



Future of NABERS Energy (FoNE) **Consultation Paper**

NABERS is administered by the NSW Department of Planning, Industry and Environment

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Contents

Contents	1
1 Introduction	2
2 Update to emissions factors used in NABERS	3
2.1 How NABERS uses emission factors	3
2.2 Why an update is necessary.....	3
2.3 Updates to the emissions factors	4
2.4 Proposed implementation plan for changes	8
3 NABERS Net Zero Emissions	10
3.1 Background.....	10
3.2 NABERS’ proposed changes	10
3.3 Inclusion of a minimum NABERS Energy rating requirement.....	12
3.4 How does this differ to Climate Active Carbon Neutral certification?	12
4 NABERS Energy with GreenPower	15
4.1 General.....	15
4.2 Option 1: Retain NABERS Energy with GreenPower (preferred)	15
4.3 Option 2: Remove the NABERS Energy with GreenPower rating.....	16
4.4 NABERS’ proposed changes	17
5 Market-based carbon accounting	18
5.1 General.....	18
5.2 NABERS’ proposed change.....	18
6 Renewable energy purchasing	20
6.1 General.....	20
6.2 Renewable Energy Sources	20
6.3 LGC verification and audit process	21
Appendix A – Impact on ratings when updating the NGA factors	22

1 Introduction

Over the past decade, the property and energy markets have gone through several transformations, such as the decarbonisation of the grid, the increase in Power Purchase Agreements (PPA) and the rise in net zero emissions targets. The Future of NABERS Energy project seeks to adapt NABERS Energy to these trends.

In their enquiry about the effects of these developments, the NABERS team has considered the following questions:

- a) How can the National Greenhouse Accounts (NGA) factors used in NABERS ratings be updated in response to the decarbonisation of the electricity grid?
- b) How can NABERS provide recognition for energy efficient buildings running on 100 % renewable energy?
- c) How can NABERS further encourage and recognise increased purchasing of renewable energy?
- d) How can the NABERS Energy with GreenPower tool align to the [Greenhouse Gas Protocol's](#) market-based carbon accounting¹ method?

This consultation paper seeks feedback from stakeholders on several proposals that address these key questions. To help inform feedback, NABERS would like to remind stakeholders of the purpose of the NABERS Energy rating system:

- 1) Measure the energy efficiency and environmental impact of buildings.
- 2) Reward energy efficiency and low environmental impact.
- 3) Encourage a transition to net zero buildings and the procurement of renewable energy.
- 4) Be technology neutral and accessible to all buildings.

The proposals in this paper have been developed by the NABERS team in consultation with a Technical Working Group (TWG) and the NABERS National Steering Committee (NSC). Stakeholder feedback is sought to inform the final recommendations that will be brought to the NABERS National Steering Committee for approval in July 2020.

Please provide feedback using the [response form](#). Once completed please save it in word format (.docx) and email it to nabers@environment.nsw.gov.au by close of business Friday 12th June 2020.

Please forward this consultation paper to any other interested parties.

Any questions should be directed to Corine Mulet at corine.mulet@environment.nsw.gov.au or 02 9995 6874.

¹ Greenhouse Gas Protocol Scope 2 Guidance: https://ghgprotocol.org/scope_2_guidance

2 Update to emissions factors used in NABERS

2.1 How NABERS uses emission factors

There are many alternative technologies available for providing services to building occupants. These technology selections have significant impact on the mix of energy sources needed to operate a building. For this reason, buildings can range from being fully electric, to being partly (or even mostly, when cogeneration is used) powered by natural gas and other fuels.

NABERS Energy uses the National Greenhouse Accounts (NGA) emissions factors to compare buildings that use different mixes of energy sources. These NGA factors establish the greenhouse gas emissions linked to the consumption of a unit of energy and are published yearly by the Commonwealth Government.

NABERS Energy ratings are calculated using the NGA factors that were published in 1998 when the rating tool was first developed. NABERS has made a conscious decision to keep using the 1998 NGA factors for the calculation of star ratings, rather than updating them on an ongoing basis. The reasons for this decision include the following:

- a) The star ratings bands are at set and predictable thresholds;
- b) Buildings can track performance year-on-year; and
- c) Targets for improvement can be set many years into the future.

This ability to set and track progress towards targets has been a key part of the success NABERS has had in helping buildings become more sustainable in the past 20 years.

2.2 Why an update is necessary

Since the development of the NABERS Energy rating tool, the production of electricity in Australia has evolved and renewable energy generation has increased. This has resulted in a trend towards the decarbonisation of the electricity grid, and reduced NGA factors for electricity in most Australian states and territories.

Stakeholders have highlighted that if NABERS continues to use the 1998 NGA factors to calculate ratings, it would likely begin to drive undesirable outcomes. A prominent example of this can be seen in South Australia, where the NGA factors for electricity have dropped significantly over the past decade. Because they are powered entirely by electricity and are very efficient, heat pumps have increasingly become a lower-carbon solution for heating in buildings in South Australia. However, because NABERS uses 1998 emission factors, the increasing environmental benefits of heat pumps and other full-electric technologies do not translate into better rating results. Stakeholders have pointed out that if no changes are made, NABERS would artificially reward buildings using fossil fuel technologies (e.g. gas boilers), while unfairly penalising buildings with all-electric technologies.

This issue goes against NABERS' purpose of reducing the environmental impact of buildings. Artificially rewarding fossil-fuel over all-electric technologies also jeopardises the technology neutrality principle of NABERS. For these reasons, NABERS has determined that changes are needed to address these issues in the future.

2.3 Updates to the emissions factors

2.3.1 General

NABERS has been working with a Technical Working Group (TWG) and the NABERS National Steering Committee (NSC) to develop solutions to the issues outlined above. Several planned changes have resulted, and these are outlined in Sections 2.3.2 to 2.3.4 below.

2.3.2 Update NGA factors to current values

In the short term, NABERS will make a significant update to the way it calculates its star ratings, to use the most recent NGA factors available. Updating NABERS to use the latest emission factors (e.g. NGA 2019) will allow for the relative environmental impact of using gas and electricity-based technologies to be more fairly reflected in NABERS rating results.

Over the past decade, electricity emissions factors have gradually decreased while gas emission factors have stayed relatively unchanged. For this reason, using the latest NGA factors will have the following impact on NABERS ratings:

- a) Buildings that use mostly electricity will generally see a slight increase in rating results;
- b) Buildings that use mostly gas will generally see a slight decrease in rating results.

Note that this change will be implemented in a way that does not affect the average rating results across a market. This means that, if the average rating on a given sector (e.g. offices) before this update was 3.7 stars, it will continue to be 3.7 stars after the adjustment is made.

The graphs (Figures 1 and 2) below show the changes to average office base building ratings when the factors have been updated based on the proportion of gas used in the building. In the interests of space and readability, two contrasting examples have been provided – one for New South Wales/Australian Capital Territory and one for South Australia. They show the impact on a region which has had a standard decarbonisation trend over the past decade (New South Wales/Australian Capital Territory) and another where decarbonisation has occurred more quickly (South Australia). Graphs for all Australian jurisdictions can be found in [Appendix A](#). Note that the changes to ratings that are displayed are averages, and that the analysis was done using the NGA 2018 values. The actual update to the NGA factors used to calculate ratings will use the latest available NGA factors at the time of update.

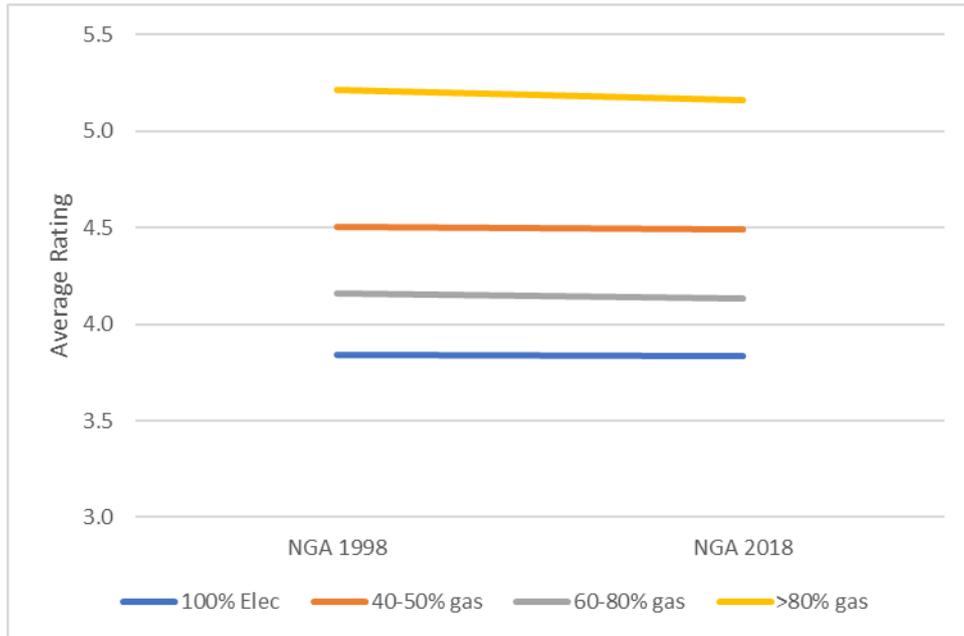


Figure 1 - Average NABERS Energy for office base building ratings with updated NGA factor NSW/ACT

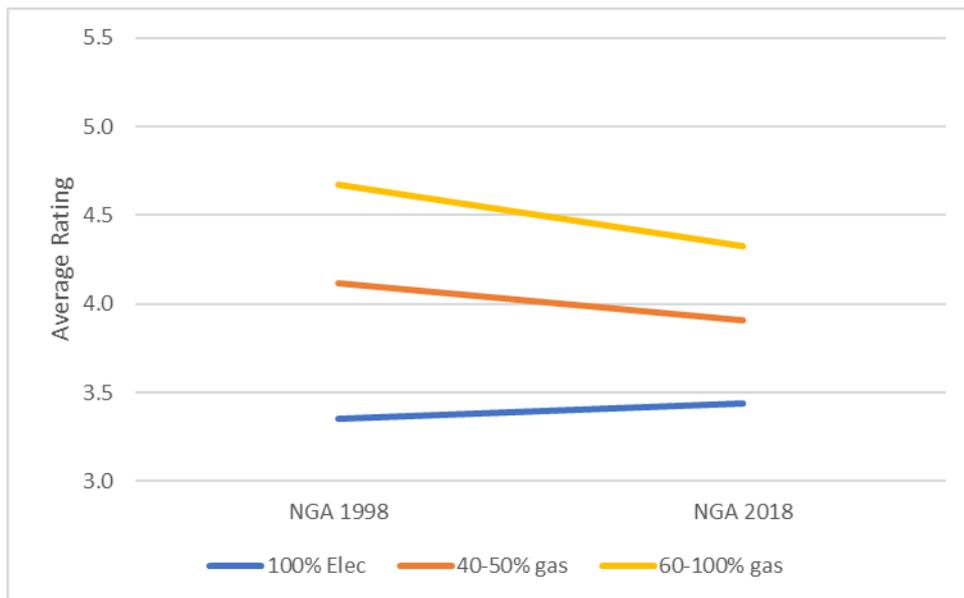


Figure 2 - Average NABERS Energy for office base building ratings with updated NGA factor SA

The NGA factors update will also be made to the NABERS Energy for Shopping Centres, Hotels, Data Centres and Hospitals tools. However, these tools were developed more recently than NABERS Energy for Offices, and therefore use more recent NGA factors. The change to average ratings for these sectors will therefore be smaller than the change to ratings for offices.

As part of the investigation and consultation work done with the TWG and NSC, NABERS assessed various other options to address the impacts of the decarbonisation of the grid on NABERS ratings. In particular, NABERS investigated the use of other metrics to compare between different fuels sources, such as energy consumed on site and primary energy. These other options were not retained as they either resulted in too much disruption for industry or the benefits of implementing them did not outweigh the disadvantages.

Note: Including all the details of the analysis on the other options assessed would make this paper too complex and long. For more information on the other options, please get in touch with NABERS.

2.3.3 Update the NGA factors periodically

While the update to the latest NGA factors resolves the immediate issue, NABERS recognises the need to address future changes to the energy landscape. Electricity emissions factors are expected to continue to drop as the grid decarbonises further over the coming years. A yearly update would not be desirable however, as this would make predictions of star ratings and performance tracking of buildings very difficult. In order to keep up with this changing situation and enable NABERS Energy ratings to be meaningful assessments of energy consumption, NABERS proposes to update the NGA factors periodically (for example, every 10 years). This solution will ensure the following:

- a) That the changes to the emissions linked to the fuel sources in the building are reflected in NABERS ratings;
- b) That lower emissions fuel choices will continue to be rewarded in ratings; and
- c) That the balance between the need to provide certainty on star ratings and making adjustments to reflect the decarbonisation of the grid is maintained.

The graphs (Figures 3 and 4) below show the projected average office base building ratings using the predicted 2030 NGA factors. The predicted emissions factors were provided to NABERS by the Commonwealth Government and were used to prepare the [Australia's Emissions Projections](#) report². As in section 2.3.2, the graphs for the other jurisdictions can be found in [Appendix A](#).

² Australia's emissions projections 2019: <https://publications.industry.gov.au/publications/climate-change/climate-change/publications/emissions-projections-2019.html>

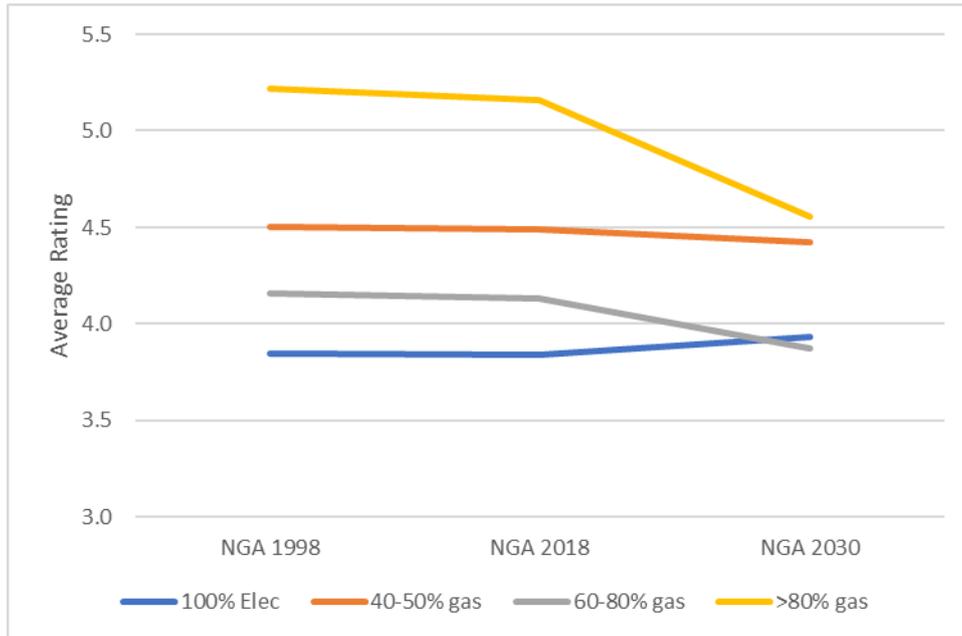


Figure 3 - Average NABERS Energy for office base building ratings with predicted 2030 NGA factor NSW/ACT

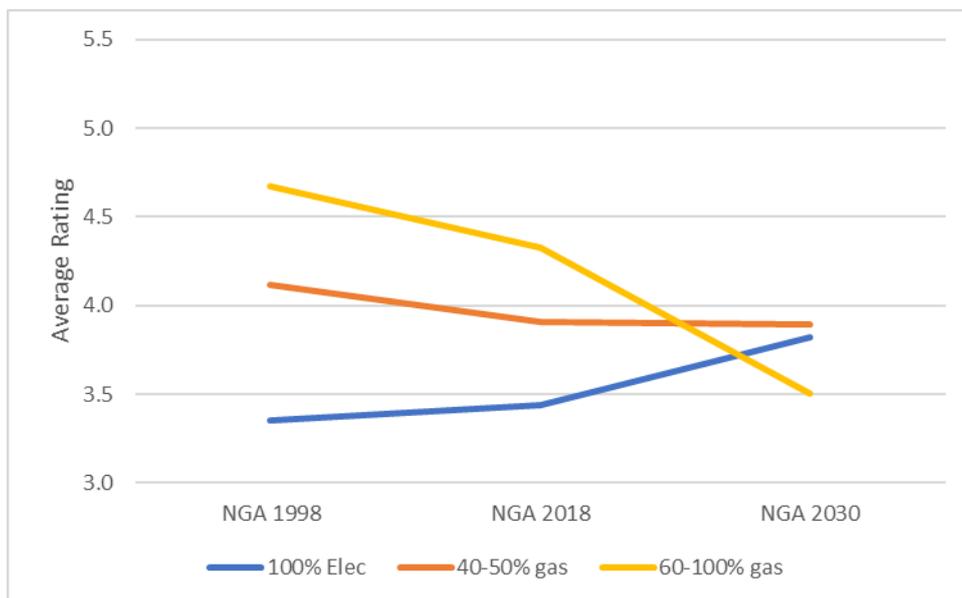


Figure 4 - Average NABERS Energy for office base building ratings with predicted 2030 NGA factor SA

2.3.4 Provide a NABERS Energy rating prediction tool

To ensure that industry can plan ahead and understand how ratings will change over time due to the NGA factor updates, NABERS will be providing a rating prediction calculator. This tool will be available on the NABERS website and will use emissions factor predictions provided by the Commonwealth Government.

2.4 Proposed implementation plan for changes

NABERS is seeking feedback on the implementation of these changes. These changes will be applied to NABERS Energy for Offices, Shopping Centres, Hotels, Hospitals and Data Centres.

NABERS proposes the following implementation plan:

a) Update the NGA factors used in NABERS rating by 1 July 2021

NABERS proposes to update the NABERS Energy rating calculation to use the latest NGA factors by July 2021. This will provide industry time to be informed about the change and to prepare for it.

b) Update the NGA factors every 10 years

This means that NABERS would conduct another update to the latest NGA factors in 2030. Modelling has shown that updating the emission factors every 10 years would not result in large step changes to ratings. Rather, impacts on ratings would still be relatively small and gradual. Estimates show that if the NGA factors are updated again in 2030, the rating results of 90 % of office buildings would change by less than 0.2 stars. Because the decarbonisation of the grid would have such a gradual impact on NABERS star ratings results, updating the factors more often than 10 years would have limited benefits in terms of accuracy.

Furthermore, updating every 10 years would provide significantly more certainty on what NABERS star ratings would be in future years. This will allow buildings to track their performance and set targets with confidence for several years into the future.

NABERS also proposes to review the rate of decarbonisation every five years, to account for the possibility that the grid decarbonises faster than currently forecasted. This would provide an opportunity to implement a more regular update if necessary.

c) Provide a NABERS Energy rating prediction tool by December 2020

This tool will be available on the NABERS website. This means that, from late 2020, an Assessor or building owner will be able to calculate the predicted rating based on the emissions factors that will be implemented in July 2021. In addition, Assessors, building managers and building designers will be able to predict 2030 ratings using projected emissions factors for 2030.

d) Provide predicted ratings in rating reports from July 2021

NABERS proposes to include the predicted 2030 rating of the building in the rating report. This will enable Assessors, building managers and owners to see what the impacts on that building will be once the next update is made in 2030.

e) Grandfather the current NABERS Energy rating tool

This will be done by allowing the use of the 1998 NGA factors in NABERS ratings for all policies and schemes that rely on the tool, such as the National Construction Code, NABERS Commitment Agreements signed before this change, and white certificate schemes such as the NSW Energy Savings Scheme and the Victorian Energy Upgrades. NABERS will work with these and other programs to update to the new emissions factors as soon as is practicably possible.

f) Put in place a market engagement campaign

This will include a roadshow to ensure that industry is informed and prepared for the coming change.

Focus Questions

- 1) Do you have any comments on the planned update to the emissions factors (Section 2.3)?
- 2) Do you have any feedback on the proposed implementation and update timelines (Section 2.4)?
- 3) Do you think that the prediction tool will be of value to industry? Do you have any other feedback on the prediction tool?
- 4) Do you have any other suggestions of how we can prepare industry for this change?

3 NABERS Net Zero Emissions

3.1 Background

An increasing number of organisations are putting in place net zero targets and are committing to purchasing 100 % renewable energy. The NABERS Energy with GreenPower rating tool recognises a building's energy efficiency as well as the renewable energy procurement choices made by the building owner. The tool's maximum score in the rating scale is currently capped at 6 stars, which is market leading performance but can still be a significant distance away from net zero emissions.

NABERS stakeholders have increasingly expressed interest in NABERS recognising buildings that go beyond 6 stars by 100% purchasing renewable energy. Over the past year, various Property Council Australia (PCA) members and Technical Working Group (TWG) members have requested that NABERS consider introducing a net zero emissions recognition for existing buildings, that could be conducted alongside a NABERS Energy rating. The NABERS National Steering Committee agreed on considering such a certification, and the NABERS team has been consulting with the TWG on its core design.

3.2 NABERS' proposed changes

3.2.1 Release a NABERS net zero emissions certification

NABERS proposes to recognise buildings that are energy efficient and run on 100 % renewable energy with a NABERS Net Zero Emissions certification. The possibility of providing recognition beyond a 6 stars NABERS Energy with GreenPower rating was considered in the design of current rating scale. When the NABERS scale was expanded to 6 stars in 2011, the 6th star was placed half-way between 5 stars and zero emissions. This was done to allow for a future expansion to 7 stars, representing zero emissions. The proposed NABERS Net Zero Emissions certification would be equivalent to the 7th star of NABERS Energy with GreenPower. NABERS is seeking feedback on whether industry would benefit from such a recognition.

3.2.2 Continuing to encourage purchases of renewable energy electricity

NABERS Energy with GreenPower has recognised and rewarded purchases of renewable electricity in the form of certified GreenPower for over 20 years. For this reason, NABERS remains as one of the largest drivers for the purchase of GreenPower throughout Australia. This is part of NABERS' long-standing goal of helping accelerate the growth of renewable energy in Australia's electricity grid.

NABERS proposes to apply the same principle regarding its treatment of renewable energy in the Net Zero Emissions certification. This means that NABERS would maintain renewable energy as the **only** mechanism to offset grid electricity emissions.

Currently in Australia, renewable energy purchasing mechanisms only exist for electricity. In 2019, around 51 % of buildings certified by NABERS were completely electric. NABERS Net Zero Emissions certification would be immediately available for this group of buildings if they were to purchase 100 % renewable electricity.

3.2.3 Extending NABERS' offset mechanisms to zero-carbon fuels

3.2.3.1 Stakeholder positions

NABERS does not currently recognise mechanisms to offset emissions from gas and diesel. Stakeholders have varying opinions on how NABERS should deal with this. Their positions can be summarised as follows:

- a) Some stakeholders have argued that NABERS should keep to their current position and that a Net Zero Emissions certification should only recognise efficient buildings running on 100 % renewable energy. They claim that allowing carbon offsets for natural gas and diesel will discourage property portfolios from doing the work needed to phase out their use of fossil fuels.
- b) Other stakeholders have argued that providing more flexible mechanisms would be more inclusive, and could encourage the 49 % of buildings with some gas use to set net zero aspirations sooner. They have suggested that NABERS could recognise the use of certified zero-carbon renewable fuels, such as biofuels, green hydrogen and/or a gas-equivalent of the GreenPower program. These stakeholders suggest this could help accelerate the uptake of zero-carbon fuels in Australia, which aligns closely with NABERS for encouraging electricity from renewables.
- c) Finally, some stakeholders argued that international carbon offsets should be allowed to offset onsite natural gas use.

3.2.3.2 NABERS' proposal

NABERS proposes to release the Net Zero Emissions certification initially using only its well-established methodologies for purchases of electricity from renewables. This means that immediately upon release the Net Zero Emissions certification will only be available for all-electric buildings. However, NABERS also proposes to work with industry to recognise the purchases of certified zero-emissions fuels. To this end, NABERS will support programs and trials for the development of other renewable fuels, as well as a gas-equivalent to certified GreenPower.

3.2.4 No change to NABERS' treatment of carbon offsets

NABERS is **not** proposing to make amendments to recognise other national or international carbon offsets, neither for gas nor for electricity use. Unlike encouraging buildings to use zero-carbon fuels, which is aligned with the use of GreenPower, allowing general carbon offsets would represent a major change to the NABERS purpose. It would also significantly dilute the impact NABERS could have in helping Australian buildings to find zero-carbon fuel alternatives in sectors that might be unable to fully electrify.

NABERS will, however, provide a small allowance for emergency fuels such as diesel, which are widely used for emergency backup. This will be capped to a small percentage of the building's total energy consumption.

3.2.5 Investigations into other fuel types

NABERS has received queries from Assessors and building designers on how other types of fuels should be accounted for in NABERS Energy ratings, in particular fuels that might be considered as zero emissions fuels. The NABERS Energy rating tool allows for the input of electricity from the grid, natural gas and diesel. NABERS uses the emissions factors from the NGA workbook to determine the emissions linked to the use of these fuels.

If NABERS is to expand the types of fuels allowed in a rating, it will need to determine the emissions factors for these fuels. One particular challenge to this is that the NGA workbook does not provide the scope 3 emissions for some fuels, such as biodiesels.

NABERS will undertake an investigation to determine how to treat these fuels in a rating. To help inform this, NABERS is seeking information from stakeholders on the types of fuels that might be used in buildings in the short to medium-term future.

3.3 Inclusion of a minimum NABERS Energy rating requirement

To ensure that buildings claiming to be net zero emissions are high performing, some stakeholders have suggested that NABERS could set a minimum NABERS Energy rating requirement to access the NABERS Net Zero Emissions certification. This would avoid inefficient buildings from making net zero emissions claims and will drive a minimum standard for those who wish to access net zero.

Some TWG stakeholders have argued that a minimum energy efficiency requirement would exclude a portion of the market, and that NABERS should also be encouraging renewable energy purchases and net zero emissions in low performing buildings. As an alternative, NABERS could eliminate the need for a minimum rating by requiring the Net Zero Emissions certification to be advertised alongside a building's NABERS Energy rating.

If NABERS were to set a minimum NABERS Energy requirement, it could be placed at the 50th percentile. This would mean that to be eligible, the building must be in the top 50 % of most energy efficient buildings. The 50th percentile would be calculated for each building type to account for some tools being more recent and having a lower average than others.

NABERS is considering both options of either implementing a minimum energy efficiency requirement or allowing all buildings to access the net zero certification, and is seeking further feedback.

3.4 How does this differ to Climate Active Carbon Neutral certification?

Climate Active Carbon Neutral certification for buildings is a standard that recognises buildings that have reached carbon neutrality by measuring their carbon emissions, reducing these emissions, and then cancelling out the remaining emissions with carbon offsets. The development of the standard was a partnership between Climate Active, NABERS, the Green Building Council Australia and the Property Council Australia. A carbon account for Climate Active includes all the building's emissions: refrigerants, gas, electricity, water, waste and other optional scope 3 emissions.

NABERS Net Zero Emissions certification could become an intermediate step for buildings on the way to achieving Carbon Neutral certification, and could help accelerate this transition.

The NABERS Net Zero Emissions certification would be different to Carbon Neutral in two ways:

- a) The scope of NABERS Energy rating tools only includes energy consumed for the operation of the buildings: electricity and onsite fuels (typically gas and diesel). Therefore, the NABERS Net Zero Emissions certification would only include stationary energy.
- b) Renewable energy would be the only method to achieve the NABERS Net Zero Emissions certification (as NABERS does not allow the use of carbon offsets).

The diagram below (Figure 3) details the difference between the NABERS Energy ratings tools and Climate Active Carbon Neutral certification for buildings.

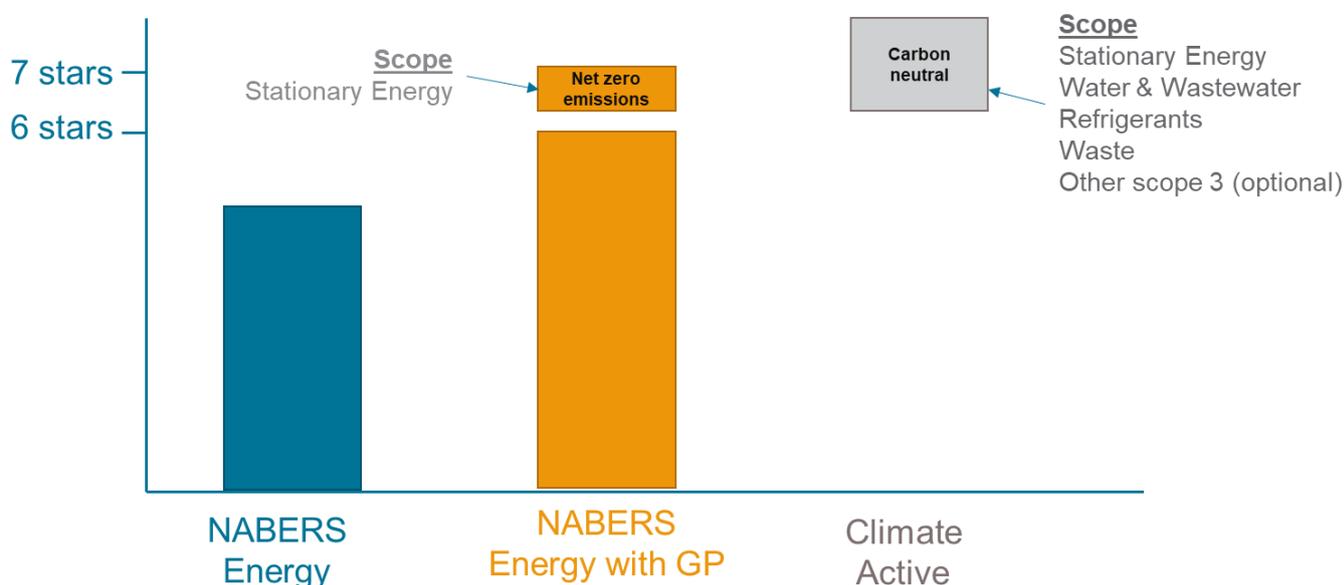


Figure 5

Leading property groups have set net zero targets in recent years with different levels of coverage. Some have limited this definition to stationary energy, while others have included scope 1 and scope 2 emissions (refrigerants and stationary energy), and others also include some scope 3 emissions.

For the Net Zero Emissions certification, NABERS is proposing to maintain its current stationary energy scope. NABERS is seeking feedback on whether the proposed boundary would be adequate.

Focus Questions

- 5) Are you in favour of the development of a NABERS Net Zero Emissions certification? Would you use it or recommend it?
- 6) Do you think that the name NABERS Net Zero Emissions is suitable for the certification?

- 7) Do you agree that the proposed boundary for net zero recognition should be identical to NABERS Energy with GreenPower (stationary energy)?
- 8) Do you support NABERS' proposal to expand its offset mechanisms from recognising renewable electricity only, to also include certified zero-carbon fuels?
- 9) Should a minimum NABERS Energy rating (without Greenpower) be required to achieve NABERS Net Zero Emissions certification (e.g. the star rating of the 50th percentile, such as 4 stars for offices)?
- 10) Are there any other fuel types that you expect to be used in buildings in the short to medium term future?

4 NABERS Energy with GreenPower

4.1 General

One of NABERS' key objectives is to help accelerate the uptake of renewables in Australia's electricity grid. The program has had a NABERS Energy with GreenPower tool for over two decades, to encourage and reward the purchases of renewable energy. The NABERS Energy with GreenPower tool is an additional rating scale, alongside the NABERS Energy rating, that is based on a building's energy efficiency performance as well as its procurement of GreenPower. If a building achieves a 4-star NABERS Energy rating and does not buy any GreenPower, it will also achieve a 4-star NABERS Energy with GreenPower rating. However, if GreenPower is purchased, the building will obtain a higher NABERS Energy with GreenPower rating.

Some stakeholders have shown interest in the development of the NABERS Energy with GreenPower tool into a more recognisable carbon accounting tool. Such an evolution of the tool would mean that building owners could use it to showcase buildings operating with low carbon emissions, and tenants and investors could use it to assess the carbon performance of the building.

Some stakeholders have raised concerns with the NABERS Energy with GreenPower rating results being used to mislead tenants into thinking that the building is energy efficient.

In light of such concerns, NABERS would like to reconsider the structure and purpose of the NABERS Energy with GreenPower tool to ensure that it encourages and rewards renewable energy purchases and is well-understood by the market. NABERS has considered two options that have been suggested by the TWG. The first option (Section 4.2) looks at renaming and reworking the communication of the tool, and the second option (Section 4.3) looks at the removal of the NABERS Energy with GreenPower tool. While NABERS' preference is for Option 1, feedback is sought on both proposals.

4.2 Option 1: Retain NABERS Energy with GreenPower (preferred)

NABERS Energy with GreenPower has been in place for over two decades, and there are buildings and organisations that use its results in several sectors. The tool has also been used by multiple government policies and programs that seek to encourage both onsite energy efficiency, and the purchase of additional renewable energy. While NABERS does receive occasional feedback regarding potential confusion with the onsite energy efficiency results, this has been relatively limited considering the tool has been in the market for over 20 years.

Some stakeholders have argued that these rating results are not a material issue to them. Some have also expressed the view that, unlike proposals like the Net Zero Emissions certification, either renaming or removing NABERS Energy with GreenPower would have limited or no impact in helping the building sector accelerate environmental progress.

Given that there are stakeholders who use this rating and that calls for its removal have been limited, NABERS' preference is to retain the NABERS Energy with GreenPower star rating. Stakeholders have suggested the following two scenarios if the rating tool was retained:

Option 1a – Retain NABERS Energy with GreenPower's current name

This option would mean that the rating tool would be unaffected from a technical perspective and would continue to be called 'NABERS Energy with GreenPower'.

Supporters for this option have argued that this is either a relatively small issue, or that the limited benefits for addressing it are outweighed by the major efforts needed to implement this in the NABERS IT platforms, Rules, communications materials and government policies. They argued that NABERS should prioritise its efforts on activities that are more likely to accelerate change in industry, such as releasing a Net Zero Emissions certification and expanding NABERS to sectors where it is not yet available.

Option 1b – Rename the tool to reduce confusion

Some stakeholders have suggested that a simple way to reduce confusion could be to rename the tool to one that is less likely to be confused with 'NABERS Energy'. They have argued that this would help reduce confusion, without removing a rating tool some buildings and organisations have used for a long time.

Several names have been suggested, such as 'NABERS Carbon' or 'NABERS Energy Emissions'. While some of these alternative names have had some supporters, people have also raised issues with each alternative considered to date. For example, some have claimed that 'NABERS Carbon' may lead users to think it includes emission sources beyond operational energy, or that it could be confused with Carbon Neutral certification. Others have contended that 'NABERS Energy Emissions' is just as likely to be confused with NABERS Energy results as the current tool.

NABERS is seeking feedback on whether the tool's current name should be changed. Whether or not this is done, NABERS will release a communications campaign to reduce any confusion with what the NABERS Energy with GreenPower tool measures.

4.3 Option 2: Remove the NABERS Energy with GreenPower rating

Some stakeholders have suggested that NABERS should consider removing its Energy with GreenPower tool altogether, and only have a NABERS Net Zero Emissions certification. This would mean that only buildings buying 100 % renewable energy would be recognised for their purchases. Under this proposal, buildings buying less than 100 % renewables (e.g. 70 % Greenpower) would not receive any encouragement or reward from NABERS in the form of an improved star rating.

Supporters of this option insist that removing the rating tool altogether would also remove any potential confusion associated with NABERS Energy with Greenpower. Some stakeholders have also argued that this may encourage buildings to make the decision to buy 100 % GreenPower, rather opting for incremental top-ups.

However, it should be noted that this proposal has also received criticism. The issue has been raised that there are stakeholders and government policies currently using this star rating, and that removing it could mean major negative impacts for only limited benefits. Furthermore, some stakeholders have pointed out that some buildings purchase GreenPower for part of their power use because of NABERS, and that removing the GreenPower rating would result in less renewable energy being purchased.

4.4 NABERS' proposed changes

For the reasons outlined above, NABERS proposes to retain the NABERS Energy with GreenPower rating results and to consider a change to the name – if stakeholders consider this to be beneficial. NABERS is interested in feedback from a broad spread of stakeholders on these options, and is open to reconsider Option 2 if it were to receive strong support from most stakeholders.

Focus Questions

- 11) Do you agree that the NABERS Energy with GreenPower tool should be maintained (Option 1)?
- 12) If you agree with Option 1, should the name be changed (Option 1b)? If so, what name would you suggest?
- 13) What other risks and issues should NABERS consider in making this decision?

5 Market-based carbon accounting

5.1 General

In 2019 the Property Council of Australia asked NABERS on behalf of its members to consider aligning NABERS Energy with GreenPower with the market-based carbon accounting method detailed in the [Greenhouse Gas Protocol Scope 2 Guidance \(GHG Protocol\)](#)³. The method aims to robustly measure carbon emissions and to avoid double counting. There are two key differences between the market-based carbon accounting method and how NABERS Energy with GreenPower ratings are currently calculated:

- a) The market-based method recognises the renewable energy in the grid that is mandated by the Renewable Energy Target (RET). This means that when renewable energy is purchased for a building to achieve 100 % renewable energy, only approximately 80 % needs to be purchased by a building, as there is already approximately 20 % in the grid. Australian households and organisations who use electricity already contribute to the RET, and can therefore fairly claim this 20% renewable energy.
- b) The second key difference is that the energy generated by onsite solar PV systems cannot be claimed for the building if its Large-scale Generation Certificates (LGCs) are sold. According to the market-based method, when the certificates are sold, the rights to the emissions avoidance are passed on to the purchaser. Currently, in NABERS Energy with GreenPower tool, there is no differentiation between onsite solar generated LGCs that are voluntarily surrendered and those that are sold.

5.2 NABERS' proposed change

NABERS proposes to update the NABERS Energy with GreenPower tool to align with the market-based carbon accounting method. This would also apply to the proposed NABERS Net Zero Emissions certification, if this was released. Note that none of the below changes are proposed for NABERS Energy (without GreenPower) results.

This would result in the following changes:

- a) **Buildings will no longer need to buy GreenPower for the portion of renewables already accounted for in the RET.**

What this change means:

³ Greenhouse Gas Protocol Scope 2 Guidance: https://ghgprotocol.org/scope_2_guidance

Up until now, for a building to be considered as using 100 % renewable energy electricity under NABERS, it had to purchase GreenPower for every kWh it used. The proposed change will allow buildings to only purchase GreenPower for the non-renewable part of the electricity purchased from the grid, which currently stands at approximately 80 %.

The following examples show the impact this will have in ratings:

- A building owner wishing to reach 100 % renewables under NABERS will only need to purchase approximately 80 % GreenPower to do so.
- A building which purchases GreenPower only to reach a specific star rating (e.g. 4 stars) will need to buy 20 % less GreenPower than previously.
- A building owner that does not purchase any GreenPower will continue to obtain the same results for NABERS Energy with and without GreenPower.

b) For onsite solar systems generating LGCs, only those that have been voluntarily surrendered would be counted in the NABERS Energy with GreenPower rating.

What this change means:

This means that if a building has an onsite solar PV system that generates LGCs, these will have to be voluntarily surrendered to count in the NABERS Energy with GreenPower rating. This also means that if a building has sold its LGCs, Assessors will have to add any energy generated by the onsite solar PV to the rating and count this as grid electricity.

Note that these changes are not proposed for NABERS Energy (without GreenPower) ratings. Buildings with onsite solar systems will continue to receive the benefit of the onsite solar whether or not LGCs have been surrendered.

Focus Questions

- 14) Are you in favour of the proposed changes?
- 15) Do you have any other feedback on the proposed changes?

6 Renewable energy purchasing

6.1 General

Over recent years there has been an increase in corporate Power Purchase Agreements (PPA). Generally, the electricity generated for these PPAs is from renewable sources, but it is not always GreenPower accredited. Some stakeholders in the Technical Working Group have advised that in some cases, the premium charged by electricity retailers for GreenPower is high, and that they prefer to use Large-scale Generation Certificates (LGCs) that are not GreenPower accredited.

These stakeholders have requested that the NABERS team investigate the option of accepting non-GreenPower voluntarily retired LGCs as an alternative method to GreenPower. This issue can be separated into two questions:

- a) How would NABERS determine the sources of renewable energy that are acceptable for a NABERS rating?
- b) What would be the processes to verify and audit the voluntarily retired LGCs?

NABERS is seeking broader feedback on whether an alternative method to GreenPower would be of interest, and if so, how this could be implemented.

6.2 Renewable Energy Sources

The GreenPower scheme requires LGCs to be sourced from GreenPower accredited generators. The requirements for a generator to become GreenPower accredited are more stringent than the Clean Energy Regulator (CER) rules for creating LGCs. For NABERS to accept non-GreenPower LGCs it will need to determine if the CER rules that define renewable energy sources are sufficiently robust. Examples of risks include accepting hydro-electric projects that require the deviation of rivers, or biomass from cleared native woodlands. Initial investigations have concluded that NABERS could largely mitigate risks by accepting LGCs from wind and solar farms only (which represent 90 % of voluntarily retired LGCs). Wind and solar projects are subject to stringent Commonwealth, State and local government approval processes that would cover the majority of ecological and social risks that NABERS stakeholders could be concerned by.

NABERS is seeking feedback on the suggestion to limit eligible LGCs to solar and wind, if it were to provide an alternative method to GreenPower.

6.3 LGC verification and audit process

6.3.1 General

NABERS has commissioned a third party to provide advice on the additional processes that would be required to provide an alternative method to GreenPower.

Initial results show that there would be several additional steps that the NABERS team, customers and Assessors would need to take to include non-GreenPower LGCs in a rating.

6.3.2 NABERS Rating customer and “LGC auditor”

NABERS rating customers would need to use the services of a third party ‘LGC auditor’ to conduct checks on the voluntary surrender of the LGCs and verify the allocation of the LGCs per building and rating period. This would involve accessing the Clean Energy Regulator’s (CER) Renewable Energy Certificate Registry and creating a ledger of all LGCs and their allocation to a rating.

The requirements for organisations or individuals to become an approved NABERS LGC auditor would need to be determined, and training and accreditation from NABERS may be required.

6.3.3 NABERS Assessor

The NABERS Assessor would need to check that the relevant documentation has been provided by the customer and that the LGC audit has been performed by a NABERS approved third party. The Assessor would need to perform a sense check on the data provided.

6.3.4 NABERS National Administrator

NABERS would need to develop the rules for the NABERS Assessor and ‘LGC auditor’ to follow. It is likely that NABERS would provide training and accreditation for the LGC auditors. NABERS would also need to update the data collection platform (NABERS Rate) to allow for the entry of LGC data into the rating and update the NABERS National Administrator auditing processes to verify the data that has been provided by Assessors.

NABERS notes that initial investigations show that using the services of an ‘LGC auditor’ and additional steps for the NABERS Assessor would have cost implications for the customer. NABERS would like feedback on whether the development of this option is of interest to customers, considering the process and additional costs that would be required.

Focus Questions

- 16) Would you use non-GreenPower LGCs for a NABERS Energy with GreenPower rating or to achieve the NABERS Net Zero Emissions certification if it became possible?
- 17) What are your views on NABERS’ suggestion to accept only Wind and Solar LGCs?
- 18) Do you have any feedback on the proposed process for verifying and auditing LGCs? Would the additional costs of this process be acceptable?
- 19) Do you have any other feedback on this issue?

Appendix A – Impact on ratings when updating the NGA factors

The graphs below portray the impact on average office base building ratings when updating the NGA factors used to calculate NABERS Energy ratings. Each graph shows the change to the average NABERS rating for each State and Territory depending on the fuel mix used in the buildings. The NGA 2030 factors were obtained from the Commonwealth Government; they were developed for [Australia’s Emissions Projections](#) report. See Sections 2.3.2 and 2.3.3 for more information.

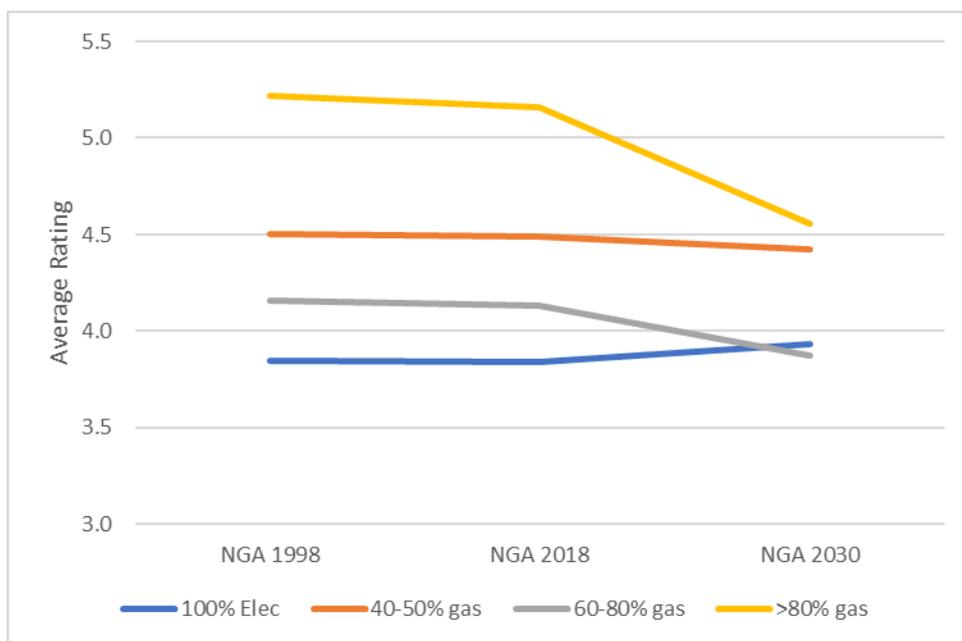


Figure A.1

Average NABERS Energy for office base building ratings with updated NGA factors NSW/ACT

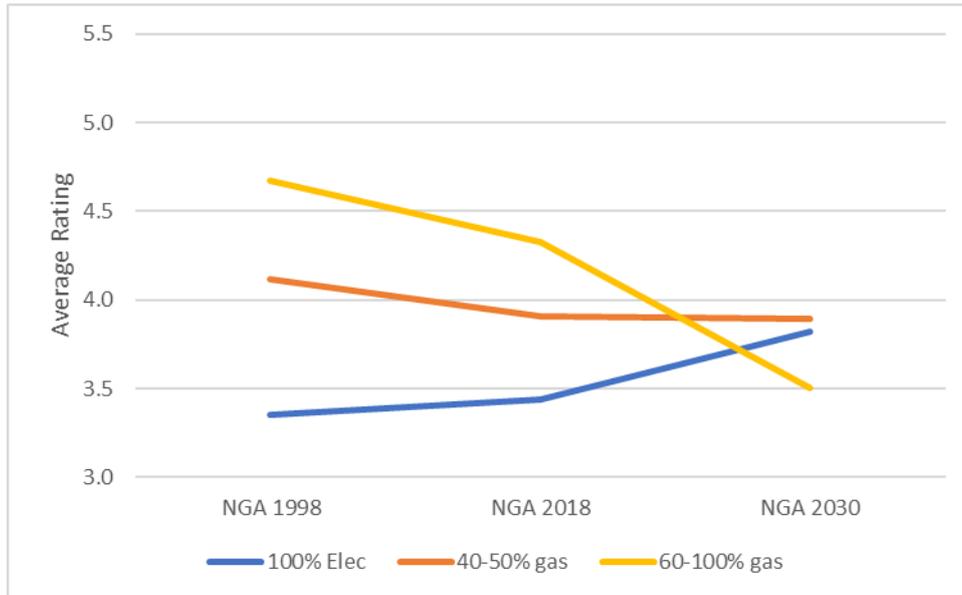


Figure A.2

Average NABERS Energy for office base building ratings with updated NGA factors SA

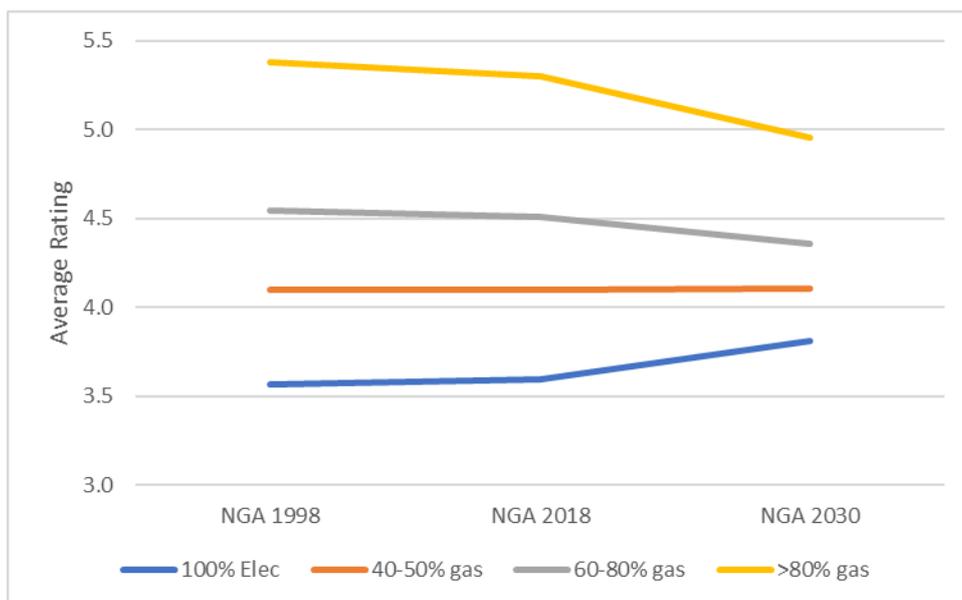


Figure A.3

Average NABERS Energy for office base building ratings with updated NGA factors VIC

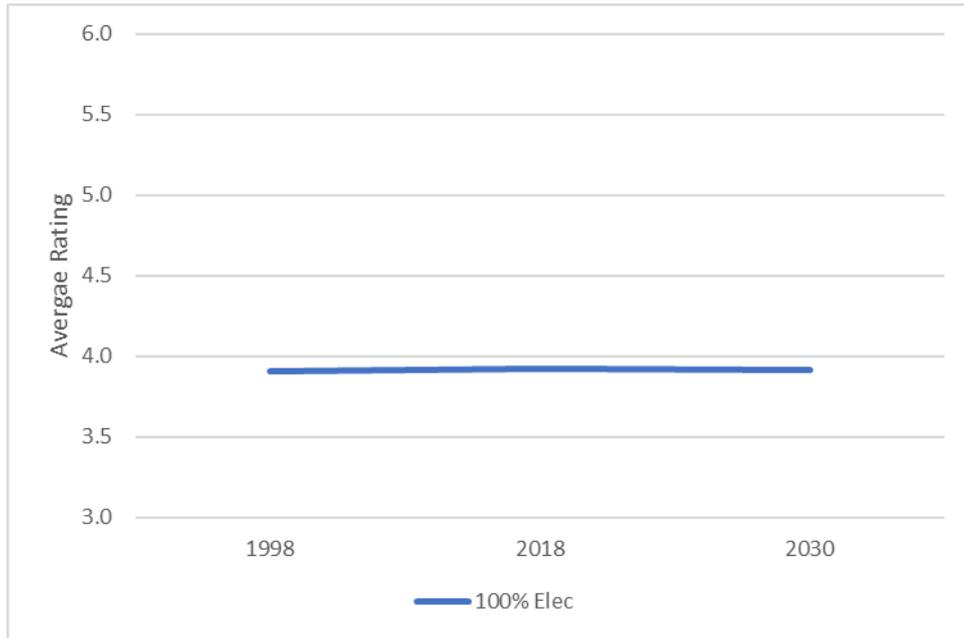


Figure A.4

Average NABERS Energy for office base building ratings with updated NGA factors NT

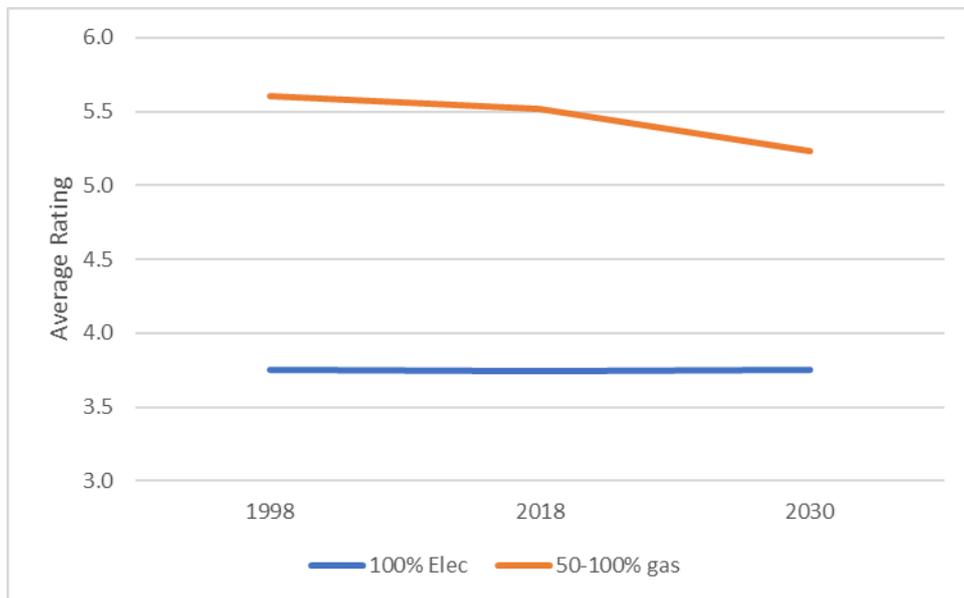


Figure A.5

Average NABERS Energy for office base building ratings with updated NGA factors QLD

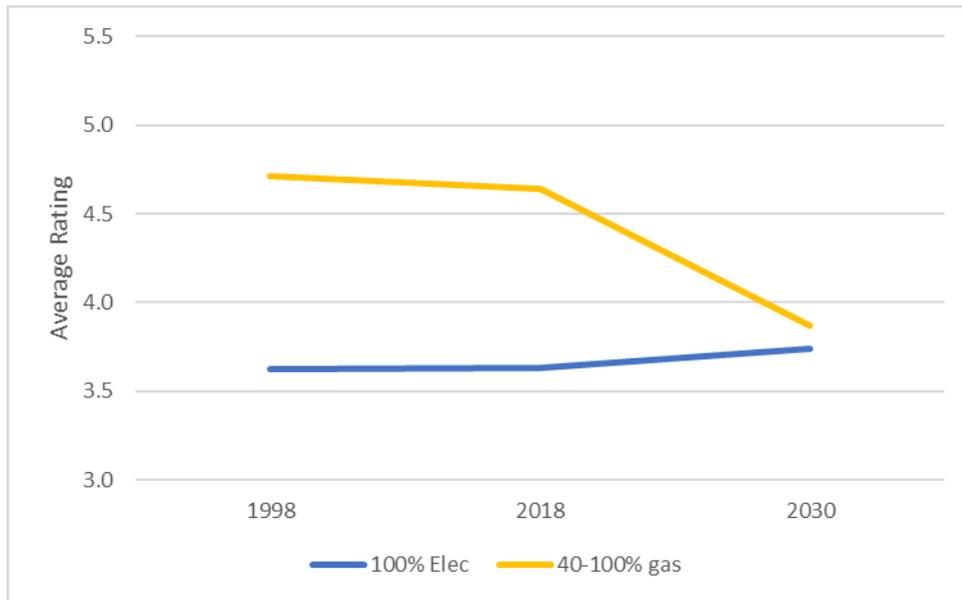


Figure A.6

Average NABERS Energy for office base building ratings with updated NGA factors WA

Contact us

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