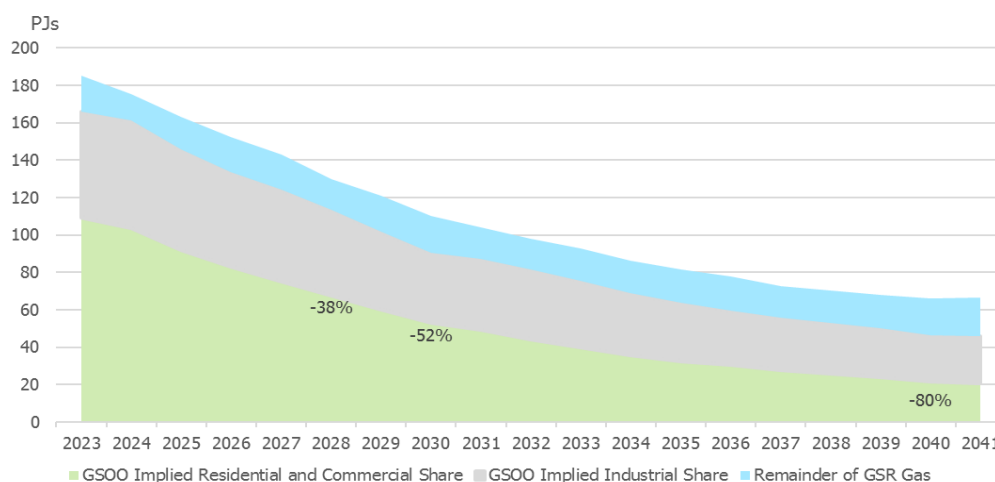
This is the Rapid Transition Scenario which lies between the more extreme GSR scenarios of “Electrified Future” and “Zero Carbon Fuels Future” with the former favouring electric technologies and the latter

<sup>1</sup> See Attachment 6.2 KPMG Expert Panel Future of Gas Report, available [here](#)

favouring hydrogen technologies. The emissions analysis in the GSR also focuses on this scenario. It shows a demand profile which we use for our GSR Scenario.<sup>2</sup>

The GSR modelled scenario demand outcomes do not split use by residential, commercial, and industrial use. The scenarios in our Final Plan focus only on residential and commercial demand,<sup>3</sup> and we take the same approach for our GSR Scenario. Residential and commercial demand is of most interest because most of the regulated revenue relates to those services. We applied the AEMO GSOO step change proportions to the GSR Rapid Transition Scenario and divided it by the three Victorian gas distribution networks to imply long run residential and commercial demand for each network. This is shown in Figure 1.2.

Figure 1.2: GSR GSOO implied residential and commercial demand



The result of this approach is that by 2040 residential and commercial demand reaches 21 PJ of gas which implies 7 PJ per network. We use this as our “benchmark” level of demand towards which we orient our scenario.

Although there is limited detail on how the demand levels shown in Figure 1.1 and Figure 1.2 have been reached in the GSR, it does contain some detail to inform our scenario, namely:

- policy changes affecting gas connections; and
- subsidies/rebates incentivising electrification.<sup>4</sup>

We discuss these two elements below.

### Policy changes affecting gas connections

Proposed policy change in the GSR that challenges gas connections include changes beginning in 2022 to the National Construction Code (NCC) and/or Victorian Building Regulations, amendments to Victoria Planning Provisions and electrification of new public housing and existing social housing.

The 2022 changes to the NCC include a proposal to increase the new home efficiency standard to 7 stars including using a whole of home assessment that will now include fixed appliances and solar panels in the

<sup>2</sup> We have compared the GSR demand profile with the GSOO Business as Usual gas demand scenario. In so doing, we note that there is a large amount of gas demand, reaching some 134 PJ by 2040 which cannot be accounted for by electrification, biomethane, energy efficiency or hydrogen. We do not know where this gas demand has gone; it may be accounted for by household self-generation of electricity

<sup>3</sup> See Attachment 6.1 Future of Gas – Our approach to accelerated depreciation, available [here](#)

<sup>4</sup> A separate report, issued as part of the GSR, provides details on appliance costs which have informed GSR modelling. On a like for like basis (that is, same sized homes etc), these do not appear inconsistent with the data we have used.

rating process and, importantly, considers household energy consumption as well as physical construction in the standards.

The proposal has now been agreed by Building Ministers and will enter into force on 1 October 2023.<sup>5</sup> The changes to the NCC need to be enacted through the Victorian building regulations, which is very likely to occur.<sup>6</sup>

As discussed in detail in the Demand Attachment (See Attachment 13.4) the adoption of the 7-star rating will likely have the highest impact of all the policies proposed in the GSR due to the requirement for new houses that install gas appliances to offset the emissions associated with those appliances by either increased energy efficiency, investing in rooftop solar to provide lower emission electricity, or further improvements to the building fabric itself.<sup>7</sup>

Other lower impact policy measures affecting connections include the realignment of 2018 Plumbing Regulations to aid electrification of hot water, amendments to Victoria Planning Provisions to remove the effective mandate to connect gas and electrification of new public housing and existing social housing.

### Subsidies and Rebates

The GSR reiterates the commitment of \$1.3 billion to the 10-year Solar Homes program introduced in 2018, the \$1.6 billion committed in 2020 to Victoria's clean energy future more generally and the 2021 \$335 million 4-year Heating and Cooling Upgrades program introduced in 2021.

However, there will be increased commitment to further incentivise electrification and to remove rebates for gas appliances by 2023. These initiatives in the GSR are still under development. However we identify an additional \$331 million committed to reduce emissions, secure Victoria's energy grid and drive down energy prices' and VEU rebates favouring electrical over gas water and space heating from late 2023.

### 1.2.2 How we created the GSR Scenario

The GSR does not contain sufficient detail to build a scenario in the same way we did using the expert panel process supporting the Final Plan.<sup>8</sup> We have therefore undertaken the following steps to develop a GSR Scenario:

- first, using an existing scenario from those in our Final Plan which is most consistent with the narrative of the GSR;
- then we adjusted some of the parameters in this scenario to pick up differences between it and the GSR that we could identify within the GSR; and
- finally, we implemented the connections and subsidies policies outlined above.

When we did this, however, we found that the level of demand, particularly at our target date of 2040, had not fallen as rapidly as shown in Figure 1.1 and Figure 1.2. We therefore looked at levers within our modelling that could be adjusted to bring demand more in line with the results shown in the GSR, and which are not inconsistent with the overall GSR narrative.

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<sup>5</sup> *Building Ministers' Meeting: Communique August 2022* <https://www.industry.gov.au/news/building-ministers-meeting-communique-august-2022>

<sup>6</sup> See p4 [here](#)

<sup>7</sup> We note that electrification at the speed envisaged by the GSR would require significant increases in electricity produced by brown coal, and that a household electrifying today would in fact produce more emissions than if it remained on gas until hydrogen is feasible. This [report](#) summarises some of the relevant issues.

<sup>8</sup> See Attachment 6.2 KPMG Expert Panel Future of Gas Report, available [here](#)

### Choosing and modifying the scenario

All three modelled GSR scenarios, including the Zero Carbon Fuels Future Scenario, involve considerable Electrification of gas demand.

The GSR highlights that efficiency and electrification can also free up gas for industrial and other users that cannot be readily electrified and provide time to develop and scale up industries that supply renewable gas and hydrogen (see page 6 of the GSR).

Hydrogen and renewable gases are not talked about in the context of residential supply, but instead are discussed as an important option for business, industry, power generation and export markets on page 13, 36, 37 and 38. These statements in the GSR imply a scenario where renewable gas and hydrogen will not be blended or supplied for residential and commercial and instead electrification is favoured.<sup>9</sup>

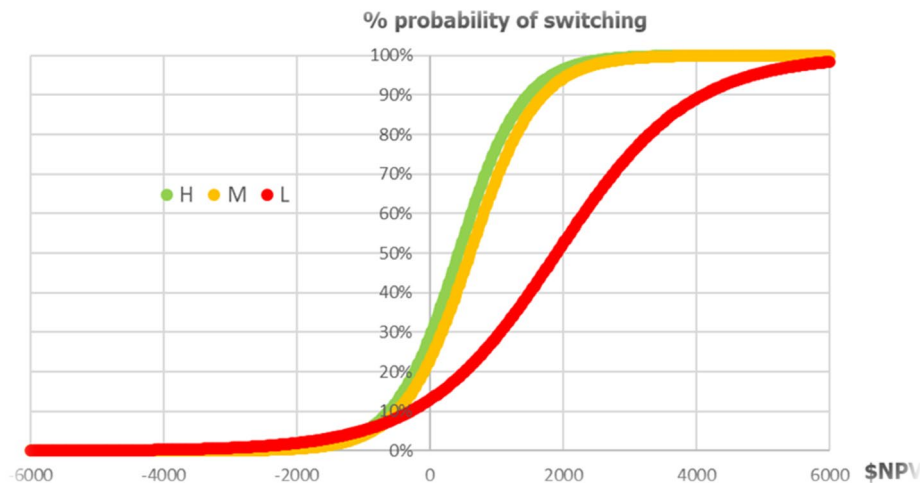
Generally, this aligns best with our Electric Dreams scenario, so we have used this as the basis for our GSR Scenario. However, we are not clear whether the GSR modelling has used electricity and gas prices (for example) that are like those which underpin our Electric Dreams scenario, as DELWP has not released details of the modelling.

The GSR does, however, provide some information about consumer preferences, noting:<sup>10</sup>

*Consumer survey results suggest that – combined with complex or inadequate information – inertia, and preferences for selected features of gas appliances, may prevent investment in electric appliances, even though they can be more efficient and have lower running costs.*

This suggests that the S curve (summarising non-economic consumer preferences between electricity and gas, see) we used in our Electric Dreams scenario, shown in green in Figure 1.3 is too extreme and instead used the medium curve shown in yellow.<sup>11</sup>

Figure 1.3: Future of gas model S-curves



### Implementing gas connections related policy

As mentioned, the effect of gas related policy is difficult to quantify; it is not a ban on new gas appliances or connections per se, but is rather a mechanism which will increase their effective price for consumers.

<sup>9</sup> However, we note that a renewable gas target is to be considered by government in 2023.

<sup>10</sup> Victorian State Government, 2022, Gas Substitution Roadmap, available [here](#), p27

<sup>11</sup> See Attachment 6.1 Future of Gas – Our approach to accelerated depreciation, available [here](#) for more detail on these S-curves and their construction.

We do not have a precedent for how consumers will respond to this (nor how it will be implemented in practice).

For example, the impacts of the 7-star efficiency standards are challenging to model. Our model does not treat new houses differently to existing ones, which would be needed for a full treatment of this policy change, and making this scale of change to the model is not feasible within the timeframe we have to revise our Final Plan in response to the GSR.<sup>12</sup>

What the model does have, however is an assumption “background” (that is, before the economics of consumer choice which our model uses) new connection growth. At present, this is set to two percent, based on historical growth. We do not know whether 7-star efficiency standards will mean that no new home will ever have gas again, or whether it will simply be lower. To address this we use sensitivity analysis, assuming background new connection growth of zero, one and two percent. We have discussed this approach with the AER’s modelling team.

Note that what we are effectively doing is putting the new policy of 7-star homes, and other connection related policy, into the background, so something that is considered outside of the model. Therefore, if the background growth rate with the 7-star efficiency standards is 1%, this means that, *before* consideration of the relative economics of gas and electric appliances (which sits at the heart of our model), the requirements of a new home builder associated with meeting the 7-star standard with gas appliances are so onerous that new connection growth would be only 1% of the existing base, as compared to 2% historically.

This sensitivity analysis is used in the GSR scenario to replace the 2030 connections moratorium implemented under Electric Dreams.

### **Implementing subsidies and rebates**

The largest pre-existing program is the \$1.3 billion Solar Homes program introduced in 2018. Only 60,000 of the 778,500 of rebates (8 per cent) available under the program apply to electrifying household appliances, specifically hot water, with the remaining rebates going to solar panel and battery installations. The maximum rebate available is \$1000 and assumes 8 per cent of the 200,000 rebates that have been taken up since 2018 are hot water rebates, 44,586 rebates remain.

The initiatives outlined in the latest state budget are largely aimed at reducing energy prices generally. The only initiative directly applicable to appliances appears to be \$42 million allocated to the Solar Homes program. Assuming 8 per cent of this, again, is allocated to hot-water and a maximum of \$1000, this implies 3,252 additional rebates or 542 rebates per year for the remaining 6 years of the program.

Since the VEU program is in the process of change we can only implement currently available subsidies in the modelling,<sup>13</sup> the maximum of which is a \$240 rebate to replace an inefficient gas room heater with reverse cycle air-conditioning. VEU targets have been set out to 2025 so we assume no subsidies are currently planned for beyond that date.

The home heating and cooling upgrades program was introduced in June 2021. Assuming the \$335 million is evenly allocated across the 250,000 rebates gives an average rebate of \$1,340 and assuming the rebates are evenly taken up over the 4 years of the program gives 62,500 rebates per year. Table 1.1 summarises the number, size of the subsidies and the years remaining under the programs.

<sup>12</sup> We, in fact, implicitly assume that all houses are like existing houses in terms of the economics of the decision to change an appliance. This simplification is appropriate as these are where almost all of our demand lies.

<sup>13</sup> For this scenario modelling; the demand forecasts discussed at Attachment 13.4 seek to assess the impact of the amended program.

Table 1.1: Victorian electrical appliance subsidies/rebates

<b>Programs</b>	
<i>Solar Homes</i>	
Budget	\$ 1,300,000,000
Number of Rebates	778,500
Solar hot water	60,000
Per cent of rebates allocated to hot water	8%
Rebate 50% or max of \$1000	\$1,000
Implied hot water rebates left	44,586
Years Remaining	6
Implied rebates per year remaining	7,973
<i>2022-23 State Budget</i>	
GSR Claimed budget	331,000,000
Solar Homes	\$42,200,000
Implied rebates per year remaining	542
<i>VEU</i>	
VEU max of \$240 to replace a room heater	\$240
Targets set out to 2025	2025
Years remaining	3
<i>Home Heating and Cooling Upgrades</i>	
Budget	\$335,000,000
Number of Rebates	250,000
Average Rebate	\$1,340
Years remaining	2
Implied rebates per year remaining	62,500

We convert the information in Table 1.1 into a percentage profile on the relevant appliances in the future of gas model which applies from 2023 to 2028. Thereafter it is assumed that appliances revert to their unsubsidised levels, which have been declining at 0.5 per cent per year between 2023 and 2028 and continue to do so thereafter.

The Victorian GSR was accompanied by an electric homes cost assessment report undertaken by GHD. The installed appliance cost ranges in the GHD report are not inconsistent with the underlying appliance costs we used in the future of gas model based on Frontier’s report for the Gas Appliance Manufacturers Association of Australia (GAMAA). For this we have kept the same appliance costs.

**Dealing with the ‘gap’**

As noted above, subsidies and connections policy alone does not allow us to reach the demand levels shown in the GSR, so we look to other levers in our model to see what we might change in order to reach these levels of demand. Of these, wholesale gas prices appears to us to be the most appropriate lever to pull. We therefore increase in gas prices above those in Electric Dreams, modifying the model so that the price profile could be ‘tilted’ upward.

The GSR itself provides some evidence to support an expectation of higher gas prices. For example, page 4, which outlines:

- domestic and international events leading to unprecedented price impacts on both gas and electricity prices and expresses concern that price volatility may continue; and
- of shortcomings in current federal government policy which are linked back to the idea of protecting Victorians from high wholesale gas prices.



The roadmap expresses a generalised opinion that many Victorians still believe gas is a cheaper energy source than electricity and that this 'used to be the case, but for too long now gas prices have been rising steadily around the world' (page 6).

The low electricity prices match the GSR narrative which states that with rising energy prices, the savings from electrification increase because a fully electrified household is no longer exposed to rising gas bills and addresses high electricity prices with accelerated investment in low-cost renewable electricity generation (page 6).

We note that we do not know that the Victorian Government has used higher gas prices in its modelling for the GSR, nor do we know what price pressure it may or may not be intending to expose residential and small commercial gas customers to. However, it is relatively easy to implement in the model and is not inconsistent with the GSR narrative (see above).

### 1.2.3 The results of our approach

We now turn to the results of our modelling of the GSR Scenario. Since, as noted above, connections policy and subsidies alone do not in our model achieve the demand levels shown in the GSR, we have increased wholesale gas prices to approach the GSR demand levels. Since this is an assumption we have made, we split our discussion of our modelling into two parts, so that readers can see, separately, the effects of what we have been able to ascertain from the GSR and the effects of assumptions we have had to make to develop this scenario. That is, we look at two different sets of results:

- connections policy plus subsidies; and
- connections policy plus subsidies plus higher wholesale gas prices.

Whilst these results give us a basis to consider our accelerated depreciation proposal in response to the GSR, these approaches still do not quite reach the demand levels assumed in the GSR circa 2040.

Note that we do not, as noted above, use our modelling framework to discover the optimal depreciation profile. Rather we use the modelling framework to test different depreciation proposals, and ascertain the impacts they have. In particular, we test accelerated depreciation of \$175 million for AGN, compared to \$144 million in our Final Plan. This would cause our prices to decrease slightly, which is consistent with our goal of price stability from one AA to the next and which is also consistent with guidance from the AER about changes to depreciation and their impact on current consumer prices.<sup>14</sup>

Note finally that we have developed a new way to show our results graphically.<sup>15</sup> We show the results of a large range of accelerated depreciation proposals on variables of interest, being gas volumes (by which we mean methane now and hydrogen when it becomes viable) to proxy consumer welfare and unrecovered assets to proxy the interest of investors. We then superimpose particular depreciation proposals as vertical lines on the graph, which allows stakeholders to see our proposals in the context of what maximises consumer welfare in the long run or minimises investor risk.

The figures below represent this new way of presenting the information just in the context of the GSR scenario; each scenario will produce different curves. When we respond to the AER's draft decision, we expect to make wider use of this means of presenting information to aid stakeholder understanding.

#### Subsidies and Gas Connection Related Policy

The results for residential and commercial demand at 2040 are shown in Table 1.2.

<sup>14</sup> See AER 2021, *Regulating Gas Pipelines under Uncertainty*, November 2021, available [here](#).

<sup>15</sup> Note that there is no change at all to the modelling, just in how we present results.

Table 1.2: Future of gas model results – subsidies and connection policy sensitivity analysis

New Connections Growth	Compromised Asset Date	Residential and Commercial Demand (PJ) at 2040
0 per cent	2052	24
1 per cent	2054	27
2 per cent	2062	29

Even under zero per cent new connection growth residential and commercial demand is 24 PJ per annum. This is much higher than the 7 PJ per annum inferred from the GSR Rapid Transition scenario (see further above). This is why we include additional analysis with higher gas prices below.

The impacts of our accelerated depreciation proposal on consumer welfare over the whole life of our asset in the context of just connections and subsidies are shown in Figure 1.4. Note that this illustrates clearly the long run interests of consumers, because it captures volumes (and hence welfare; consumers want to consume our product) over the whole life of our asset, rather than just considering the impacts on consumers now, or consumers in the future.<sup>16</sup> This is one reason why we believe this new graphical representation is useful for stakeholders.

Figure 1.4: Future of gas model consumer welfare results – volumes of gas sold versus accelerated depreciation

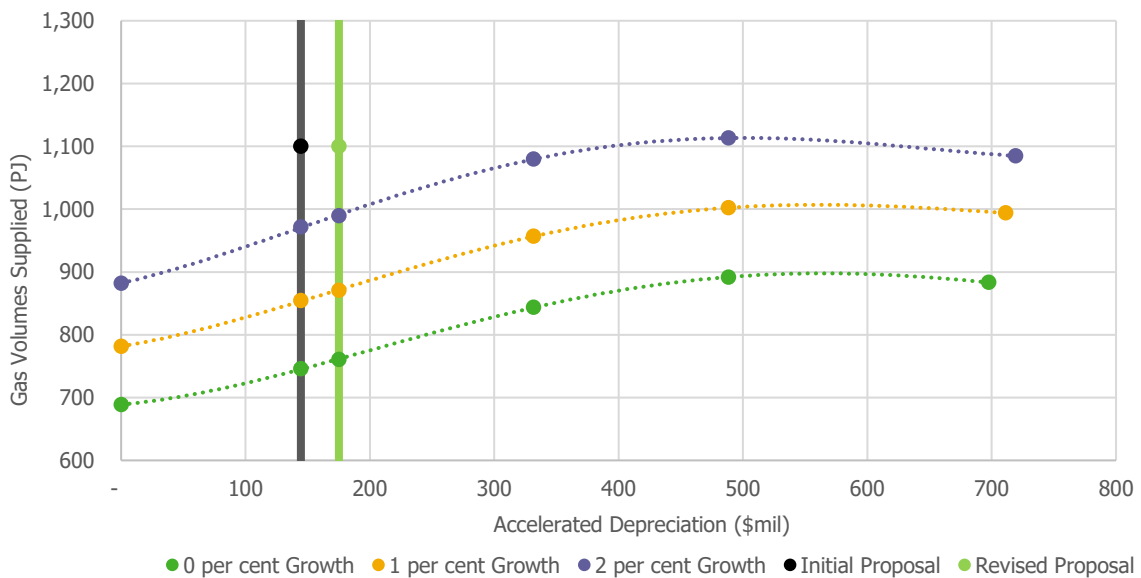


Figure 1.4 shows that increasing accelerated depreciation from \$144 million (black line) in our Final Plan to \$175 million (green line) in this revised proposal increases consumer welfare in terms of volumes of gas (methane now and hydrogen when viable) sold regardless of connections growth being associated with the green (zero percent) orange (one percent) or purple (2 percent) level.

This happens because accelerated depreciation increases prices now, but decreases them later, which means we are sustainable as a business for our customers for longer. The effect of staying in business longer is greater than the reduced volumes of gas sold today; in economic terms we shift our recovery of fixed costs from more to less elastic consumers, increasing volumes sold. Eventually, the gains from staying in business longer no longer outweigh current lost volumes and the curve begins to flatten. Here

<sup>16</sup> This concept of consumer welfare is discussed in much more detail in an expert report provided with our Final Plan See Attachment 6.4 Incenta Expert Report – Assessment of Compliance with the Requirements for Regulatory Depreciation available [here](#).

this happens at about \$450 million in accelerated depreciation, which represents the consumer welfare speed limit” in this GSR Scenario. Note that the curve stops at about \$700 million in accelerated depreciation because, at this level, the price limit we have imposed on our model of 1.7 times current prices is breached and the model consider that the network shuts down at this point.<sup>17</sup>

Having examined the consumer perspective, we now turn to the investor perspective in Figure 1.5.

Figure 1.5: Future of gas model investor benefit results – unrecovered asset versus accelerated depreciation

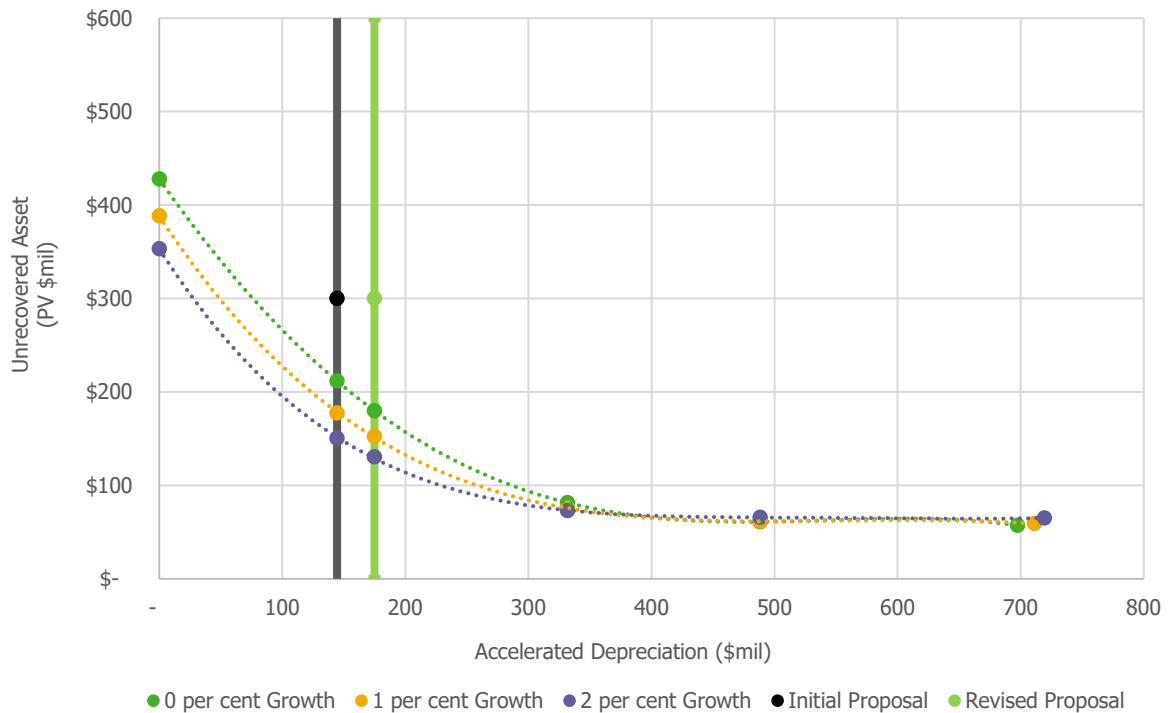


Figure 1.5 shows that the same increase in accelerated depreciation reduces unrecovered asset from \$150-200 million to around \$125-175 million. Increasing accelerated depreciation beyond \$300 million does little to reduce risk to our investors of asset stranding. Here the “speed limit” for our investors is lower than it is for consumers, which suggests that consumers, considering the whole life of the asset, would prefer more accelerated depreciation than investors. This is driven largely by the interests of future consumers, who otherwise lose the opportunity to consume what will then be hydrogen or other renewable gases.

Note also that increasing depreciation beyond \$750 million in the next AA period would cause prices to breach the 1.7 times current prices limit. This is why the curves finish at \$700 million in additional depreciation.

**Subsidies, gas connections related policy and higher gas prices**

Gas prices here are increased above those in the Final Plan and added to the subsidies and connection policy sensitivity analysis outlined above. The results for residential and commercial demand at 2040 are shown in Table 1.3.

<sup>17</sup> See Attachment 6.1 Future of Gas – Our approach to accelerated depreciation, available [here](#) for more detail on the operation and justification of this pricing constraint.

Table 1.3: Future of Gas Model Results – Subsidies, Connection Policy Sensitivity Analysis and Accelerated Gas Prices

New Connections Growth	Compromised Asset Date	Residential and Commercial Demand (PJ) at 2040
0 per cent	2041	15
1 per cent	2041	15
2 per cent	2041	15

The future of gas model could not produce residential and commercial demand below 15 PJ for AGN without hitting the 1.7 times tariff threshold at which point business ceases. Even so, the gas price increases we have imposed are particularly bullish, and a reduction in demand from current levels to 15PJ/a is not all that different from a reduction to 7PJ/a; certainly from the perspective of understanding, with the limited information we have now, whether we have come close to our ‘speed limits’ in terms of increasing accelerated depreciation. This is why we feel comfortable using this analysis to inform our decisions, rather than seeking to replicate the GSR outcomes exactly.

We turn first to the consumer perspective under this scenario.

Figure 1.6: Future of gas model consumer welfare results with higher gas prices – volumes of gas sold vs accelerated depreciation

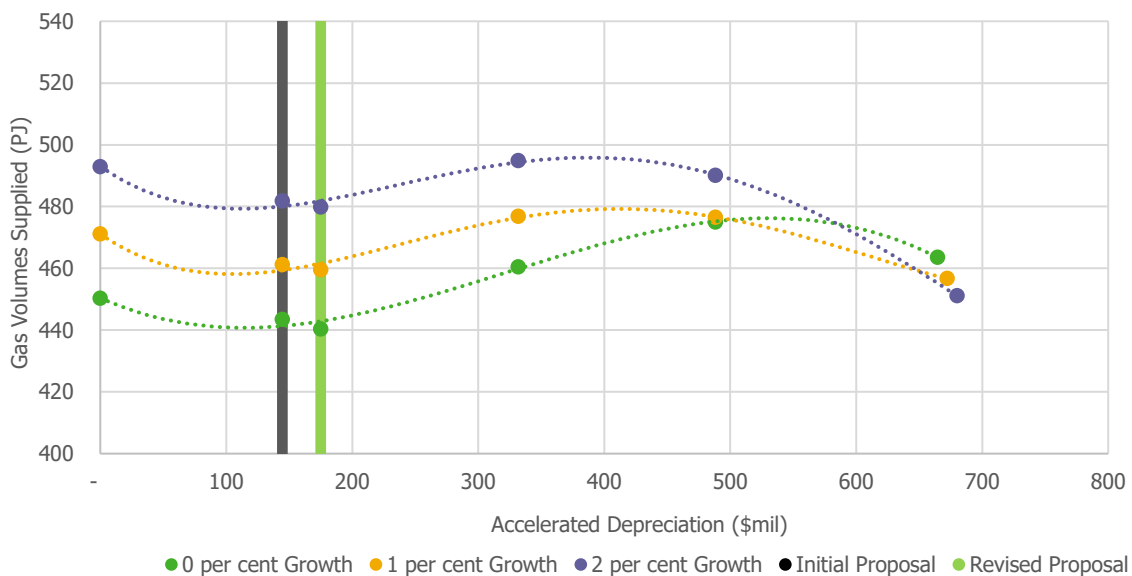


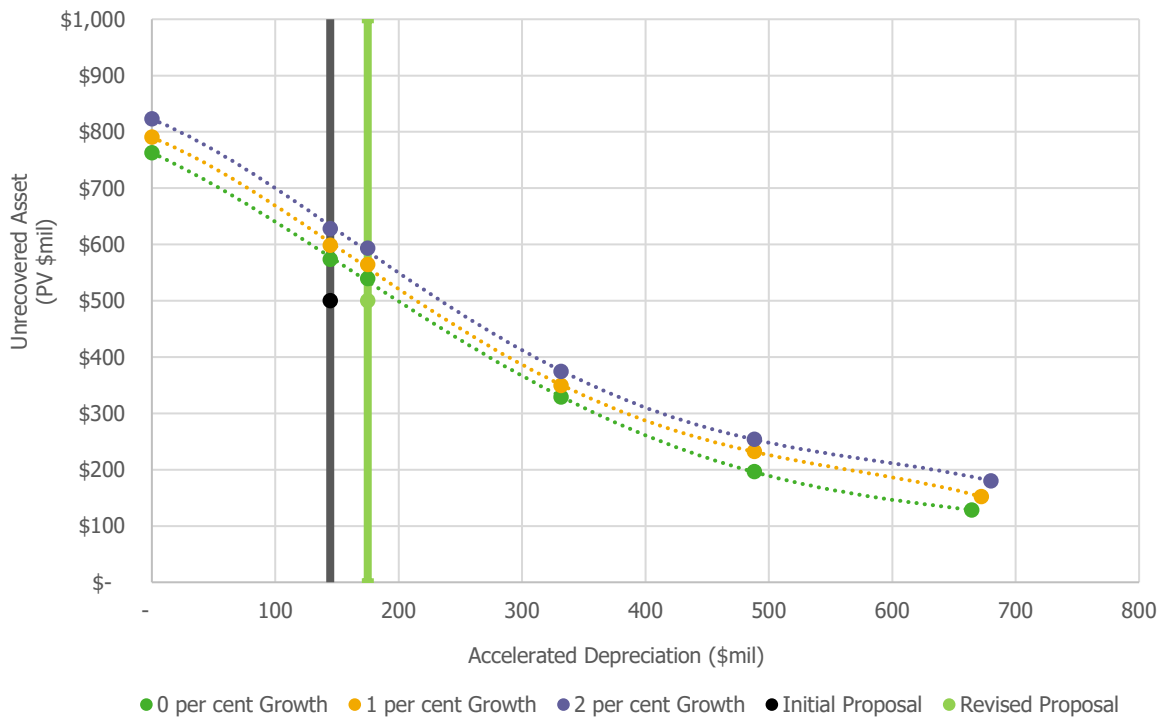
Figure 1.6 shows that when a higher gas price trajectory is introduced, additional depreciation smaller than \$144 million decreases consumer welfare slightly compared to doing nothing.<sup>18</sup> This is because under the high gas price trajectory these lower levels of depreciation do not extend the life of the business, but it does reduce gas volumes today, meaning that, over the long term, consumers are not better off. However, this result changes with more accelerated depreciation; increasing accelerated depreciation above \$144 million begin to increase business life under all three connection growth assumptions, and our revised proposal creates more consumer welfare than our Final Plan did.

The increase in business life more than offsets the fall in volume per connection, thus resulting in higher consumer welfare. This is an important consideration from the perspective of the long run interests of consumers; a finding that a given level of accelerated depreciation does not improve consumer welfare

<sup>18</sup> In our Final Plan, this also happens in the Electric Dreams scenario, see Attachment 6.1 Future of Gas – Our approach to accelerated depreciation, available [here](#) for more detail.

does not necessarily mean that one should therefore always look to smaller amounts of accelerated depreciation.

Figure 1.7: Future of gas model investor benefit results with higher gas prices – unrecovered asset vs accelerated depreciation



Under a higher gas price trajectory Figure 1.7 shows that accelerated depreciation beyond \$400 million continues to materially reduce unrecovered asset under all three new connection growth assumptions. In fact, if gas prices were rising this rapidly, and demand was as the model predicts, it would make sense for us to increase our accelerated depreciation to the maximum shown here, and recover our assets as quickly as the 1.7 times price constraint would allow.

### 1.3 Summary

When we attempt to produce a scenario which replicates, as best we can, the GSR demand outcomes, we find that increases in accelerated depreciation significantly above those we proposed in our Final Plan are still viable, with amounts less than \$400 million still not welfare reducing for consumers.

However, whilst the narrative in the GSR certainly gives us reason to believe our risk profile has increased and we should increase our depreciation in response, moving right up to this “speed limit” is likely untenable for existing consumers, and we maintain that price stability during the transition of the energy sector is an important objective.<sup>19</sup> For this reason we have proposed an increase in our accelerated depreciation from \$144 million to \$175 million.

We believe this represents a prudent balancing of risks for the interests of current consumers against our investors (who still face significant stranding risk if scenarios like our GSR Scenario come to pass), and both of these against the interests of future consumers.

<sup>19</sup> A \$500 million accelerated depreciation proposal would increase network charges by 40 percent and overall gas bills by roughly 10 percent.