NABERS

Managing impacts of COVID-19 on NABERS ratings

Consultation Paper

NABERS is administered by the NSW Department of Planning, Infrastructure and Environment
Published April 2020

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1 Summary

The measures enacted to fight COVID-19 have resulted in significant changes to the way many buildings are used, which is expected to impact NABERS rating results. These impacts will be particularly pronounced in office buildings, which have experienced a major drop in occupancy due to social distancing measures and working from home arrangements.

Nevertheless, while occupancy has decreased, many buildings are still operational, consuming energy and water, and generating waste. Many stakeholders have flagged that the use of these resources still has a considerable environmental impact, and that buildings can take measures to minimise this.

NABERS rating tools were designed to compare buildings in operation, most of which are generally considered 'occupied'. A scenario where most buildings in some sectors operate at minimal occupancy over an extended period of time has not been considered by NABERS in the past. If no adjustment is made for the current circumstances, it is anticipated that rating results using data collected during this time may not reflect the relative environmental performance of buildings.

To prevent this, NABERS is working on a series of Rulings to help mitigate the impact COVID-19 will have on the delivery and comparability of NABERS ratings.

Why is NABERS releasing this paper?

Over the last couple of weeks, NABERS has consulted with stakeholders to discuss what impact social distancing measures and lockdowns are having on NABERS ratings. Initial discussions focused on providing solutions to immediate issues preventing the submission of rating applications. These discussions resulted in the release of *Ruling: Managing impacts of COVID-19 on NABERS ratings*.

NABERS is now seeking feedback on proposals to mitigate further impacts of COVID-19 on NABERS ratings. This consultation paper outlines these proposals.

How do I provide my feedback?

Stakeholders are asked to enter their feedback in the spaces provided within this document. Once completed, save the PDF and email to Andrew Buchel: andrew.buchel@environment.nsw.gov.au.

When is the feedback deadline?

NABERS is inviting stakeholders to provide feedback by close of business on **Friday 1st May.**

Will my submission and my details be made public?

The NABERS team will not make submissions or any author's details public. This is to protect personal information in line with the confidentiality policy of the NSW Department of Planning, Industry and Environment.

Will NABERS include all the suggestions contained in my submission?

NABERS will prioritise submissions that focus on the key issues it is examining. If your feedback falls outside of the scope of the core enquiry, the NABERS team may note your suggestions for future reviews.

2 Request for data

2.1 Introduction

NABERS is seeking to collect data from the last two months, and for future months as this data becomes available. This will be used to model the impact of COVID-19 on NABERS ratings. The results of this modelling will help inform future amendments to the document *Ruling: Managing impacts of COVID-19 on NABERS ratings*.

2.2 Types of data

NABERS is seeking the following types of data, for February 2020 to April 2020:

a) Monthly energy and water consumption data from all building types;

b) Temperature data sets similar to those used for the annual temperature section of the Indoor Environment ratings;

c) Measured volumes of rubbish bins used for Waste ratings.

NABERS also seeks the following general information for each building:

1) The last NABERS rating number;

2) A metric of occupancy levels during this period. For example, number access keys used over the past few months or an estimate of occupancy percentage on given days.

In addition, if more granular data was available (such as data in weekly intervals or meter-level information), it would be much appreciated.

2.3 How NABERS will use the data

All data provided will be for internal use only and will not be made publicly available. Data received will only be used for the purpose of modelling the effects of COVID-19 on ratings.

NABERS will publish aggregated analysis of the modelling conducted, but will ensure no data from individual buildings or companies is identifiable.

2.4 How to contribute data

If you would like to contribute data, please contact Andrew Buchel:

andrew.buchel@environment.nsw.gov.au.

For Waste data, we encourage monthly data be entered into the Waste Rating platform; it will then be reviewed by NABERS.

3 Energy & Water Ratings

3.1 Proposal #1 – Dealing with reduced energy and water consumption

Early stakeholder feedback suggested that, due to a reduction in occupancy levels during March 2020, there was a meaningful reduction in energy and water consumption for the latter half of the month. It is anticipated that this reduced energy and water consumption will also be experienced in April and subsequent months while social restrictions remain. This situation presents a challenge in ensuring the NABERS Energy and Water star rating results continue to adequately reflect the relative environmental performance of buildings in these operational circumstances.

Proposed Solution

To address this, NABERS proposes the application of a 'normalising factor' to account for average changes to energy and water used during this time. This 'normalising factor' may be applied on a sliding scale depending on occupancy levels.

The 'normalising factor' will be developed using a combination of data observed in buildings over the last couple of months, as well as modelling of future expected impacts during the COVID-19 affected period. Creating a robust adjustment will require data from buildings under the current operational conditions, and NABERS is seeking this information from stakeholders (see Section 2 for further details).

Alternative Methods

The following further alternative methods to account for the changing circumstances have been proposed by stakeholders, but each comes with challenges:

a) Replacement of consumption data for that affected month from the preceding year (e.g. replace data from March 2020 with data from March 2019). This is not a preferred long-term solution, as it does not recognise the efficiency measures many buildings are undertaking during this period of unusually low occupancy. Additionally, this option could be difficult to implement where significant changes have occurred to the building area, hours of operation or vacancy rates in the past year.

b) Reduction of the consumption data requirement period (i.e. require 9 months of consumption data instead of 12 months, where the shutdown months are included in the rating period). This is not the preferred option due to seasonal variations in consumption data which, depending on the time period selected and geographical location, may significantly vary the rating result.

Focus Questions

1) Do you support the proposed solution of developing a 'normalising factor'?

2) If not, which of the above alternative proposals would you support?

3) Are there any further alternative methods that NABERS should consider?

Your response:

3.2 Proposal #2 – Temporary extension of rating lodgement date

Most NABERS ratings are lodged using consumption data that is one to four months old by the time the rating is submitted. As a result, most ratings lodged in March and early April 2020 are not affected by the reduced levels of occupancy. However, from early May onwards, this reduced occupancy will begin to affect some ratings, as buildings begin to include consumption data from the period impacted by the COVID-19 restrictions. Section 3.1 in Proposal #1 suggests a longer-term solution to this issue, but it requires **additional time** to collect data in the coming weeks, conduct modelling and consult with stakeholders.

Proposed Solution

To provide sufficient time to put in place a longer-term solution, NABERS is proposing a temporary moratorium on using consumption data recorded from 1 March 2020 on **a rating application**. This means that the 12-month rating period for buildings certified over the next few months would end no later than 28 February 2020. This would be accompanied by an extension of the application lodgement period from 120 days to 180 days, to ensure buildings will not be penalised with a shorter certification period.

This measure would allow buildings to be fairly compared while a longer-term solution (see Proposal #1) to this issue is being developed. NABERS intends to have a longer-term solution in place by 30 June 2020 or earlier, after which this Ruling will be rescinded and data post 1 March 2020 will be able to be used.

Focus Questions

1) Do you support the proposed solution of implementing a temporary moratorium on consumption data post-March 2020?
2) Will the above proposal be of assistance to Assessors in managing their upcoming rating application deadlines and workflows?

Your response:

3.3 Proposal #3 – Rated hours via OTAs and comfort conditions

Section 5.3.2.1 of *The Rules – Energy and Water for Offices v4.0*, refers to 'comfort conditions' when using an Owner Tenant Agreement (OTA) to define the rated premises' rated hours.

However, the issue has been raised that, due to lower occupancy levels from COVID-19, ratings using the OTA method would be penalised as they would not be able to meet the requirements of 'comfort conditions' as stated in the OTA. This would typically be taken as a temperature band of 21 ºC to 24 ºC.

Typically, NABERS has allowed the use of an OTA regardless of the actual occupancy levels of tenancies or the load placed on HVAC services to meet comfort conditions. Considering the extraordinary circumstances presented by COVID-19, NABERS is seeking to add flexibility to the OTA method for those affected sites.

NABERS is proposing two possible solutions that could be implemented to continue use of the OTA method during the COVID-19 shutdown period:

a) Define 'comfort conditions' with a wider temperature band that accounts for changes to comfort conditions due to lower occupancy (such as 20 ºC to 25 ºC); OR

b) Permit adjustment of the OTA method if it can be demonstrated that there is an additional agreement that allows for reduced service levels.

Focus Questions

1) Which of the above two proposals should the NABERS team incorporate for those sites affected by COVID-19?

2) For option a) above, what would be an appropriate temperature band for 'comfort conditions'?

3) Is there a more appropriate solution to the issue above that the NABERS team should consider?

Your response:

4 Indoor Environment Ratings

4.1 Proposal #4 – Accounting for changes to Carbon dioxide (CO_2) and Particulate Matter (PM_{10}) in Base Building IE ratings

Carbon dioxide (CO_2) and Particulate Matter (PM_{10}) are the two parameters in Indoor Environment (IE) ratings that will be most affected by the significant reduction in building occupancy. In addition, these two parameters have substantial weighting when calculating IE Base Building ratings.

To account for this, NABERS proposes that the value recorded during spot measurement be compared with the value recorded during the previous rating's spot measurement. If there is a deviation (e.g. greater than 20 %) then the previous rating's spot measurement values must be used, provided there have been no substantial changes to the building since the last rating.

Substantial changes to building are defined as situations where, compared to the last rated period:

a) There were significant changes in the occupancy within the building or changes to vacancy levels prior to the COVID-19 shutdown;

b) There were significant changes to the building's HVAC systems;

c) Major fitout works in the building have occurred or are in progress; or

d) Major construction near the building has occurred or is in progress.

For new ratings or for ratings that are impacted by substantial changes, it is proposed that the 50_{th} percentile benchmark value for CO_2 and PM_{10} be used in place of measured values.

This proposal does not apply to Whole Building or Tenancy IE ratings.

Focus Questions

1) Are there any other IE parameters that this proposal should apply to?

2) When comparing current spot measurements with the previous year's measurements, what should the deviation limit that would trigger use of the previous measurement be? For example, should it be 5 %, 10 % or 20 %?

3) Are there any other substantial changes not yet listed which could preclude use of this proposal?

4) Are there any issues with using the 50_{th} percentile benchmark values for situations where the spot measurement of the previous year is not available, or where there have been substantial changes?

Your response:

4.2 Proposal #5 – Annual temperature data

Initial stakeholder consultation has flagged that annual temperature data may be greatly impacted by fluctuations in building occupancy levels due to social distancing measures and other restrictions that vary the load on the building's HVAC system. While the impact is expected to be small initially, it is anticipated that the longer the occupancy levels are low, the greater the impact on the temperature data.

Proposed Solution

To resolve this, NABERS proposes the application of a 'normalising factor' to annual temperature data to correct for the reduced occupancy. This 'normalising factor' may be applied on a sliding scale depending on occupancy level.

The 'normalising factor' would be developed through modelling of the changes to rating based on occupancy level. As accuracy will depend on the data set used to model, NABERS is seeking current annual temperature data from stakeholders (see Section 2 for further details).

Alternative Solutions

The following further alternative methods to account for the changing circumstances have been raised for consideration, but each comes with challenges:

a) Allow 18 months' worth of temperature data from which the Assessor can choose any 12 months for use in a rating. This is not a preferred option due to seasonal variations in consumption data which, depending on the time period selected, may significantly vary the rating.

b) Allow the use of data from the month of the preceding year (for example replacing data from March 2020 with data from March 2019), if the context of the rating otherwise remains consistent with the preceding year (i.e. vacancy level and HVAC setup are unchanged). This is not the preferred option as it would mean reuse of old data.

Focus Questions

1) Do you support the proposed solution of developing a 'normalising factor'?

2) If not, which of the above two alternative proposals would you support?

3) Are there other alternative solutions to the issue above that the NABERS team should consider?

Your response:

5 Commitment Agreements

5.1 Proposal #6 – Ratings for Commitment Agreements

The low occupancy levels experienced by many buildings have major implications for Commitment Agreements, as NABERS ratings are used to prove the achievement of design energy efficiency targets in operation. Failure to address this issue could result in buildings artificially appearing to perform at a level of energy efficiency they are unable to maintain under normal operations.

Proposed Solution

Similarly to Proposal #2, NABERS proposes that a temporary moratorium on using consumption data recorded after 1 March 2020 is implemented on buildings certifying a rating for the purposes of a Commitment Agreement. Buildings that require the use of data during this period to complete their rating will be required to defer the lodgement of their rating.

NABERS intends to have a longer-term solution (see Section 3 of Proposal #1) in place by 30 June 2020 or earlier, after which, this Ruling will be rescinded and ratings for Commitment Agreement purposes will be able to use data post 1 March 2020.

Focus Questions

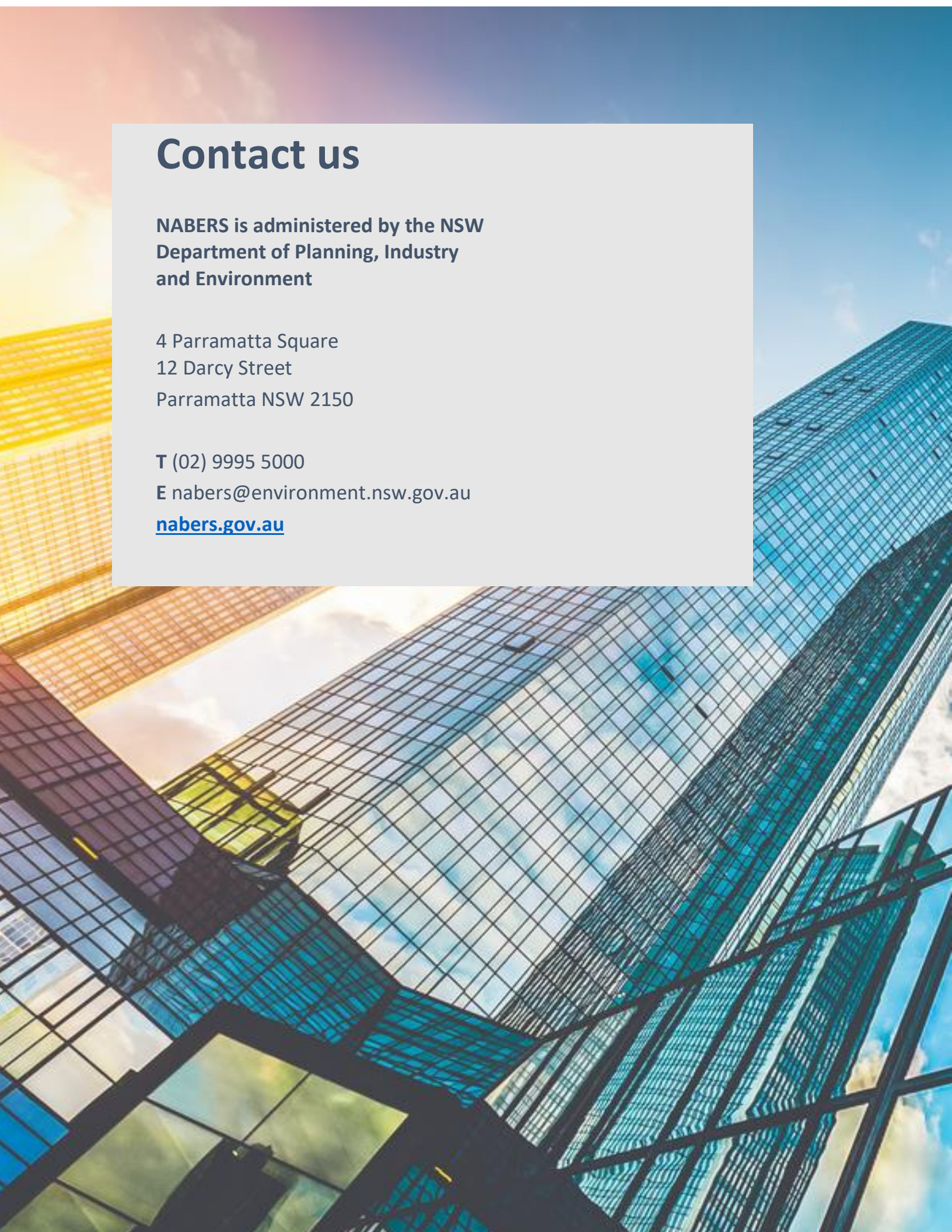
1) Do you agree with this proposal?
2) If not, what are your concerns with the proposal?

Your response:

6 Other Feedback

If you have any other feedback, please enter it below.

Your response:



Contact us

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

4 Parramatta Square
12 Darcy Street
Parramatta NSW 2150

T (02) 9995 5000
E nabers@environment.nsw.gov.au
nabers.gov.au