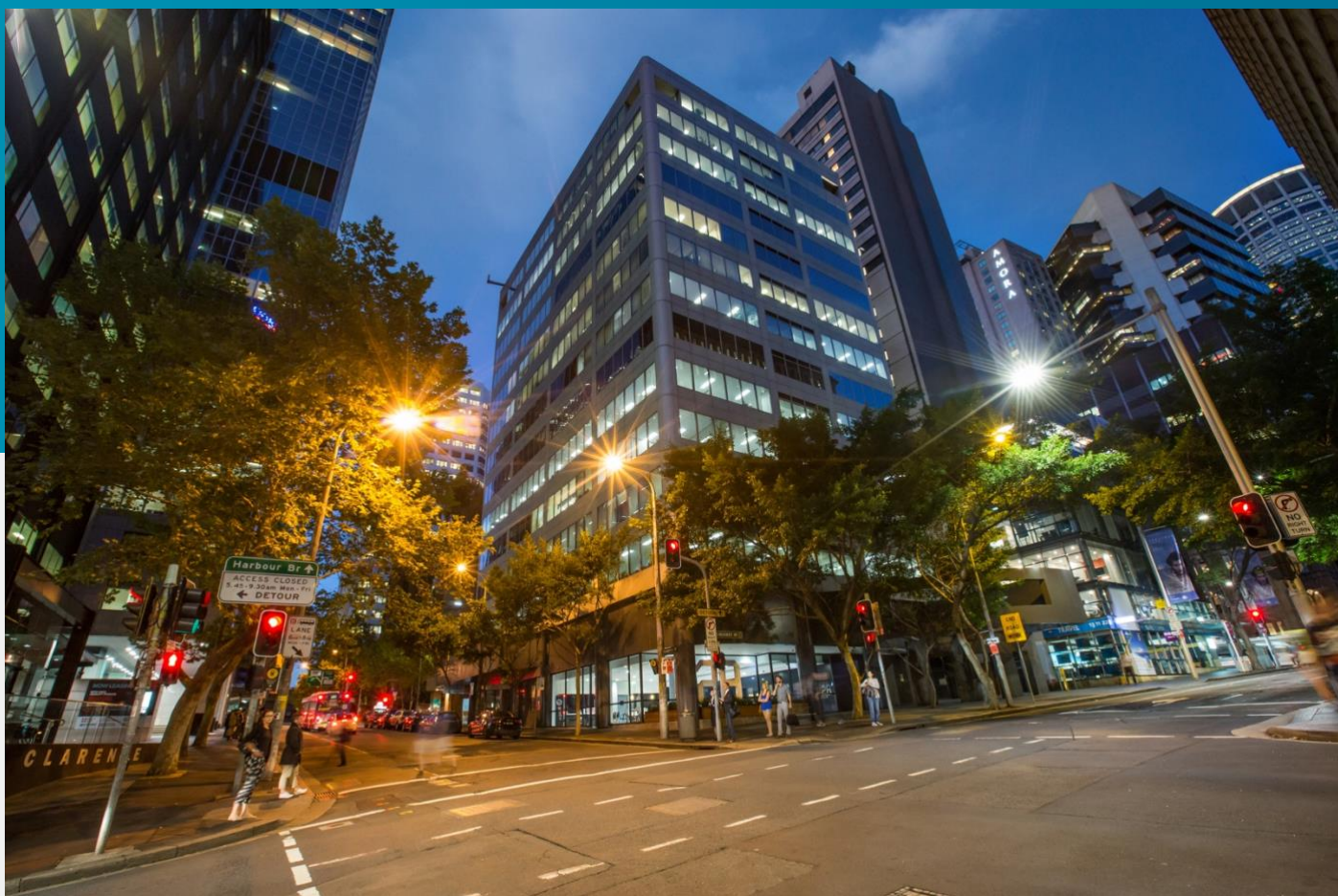


The Rules

Energy and Water for Offices

Version 4.1 – August 2020



Cover photo: Owned by Local Government Super and managed by Knight Frank Australia, 28 Margaret Street Sydney NSW was first rated in 2009 and has achieved a 6 star NABERS Energy rating every year since 2012.

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1 Introduction

1.1 Summary

The National Australian Built Environment Rating System (NABERS) is a performance-based rating system managed by the **National Administrator**.

NABERS ratings are expressed as a number of stars, for example:

NABERS rating		Performance comparison
6 stars	★★★★★★	Market leading building performance
5 stars	★★★★★	Excellent building performance
3 stars	★★★	Market average building performance

An accredited NABERS Energy or Water for Offices rating is awarded when the **National Administrator** certifies a rating completed by an **Assessor**. The **National Administrator** may independently audit the rating and assist in resolving complex technical issues.

The purpose of this document is to give clear requirements for **Assessors** when they are evaluating offices for their energy and water usage with the goal of providing a NABERS rating.

In the context of this document, 'offices' are understood as being workplaces primarily used for administrative, clerical and similar information-based activities.

This edition of the **Rules** (4.0) is significantly different to previous versions. Several chapters that are common across NABERS energy and water ratings have been removed to form an entirely new document entitled *NABERS The Rules – Metering and Consumption*. It is intended that this document, *NABERS The Rules – Energy and Water for Offices*, be read and used alongside *NABERS The Rules – Metering and Consumption*.

In addition to the **Rules**, an **Assessor** is to make use of relevant **rulings** and the **NABERS rating input form**.¹ A list of the documentation required in relation to this document is given in Chapter 8.

1.2 Interpretation of the Rules

Assessments for an accredited rating must comply with the version of the **Rules** and any relevant **rulings** current on the day the rating application is lodged to NABERS, unless—

- a) the **National Administrator** has specifically approved otherwise in writing, or

¹ The **Rules** are amended as required by additional **rulings** which are published on the NABERS website: www.nabers.gov.au

- b) the assessment is conducted under the terms of a NABERS Commitment Agreement which specifies an earlier version of the **Rules**.

A **ruling** takes precedence if there is any conflict with the **Rules**. If there is a conflict between **rulings**, the most recent takes precedence.

The implementation of these **Rules** is summarised in the following table:

Guidance for this Ruling	
Application	<p>These Rules will apply to office buildings seeking a NABERS Energy and/or NABERS Water rating.</p> <p>These Rules can be used from the date of release and are mandatory from midnight Monday 28th September 2020 onwards.</p>
Feedback and support	<p>Assessors are encouraged to provide feedback, as well as any concerns or queries, to the NABERS mailbox at nabers@environment.nsw.gov.au</p>

1.3 Situations not covered by the Rules

These **Rules** are intended to cover most office buildings. If an exceptional situation is encountered and the **Rules** are not easily applicable, the **Assessor** must contact the **National Administrator** for assistance.

Where an **Assessor** is unsure how to apply the **Rules**, the **National Administrator** may resolve the issue by making an interpretation of the **Rules** or by advising the use of a specific procedure that aligns with the intention of the **Rules**. Written correspondence from the **National Administrator** is required as evidence if this occurs.

Procedures not contained within these **Rules** may only be used for a particular rating with prior written approval from the **National Administrator**. Approval to use the same procedure must be sought from the **National Administrator** each time it is proposed to be used. Approval is entirely at the discretion of the **National Administrator**.

1.4 How to use this document

1.4.1 Overview

This document provides the framework for assessing offices in relation to the following elements:

- Rated area (Chapter 4);
- Rated hours (Chapter 5);
- Number of computers (Chapter 6); and
- Minimum energy and water coverage (Chapter 7).

Documentation requirements for accredited ratings are given in Chapter 8.

Detailed requirements regarding energy and/or water sources and supply points, **metering systems**, validation of metering systems and other types of consumption can be found in *NABERS The Rules – Metering and Consumption*.

1.4.2 NABERS Energy for Offices

Under the NABERS rating system, the number of stars awarded to an office is calculated by benchmarking energy consumption and comparing it against buildings of the same category, using 12 months of actual data. Key factors that influence this consumption, such as building area, hours of use, climate, equipment density etc., are taken into account depending on the **rating scope**. GreenPower™ purchases are also considered, but the rating without purchased GreenPower™ is also displayed.

The **rating scope** must be determined as per **Table 1.1** below:

Table 1.1: Scopes for NABERS Energy for Offices ratings

Type of rating	Scope
Base Building rating	Assessment of the energy consumed in supplying building central services to office Net Lettable Area (NLA) and common spaces.
Tenancy rating	Assessment of the energy consumed by the Tenancy to be rated. A tenancy rating typically covers lighting and power within the tenancy, as well as any special tenancy requirements or supplementary air conditioning equipment . A tenancy rating does not cover Base Building central services.
Whole Building rating	Assessment of the energy used by office Tenancies and by Base Building services to office lettable and common spaces.

1.4.3 NABERS Water for Offices

Under the NABERS rating system, stars for water consumption are awarded in the same manner as energy consumption. Water usage in the **rated premises** is compared to other buildings of the same category, over a 12-month period. The scope of Water for Offices ratings remains the same between Base Building and Whole Building ratings; it includes all water used for offices within the building.

Water for Offices ratings can be conducted at the same time as NABERS Energy for Offices Base Building or Whole Building ratings.

In addition, external recycled water purchases are taken into account, but the rating without purchased external recycled water is also displayed.

1.4.4 Formatting conventions and referencing

The term '**Rules**' refers to a body of works produced by NABERS that specify what must be examined, tested and documented when an **Assessor** conducts a rating. Wherever the term is used in this document from Chapter 4 onwards, it refers to this particular document, *NABERS The Rules – Energy and Water for Offices*. Wherever the document *NABERS The Rules – Metering and Consumption* is referred to, the title is also mentioned.

Notes and examples: Text appearing with a grey tint in the background is explanatory text only. It is not to be read as part of the **Rules** and/or is not essential for the proper use of this document.

Text appearing **dark green and bold** is a defined term (see Chapter 2).

All main references to documentation requirements appear *italicised and in aqua font*.

Internal cross references appear as numbered sections (e.g. Section 4.2) or chapters (e.g. Chapter 6) and are hyperlinked. Cross references to an individual **Rules** text (e.g. *NABERS The Rules – Metering and Consumption*) are numbered appropriately together with the title of the specific text.

1.5 What is new in this version?

A list of the main changes between this version and the previous version, including this minor update, is given in Appendix D.

1.6 Related Documents

NABERS The Rules – Metering and Consumption, v1.0, 2020

NABERS Energy for Data Centres – Rules for collecting and using data, v 1.1, 2014

NABERS Energy for Offices – Validation Protocol for Thermal Energy Exclusions, v2.0, 2008

NABERS Ruling – Shared Facilities, 2014

NABERS Ruling – Shared Services for Mixed-Use Buildings, 2015

Interim Methodology for the treatment of Cogeneration and Trigeneration Systems in NABERS ratings, v1.1, 2013

Building Owners and Managers Association (BOMA), *Method of Measurement*, 1989 or 2017

Building Owners and Managers Association (BOMA), *Method of Measurement (Net Rentable Area)*, 1985 or 2017

Commercial Building Disclosure, *What is a 'building' under the CBD program?*

The Property Council of Australia (PCA), *Method of Measurement: Commercial*, 2008 (1997 reprint)

2 Terms and definitions

This chapter lists the key terms and their definitions that are integral to the proper use of this document.

Term	Definition
acceptable data	Data which meets the applicable accuracy and validity requirements of these Rules .
acceptable estimate	<p>The values derived from an estimation method permitted by these Rules in place of incomplete or uncertain data.</p> <p>Estimates that do not satisfy the above specifications are deemed unacceptable and cannot be used in the rating.</p>
Assessor	An accredited person authorised by the National Administrator to conduct NABERS ratings for office buildings.
Auditor	A person contracted to the National Administrator to perform audits of NABERS rating applications.
co-assess	An application process that allows Tenancy, Base Building and Whole Building ratings to be conducted within the same application.
comfortable for office work	Where the conditions in a space, in terms of temperature and outside air supply, are suitable for reasonable, normal use as an office.
complete tenancy	<p>The NLA a single tenant occupies, including all office spaces and office support facilities in the building that are used together as an interrelated group of facilities to accommodate its business, no matter if they are on one or more floors and regardless of whether—</p> <ol style="list-style-type: none">the spaces are occupied on the basis of one or more leases or other agreements, andthose leases or agreements are nominally held by one or more associated entities on behalf of the tenant. <p>Facilities are not included in such an interrelated group if they are—</p> <ol style="list-style-type: none">physically distinct,managed independently,presented or branded distinctly, andindependent of one another for services. <p>For leases with one or more sub-leases, it is acceptable to either:</p> <ol style="list-style-type: none">consider the entire NLA under the head lease with the main tenant as a complete tenancy; orfor the sub-lease(s), separate and consider the NLA of the sub-lease(s) as individual complete tenancies, if sub-metering allows. <p>Note: For information on treatment of government tenancies, see Section 4.3.1.3.</p>

Term	Definition
computer server room	A room designed to accommodate computer and associated communications equipment that is separated from adjacent spaces by full-height walls and a door.
data centre	<p>A computer server room that comprises:</p> <ul style="list-style-type: none"> a) at least 5 % of the total office NLA of the rated building; or b) at least 25 % of the NLA of the floor on which it is located; or c) a room where at least 75 % of its capacity is dedicated to external users. <p>The combination of multiple computer server rooms is not considered a data centre.</p>
direct HVAC energy	<p>All energy associated with the provision of an HVAC service to the functional space with the exception of energy use associated with the operation of a tenant condenser water loop providing heat rejection for a supplementary air conditioning equipment.</p> <p>Note: A “tenant condenser water loop” is sometimes referred to as a “supplementary condenser water loop”.</p>
educational office facility	<p>An educational facility which occupies a tenancy within a commercial office building that is fit for office use and is serviced by the Base Building’s direct HVAC energy.</p> <p>Note: For more information, see Section 4.6.</p>
embedded network	<p>A private electricity network that is connected to the parent electricity network or ‘grid’.</p> <p>Note: Most office buildings in Western Australia, South Australia and Queensland use embedded networks for supplying office tenants and the Base Building systems.</p>
end use	A purpose or activity (or a group of related purposes and activities) that water or energy is used for.
exclusively for the use of office tenants	Where public access is not generally allowed by the office owner or leaseholder, except for receiving visitors to the office.
external user	<p>User of an IT or communication service provided from a facility sited in the rated premises, who is not an occupant of the rated premises.</p> <p>Note: An occupant who uses the service internally from the rated premises and who may also access the network or system remotely (such as from home or another work location) is not an external user.</p>
fit for office use	Fit for continuous occupation as an office, with adequate lighting and with suitable ventilation (such as air conditioning, natural ventilation or mixed-mode operation) of a similar or higher standard of service to the bulk of the office.

Term	Definition
fitout works	A construction activity undertaken to install, remodel, replace or remove an office fitout.
functional space	A space identified by an Assessor as a distinct space in accordance with Section 4.4.
measurement standard for rated area	<p>The standard used for determining the Net Lettable Area (NLA) of a rated premises, as set out in</p> <ul style="list-style-type: none"> a) The Property Council of Australia (PCA), <i>Method of Measurement: Commercial</i>, 2008 (1997 reprint); or b) Building Owners and Managers Association (BOMA), <i>Method of Measurement</i>, 1989 or 2017; or c) Building Owners and Managers Association (BOMA), <i>Method of Measurement (Net Rentable Area)</i>, 1985 or 2017.
meeting room	<p>A room designed to accommodate meetings for short periods of time on a temporary basis, as opposed to a permanent working area.</p> <p>A meeting room is separated from adjacent spaces by full-height walls and a door.</p>
medical office facility	<p>A doctor's surgery, dentist's surgery or other facility operated by a health professional (e.g., physiotherapist) that occupies a tenancy within a commercial office building that is fit for office use and is serviced by the Base Building's direct HVAC energy.</p> <p>Note: For more information, see Section 4.6.</p>
metering system	<p>A system of one or more devices providing an individual measurement.</p> <p>Note: For further information, refer to <i>NABERS The Rules – Metering and Consumption</i>.</p>
NABERS rating input form	<p>The rating input form provided by NABERS for use by Assessors in the calculation of accredited ratings.</p> <p>For NABERS ratings for Offices, this is in the NABERS Rate application.</p> <p>For NABERS co-assess ratings, this is the NABERS Co-Assess Office Rating Calculator.</p>
National Administrator	<p>The body responsible for administering NABERS, in particular —</p> <ul style="list-style-type: none"> a) establishing and maintaining the standards and procedures to be followed in all aspects of the operation of the system, and b) determining issues that arise during the operation of the system and the making of ratings, and c) accrediting Assessors and awarding accredited ratings in accordance with NABERS standards and procedures. <p>The functions of the National Administrator are undertaken by the NSW Government through the Department of Planning, Industry and Environment.</p>

Term	Definition
Net Lettable Area (NLA)	<p>The floor area, determined in accordance with the measurement standard for rated area, of spaces that can be used as offices within the rated premises.</p> <p>Note: This is essentially the space within the permanent walls of the building, but excluding spaces for:</p> <ul style="list-style-type: none"> a) Public access and use (including stairs, escalators, lift lobbies and passageways); b) Building mechanical, air conditioning, electrical and other utility services; c) Staff and cleaning facilities (including toilets, tea rooms, and cleaners' cupboards). <p>The Assessor should refer to the relevant measurement standard for rated area documents for a definitive list of inclusions and exclusions.</p>
occupied	<p>A space within the NLA of a building that—</p> <ul style="list-style-type: none"> a) for Base Building ratings – is ready for occupation, b) for Tenancy ratings – is ready for occupation and being actively used as an office, including use as an office support facility, c) for Whole Building ratings – is ready for occupation and either being actively used as an office (this includes use as an office support facility) or undergoing fitout works.
office	<p>A workplace primarily used for administrative, clerical and similar information-based activities, including the associated office support facilities.</p> <p>Note: For reasons of readability, this term is not highlighted throughout this document.</p>
office support facility	<p>A facility which—</p> <ul style="list-style-type: none"> a) is an adjunct to an office used primarily to provide supporting facilities or services to the office or its occupants, and b) is exclusively for the use of office tenant, and c) occupies a space which is fit for office use. <p>This includes facilities for reception, meetings, training, filing and storage, IT and other office equipment, tenant-installed kitchenettes and staff amenities. It can also include child care, refreshment, recreation, and exercise facilities, as long as they are only available for use by office tenants in the rated premises.</p>

Term	Definition
Owner/Tenant Agreement (OTA)	<p>An OTA refers to a document that:</p> <ul style="list-style-type: none"> a) is a mutual agreement between the landlord and a tenant representative with adequate authority; and b) clearly defines the space and the period of time for which the agreement is made; and c) defines hours of use for the space considered (OTA Hours); and d) is in a format that can be relied upon by the tenant for operational complaints and lease (re)negotiation. <p>The OTA could be the lease agreement or any other written correspondence between the tenant and owner as long as the conditions above are met.</p>
potential error	<p>The total of all acceptable estimates (including assumptions, approximations, and unverified data) included in the rating assessment. The NABERS rating input form automatically calculates the potential error based on the data provided.</p>
public access space	<p>A space that members of the public have access to.</p>
rated area (for an entire rating)	<p>The final area determined by following the process described in these Rules.</p>
rated hours (for a functional space)	<p>For each functional space, the total number of hours per week determined by using one or a combination of the methods described in these Rules.</p>
rated hours (for an entire rating)	<p>For an entire rating, the area-weighted average of the rated hours for all functional spaces included in the rating.</p>
rated premises	<p>The tenancy or building to be rated.</p>
rating period	<p>The 12-month base period for the rating, requiring at least 12 contiguous months of acceptable data upon which the rating is based.</p>
rating scope	<p>The scope of the rating – either Base Building, Whole Building or Tenancy (see Table 1.1).</p>
rating type	<p>Type of rating – such as energy or water.</p>
ready for occupation	<p>A space within the NLA of a building when a person or organisation:</p> <ul style="list-style-type: none"> a) is entitled to exclusive use of the space (e.g., through ownership or a lease or other agreement); and b) requires normal base building services, such as access, air conditioning, lighting and power to be provided to the space.
Rules	<p>Authoritative document produced by the National Administrator that specifies what must be covered by an Assessor in order to produce a rating.</p>

Term	Definition
ruling	An authoritative decision by the National Administrator which acts as an addition or amendment to this document.
special tenant requirement	An unusual usage of office space or office support facility (e.g., a ‘trading floor’ within an office), resulting in an increased consumption of one or more services or a requirement for additional services to achieve comfort conditions.
supplementary air conditioning equipment	Equipment that supplements the typical capacity provided by the Base Building air conditioning system.
Tenant Occupancy Survey (TOS)	<p>A survey of the staff managers or supervisors responsible for the functional spaces in the rated premises, conducted in accordance with these Rules.</p> <p>Note: For more information, see Section 5.3.4.</p>
utility	<p>An organisation or company that holds a licence to retail electricity, gas or water, and that sells energy or water as its primary business.</p> <p>This definition excludes:</p> <ul style="list-style-type: none"> a) Landlords which on-sell electricity or water where they neither hold a licence nor have an exemption deemed valid by the National Administrator for needing a licence; b) Third party contractors, such as meter reading providers.
validity period	The post-certification period during which the rating is valid for up to 12 months.

3 Key concepts and procedures

3.1 Eligibility criteria

3.1.1 Base Building and Whole Building ratings

A building is considered eligible for a NABERS Base Building or Whole Building rating if **all** of the eligibility criteria detailed below are met:

- a) Building type: during the **rating period**, the building or part of the building was used as an office, or, if unoccupied, capable of being used as an office.

Note 1: Purpose-built educational buildings (e.g. a school or non-office buildings on university campuses) or medical centre buildings are not considered **educational office facilities** or **medical office facilities** as they are not a tenancy within a commercial office building. Therefore, they cannot be assessed for a NABERS Energy and Water for Offices rating.

- b) Building consumption data: less than 80 % of the building's total office **NLA** has been excluded due to lack of consumption data using the method described in Section 4.5.6.
- c) Building energy or water coverage: the minimum energy or water coverage for the **rating scope** and spaces included is met, as described in Chapter 7.
- d) New buildings and major refurbishments: new buildings or buildings undertaking major refurbishments are eligible for a NABERS rating as soon as 12-months of a **rating period** can be completed. In these cases, the **rating period** can start as soon as one of the following conditions is met (whichever occurs first):
 - 1) 75 % of the office **NLA** is **occupied** by tenants; or
 - 2) It has been two years since the certificate of occupancy (however described in the relevant jurisdiction) was issued.

Note 2: Buildings with high levels of vacancy are eligible for a NABERS rating to be conducted.

3.1.2 Tenancy rating

A tenancy is considered to be eligible for a NABERS Tenancy rating if all of the eligibility criteria detailed below are met:

- a) Tenancy type: the tenancy is used as, or, if unoccupied, capable of being used as, an office.
- b) Tenancy consumption data: less than 80 % of the **complete tenancy** office **NLA** has been excluded due to lack of consumption data (see Section 4.5.6).
- c) Tenancy energy coverage: the minimum energy coverage for the Tenancy rating and spaces included is met, as described in Chapter 7.

- d) **New buildings and major refurbishments:** tenancies in new buildings or in buildings undertaking major refurbishments are eligible for a NABERS rating as soon as 12-months of a **rating period** can be completed. In these cases, the **rating period** can start as it has been two years since the certificate of occupancy (or equivalent in the relevant jurisdiction) was issued.

Note: Tenancies with high levels of vacancy are eligible for a NABERS rating to be conducted.

3.1.3 Multiple building versus single building ratings

NABERS ratings are for single buildings.

The following list must be consulted in cases where it is unclear whether there is a single or multiple buildings present. A majority of the following features is evidence of a single building:

- a) A common entry point for occupants;
- b) Interconnected access or the potential for interconnected access between areas;
- c) Central shared provision of the common services, such as heating and cooling;
- d) Capacity to be offered to a tenant as one building;
- e) Single owner;
- f) Buildings constructed at the same or within a short period of time of each other (within 2 years) and the original design allowed for the additional construction;
- g) Potential for Disability Discrimination Act (DDA) compliant travel horizontally between the buildings without using basement, car park or plant rooms;
- h) Single public street address (i.e. the address the building is known publicly by);
- i) Single LOT number;
- j) A reasonable person would assume it is one building.

Note: For further details on what constitutes a building, the **Assessor** should refer to the guidance note [“What is a building under the CBD program”](#).

If the majority of these features are not met, more than one building may be present. Sufficient metering must be installed on each building for the buildings to be rated separately.

Exceptions may be made by the **National Administrator**. Examples of exceptions may include:

- 1) Where it is not physically possible to install separate metering;
- 2) For a period of time until adequate metering can be installed;
- 3) Where there is a very small separate building on a site, that on its own would not warrant a separate rating.

Where **Assessors** are unsure if buildings should be separated for rating purposes, they should contact the **National Administrator**. The **National Administrator** reserves the right to determine what is considered a majority of features on a case-by-case basis.

3.2 The rating period

A NABERS rating is based on a 12-month **rating period**. Once certified, the rating is valid for a further 12 months after the **rating period**. This is called the **validity period**.

It takes time for the **Assessor** to complete a rating. Therefore 120 days is given to lodge the rating after the end of the **rating period**. Ratings lodged after the 120 days will have a reduced **validity period** to ensure all ratings are based on current data.

The **Assessor** must respond to all questions from the **National Administrator** within 10 working days to avoid impacting the validity of the rating.

More information on the **rating period**, **validity period** and time limits for submission can be found in Appendix C.

3.3 Standards for acceptable data and acceptable estimates

3.3.1 General

An assessment for an accredited NABERS for Energy or Water for Offices rating must be based on the **acceptable data** or **acceptable estimates** specified in the **Rules** (including applicable **rulings**) or as directed by the **National Administrator**.

Data and estimates must be of an acceptable standard. The decision process for determining **acceptable data** and **acceptable estimates** in Sections 3.3.2 and 3.3.3 below must be followed, except where another process is specifically allowed by a provision of these **Rules**.

Note: Specific procedures related to standards for **acceptable data** and **acceptable estimates** in individual sections of these **Rules** take precedence over the standards in Section 3.3.2 and 3.3.3 below. Where specific procedures are followed, the requirement for compliance with Sections 3.3.2 and 3.3.3 is deemed to be satisfied.

3.3.2 Acceptable data

If accurate and verifiable **acceptable data** is available, it must be used. Where a section of the **Rules** allows more than one type of data source to be used and no particular priority is given, the following order of preference applies:

- a) Data obtained directly by the **Assessor**;
- b) Data provided by a third party without a significant interest in the operation or performance of the building or its equipment (such as an energy or water **utility**), including:
 - 1) Documents or other records provided by a third party which can be verified by the source (e.g., **utility** bills); or
 - 2) Documents or other records which cannot be independently verified but whose authenticity and accuracy is attested to by a credible and responsible person without a conflict of interest; or

- 3) Written information provided by a credible and responsible person, which includes their full name, position and contact details of the person giving the information; or,
 - 4) Verbal information provided by a credible and responsible person, recorded in writing by the **Assessor** with the full name, position and contact details of the person giving the information.
- c) Data provided by the owner commissioning the rating, or a third party with a significant interest in the operation or performance of the building or its equipment (such as a facility manager, technical contractor or equipment supplier), including:
- 1) Documents or other records provided by a party to an agreement or transaction which can be verified by another party to the same agreement or transaction (e.g., contracts or other legal agreements);
 - 2) Documents or other records which cannot be independently verified but whose authenticity and accuracy is attested to by a credible and responsible person without a conflict of interest; or
 - 3) Verbal information provided by a credible and responsible person, recorded in writing by the **Assessor** with the full name, position, and contact details of the person giving the information.

3.3.3 Acceptable estimates

If **acceptable data** is not available, estimates (including assumptions, approximations and un-validated data) can be used if they are deemed to be **acceptable estimates** in accordance with these **Rules**.

Acceptable estimates must total to no more than $\pm 5\%$ of the overall rating greenhouse gas emissions or water consumption, as calculated when using the **NABERS rating input form**. Where they are greater than 5% , the building cannot be rated until sufficient **acceptable data** and/or **acceptable estimates** have been obtained.

Refer to Section B.5 for more information.

3.4 Site visits

Assessors are required to inspect the **rated premises** in order to:

- a) Become familiar with the layout, services and features of the **rated premises**;
- b) Confirm that documentation provided for the assessment is accurate, complete and up-to-date;
- c) Check that all required spaces have been included in the **NLA**;
- d) Check for inclusions in and exclusions from the **rated area** calculation and energy and water coverage (as appropriate);
- e) Confirm energy and/or water sources;
- f) Count computers (for Tenancy and Whole Building ratings);

- g) Visit plant rooms and switch rooms to ensure that all relevant equipment is covered under the meters included in the rating; and
- h) Resolve any other issues that arise.

The inspection must occur during the **rating period** or during the 120 days period following the **rating period**.

A physical check of all **functional spaces** is required during an **Assessor's** inspection of the **rated premises**.

There may be circumstances where access to part of the building is refused due to safety or security concerns. If this occurs, the **Assessor** must explain why they could not access these spaces and fully document this in the **NABERS rating input form**. Any known impacts on the quality of the information obtained for the assessment must also be fully described (e.g. an **acceptable estimate** must be used in the absence of **acceptable data**).

Only **Assessors** can undertake a site inspection for a NABERS rating. If the **Assessor** cannot conduct the site visit, they may only delegate this task to another **Assessor** accredited specifically for offices.

The **Assessor** lodging the rating is responsible for the accuracy of the data. The **Assessor** must obtain and retain all the evidence required to prove their assumptions for auditing purposes, including but not limited to the documentation requirements listed in Chapter 8.

If there are significant difficulties visiting the site, the **National Administrator** must be notified.

3.5 Documentation and record keeping

3.5.1 Documentation required

An assessment may be based on copies of original documents such as utility bills, signed leases and other records, as long as the **Assessor** is satisfied that they are, or can be verified to be, true and complete records of the original documents or files. Access to original documents is highly desirable if they are available. Partial copies of original documents must be sufficient to identify the original document including date, title and file name.

3.5.2 Record keeping for auditing purposes

Assessors must keep all records on which an assessment is based.

The records kept by **Assessors** must be to such a standard that it would be possible for another **Assessor** or an **Auditor** to accurately repeat the rating using only the documents provided. This includes records of assumptions and all information and calculations used as the basis for **acceptable estimates**. The records kept must be the actual documents used for the assessment or verifiable copies. Summaries or other derivative documents that quote the original source documents are not acceptable, even if prepared by the **Assessor** from original documents.

Digital copies of documents are considered acceptable in all cases.

Records must be kept for seven years from the date the rating application was lodged and be made available for audit on request. **Assessors** remain responsible for ratings they have conducted, even if they move companies.

A list of the usual documentation for a rating is presented in Chapter 8, however, additional documentation may also be required to permit an **Auditor** to accurately repeat the rating using only the documents provided.

4 Rated area

4.1 Summary

There are several factors which impact the consumption of energy and water in an assessment and therefore affect a NABERS Energy and Water for Offices rating. The first of these factors is **area**. The **rated area** must be correctly determined to allow for fair comparison.

For documentation requirements, see Section 8.1.

4.2 Process overview

The process for determining the **rated area** is as per **Table 4.1** below for all **rating scopes**. Calculations for **rated area** are given in Section B.1.

For a stand-alone NABERS Water for Offices rating, the area calculation process for a NABERS Energy for Offices Base Building rating must be followed.

Table 4.1: Determining rated area

Step		Reference
1	Determine the total office NLA for the rated premises	4.3
2	Divide the total office NLA into easily workable functional spaces with separate spaces, vacancies and hours of operation	4.4
3	For each functional space , determine if the space must be excluded	4.5
4	Add up only the resulting included functional space areas to obtain the net office NLA	N/A
5	Cap the inclusion of public access space to a maximum of 10 % of the net office NLA	4.6.2
6	For Base Building ratings only, determine spaces qualifying as medical or educational office facilities and cap their inclusion to a maximum of 25 % of the net office NLA	4.6.3
7	Adjust for unoccupied spaces	4.7
8	The sum of the resulting occupation-weighted functional space NLA included in the rating is the rated area	N/A

The **NLA** is the starting point for calculating the **rated area**. The **Assessor** must then divide the **NLA** into **functional spaces**, determine exclusions, limit the proportion of medical or educational facility spaces and **public access spaces** and finally assess vacancies. This will require copies of plans, leases and site investigation.

Example: A floor might be verified to the **measurement standard for rated area**, but for convenience of hours calculations, it might have several **functional spaces** measured from not-to-scale layouts. Since the overall area is verified, there is no need to add the **functional space** floor areas to the **potential error** for area.

4.3 Determining office Net Lettable Area

4.3.1 General

4.3.1.1 Base Building and Whole Building ratings

For Base Building and Whole Building ratings, the **Assessor** must consider the **NLA** of all spaces that are leased or available for lease for office tenancies in the building.

4.3.1.2 Tenancy ratings – complete or separate

For Tenancy ratings, the **Assessor** must consider the **NLA** of all spaces that are included in the **complete tenancy** being rated.

4.3.1.3 Treatment of government tenancies

All tenancies that can be attributed to a single government jurisdiction (e.g. a state government or federal government) may be treated as a single **complete tenancy** for that government jurisdiction or as separate tenancies.

A useful example is an office building that contains a Department of Justice tenancy and a Department of Education tenancy. As both tenancies are from the same government, they may be rated either as a single government tenancy or as separate tenancies if metering allows.

This does not apply to state or federal corporations, such as *Sydney Water* or the *Clean Energy Finance Corporation*. These must be treated as individual tenancies in their own right.

For documentation requirements, see Section 8.2.1.

4.3.2 Standard for acceptable data

The office **NLA** of the **rated premises** must be verified by the **Assessor** to have been measured in compliance with the **measurement standard for rated area**, by one of the following methods (listed in order of preference):

- a) Reference to a third-party survey or to lease documentation that is explicitly based on the **measurement standard for rated area**, or, if not available;
- b) Direct measurement from current plans or scaled prints, measured to the **measurement standard for rated area**, or, if not available

- c) Site measurements verified by the **Assessor** to have been done to the **measurement standard for rated area**.

Regardless of the method used to determine the **NLA**, the **Assessor** must ensure that the information accurately reflects the configuration of the building and its uses during the **rating period**. Survey information must be checked through a site inspection to ensure the space has not been altered, for example by the introduction of corridors to serve multiple tenancies. **Assessors** must also confirm that the **measurement standard for rated area** has been interpreted correctly.

An unverified tenancy schedule is not a suitable document on which to base the **NLA** assessment.

Note: This effectively means that, for any rating, all non-**NLA** spaces including common areas, purpose built retail facilities and accessways must be disregarded as they cannot be considered as **NLA**.

4.3.3 Area measurement estimates

If the office **NLA** of the **rated premises** cannot be verified by the **Assessor** in accordance with Section 4.3.2, then the estimated area of that space must be added to the **potential error** for area.

Note: Subdivision of spaces is not as critical as overall areas. For example, a floor might be verified to the **measurement standard for rated area**, but for convenience of hours calculations, it might have several **functional spaces** measured from not-to-scale layouts. Since the overall area is verified, there is no need to add the **functional space** floor areas to the **potential error** for area.

4.4 Dividing the office Net Lettable Area into functional spaces

4.4.1 General

After determining the office **NLA** of the **rated premises**, this office **NLA** must be divided into **functional spaces** in order to calculate the effects of vacancies and differing operational hours across the total office **NLA**. These spaces should be based on existing functional distinctions such as physical boundaries, leases, or operational divisions.

Most **office support facilities** do not need to be separated into their own **functional spaces** as they will have the same periods of occupation and operating hours as the office space. For Tenancy and Whole Building ratings, **office support facilities** (besides **computer server rooms**) are only required to be separated out into their own **functional space** when there is a significant difference in period of occupation or operating hours.

For documentation requirements, see Section 8.2.2.

4.4.2 Minimum requirement for division of office NLA

For all ratings, a **functional space** must be the smallest of the following:

- Each individual contiguous floor plate of the building (i.e. for buildings with multiple units or towers, this refers to each floor of each unit or tower); or
- Each individual and distinct tenancy, regardless of its size; or

- c) Within any tenancy, any section that must be treated as distinct because of a significant difference in period of occupation or operating hours. This must include:
 - 1) Spaces in which significant construction activity has taken place for fit-out works during the **rating period**; and,
 - 2) Spaces associated with different AHAC zones and AHAC hour counts or **office support facilities** that have a significant difference in operating hours to the surrounding office space.
- d) Any **computer server room** or series of contiguous **computer server rooms** that constitute more than 5 % of that respective floor plate's **NLA**; or
- e) Any **meeting room** or series of contiguous **meeting rooms** that constitute more than 10 % of that respective floor plate's **NLA** and have supplementary air conditioning or hours of operation that are different to the surrounding offices.

In addition, any space which meets either of the following two conditions must also be separated into its own **functional space** for the purpose of exclusion under Section 4.5.6:

- i) **Acceptable data** or **acceptable estimates** of energy and/or water consumption (as relevant, within the coverage of the rating) is not available for reasons beyond the control of the **Assessor** or customer; or
- ii) Where it is not possible to include all the energy required to be included under the energy coverage (typically because of supplementary air conditioning that has been allocated to the Base Building under Section 7.3 but is not on the Base Building meter).

This provision does not apply to any **computer server room** or **meeting room** not required to be separated under provisions (d) and (e) above.

Note 1: The requirements in this section are intended to make it easier for the **Assessor** to separate independent spaces and record the necessary data, not to fragment the **NLA** into multiple similar spaces for no real benefit.

Note 2: Small **office support facilities** whose operating hours depend on the spaces nearby should be treated as an integrated component of the surrounding office space. They should not normally be separated out into a different **functional space**. However, if the **Assessor** judges that the division of office **NLA** into smaller spaces will improve the rating accuracy, such a division can be deemed acceptable.

Example: **Computer server rooms** that make up less than 5 % of the floor plate **NLA** for Whole Building and Tenancy ratings. These could be separated into separate **functional spaces** to better reflect the hours for these spaces which are usually serviced by tenant **supplementary air conditioning equipment** 24/7.

For documentation requirements, see Section 8.2.2.

4.5 Excluding functional spaces

4.5.1 General

After dividing the office **NLA** into **functional spaces**, the **Assessor** must determine the nature of each of the **functional spaces** and include or exclude them as required.

The following must be excluded from the **rated area** calculation:

- a) Spaces within the office **NLA** that have not been used as offices (as per the requirements of Sections 4.5.2 and 4.5.3) during the **rating period**;
- b) **Computer server rooms** or other **office support facilities** as per the requirements of Sections 4.5.4 and 4.5.5;
- c) Spaces with no consumption data.

This ensures that ratings are consistently based on office usage of buildings, and provide a fair comparison between different offices.

Note 1: Exclusions are only considered *after* calculating the office **NLA** as described in Section 4.3. The criteria in this section cannot be applied to areas that are not within the office **NLA**, as these are never included in the **rated area** calculation.

Note 2: The energy or water consumption associated with an excluded space may still need to be included in the assessment in accordance with Chapter 7.

Note 3: For consistency and ease of auditing, the area of spaces which have been excluded should be entered into the **NABERS rating input form** but their occupancy days should be marked as 0. This area can be approximated by the **Assessor** as it is not used in the calculation of the NABERS rating.

For documentation requirements, see Section 8.2.3.

4.5.2 Excluding spaces that are office NLA subject to commercial negotiation

The **measurement standard for rated area** offers provision for spaces that do not fit the definition of **NLA** to be counted as such, subject to commercial negotiations between the building owner and the tenant. Such spaces must be excluded from the **rated area** unless all of the following conditions are met:

- a) There is documented evidence that such spaces have been considered as **NLA** following commercial negotiations between tenants and the building owner; and
- b) The spaces are **fit for office use**, and are actually used to accommodate office spaces (as opposed to **office support facilities**); and
- c) The spaces are not located within a building foyer, atrium, lift, lobby, car parking spaces or dedicated walkway.

Note: Spaces such as foyers and lobbies are present in most office buildings, and typically neither are used as offices nor meet the definition of **NLA**. However, the **measurement standard for rated area** does allow spaces such as these to be included in the building's **NLA** if commercial negotiations between owners and tenants allow it. Despite this, NABERS does not allow these spaces to be included in the **rated area**. The reason for this is that including these spaces artificially increases the **rated area**, and can make the building appear to perform better than the same building that has not included these areas. Hence the requirements of this Section 4.5.2 ensure a fair comparison between buildings can be made irrespective of these commercial negotiations.

For documentation requirements, see Section 8.2.3.

4.5.3 Excluding spaces that cannot be considered offices

A **functional space** area must be excluded when:

- a) It is either not used, or not available to be used for, accommodating an office or an **office support facility**. This applies whether or not these spaces were primarily intended as office accommodation; or,
- b) It is not **occupied** for all or part of the **rating period** (as per Section 4.7 for each **rating scope**); or,
- c) It is not **fit for office use**.

It is not necessary to exclude a space with a floor area less than 5 m² unless it is a well-defined separate facility (e.g., surrounded by walls). However, where several similar excludable spaces or facilities are located next to each other, they must be considered to be a single group and not individual items. See **Table 4.2** and **Figure 4.1** below for examples.

For documentation requirements, see Section 8.2.3.

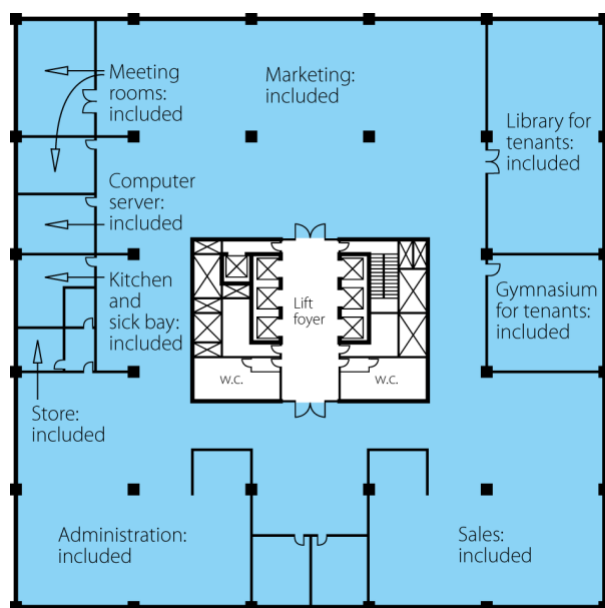
Table 4.2: Examples of area exclusions

Example	Interpretation
A space originally designed for office accommodation but not used as an office – such as a suite of training rooms for hire, a commercial art gallery, a showroom, an information centre	Excluded. They are not used as offices or office support facilities
A space designed for retail accommodation, considered as Gross Lettable Area Retail (GLAR) but used as an office space Example: A tenancy in a shopping centre used as an accountant's office.	Excluded. The space is not considered as office NLA
Spaces used primarily for providing services to the public	
Retail spaces selling goods and products (shops)	Excluded. They are not used as offices or office support facilities . They are retail outlets
Government spaces open to public including Centrelink and Medicare	Limited inclusion. Customer service areas requiring appointments or escort can be considered as office spaces. Waiting areas are still considered as public access spaces and must be included in the 10 % allowance of public access spaces
Other tenancy spaces with a primary purpose of providing services to walk-in customers; and where the office portion supports the retail space Example: Bank branch open to the public, post office, real estate agency, travel agency, information centre, print shop.	Excluded. These are retail outlets




Example	Interpretation
Commercial cafeterias and cafés	
Exclusively for the use of office tenants (and their visitors)	Included. They are office support facilities
With public access (but can also be used by tenants)	Excluded. They are retail outlets
Gymnasiums, child minding centres, treatment rooms and similar	
Exclusively for the use of office tenants (and their visitors)	Included. They are office support facilities
With public access (but can also be used by tenants)	Excluded. They are retail outlets
Call centres and trading rooms	Included. They are high-density office spaces
Breakout spaces, meeting rooms , eating areas or tea rooms and kitchenettes built as part of the tenant fitout	Included. They are office support facilities
Tenant-fitted-out toilets and showers	
Toilet and shower facilities with an area over 5 m ²	Excluded. Although they are office support facilities , they are not fit for office use
Small ‘ensuite’ toilets, etc., with individual floor area under 5 m ²	Included. Although they could be excluded as not fit for office use , this is not required as the area is so small
End of trip facilities	Excluded. Although they are office support facilities , they are not fit for office use
Change rooms (within the NLA)	
Integral to the toilet and shower facility, with only exhaust air systems and low-level lighting	Excluded. Although they are office support facilities , they are not fit for office use
Partitioned-off office space with air conditioning and lighting as for the rest of the office	Included. They are office support facilities , and located in spaces fit for office use
Storage spaces	
A chain-wire enclosed store in the basement	Excluded. This space is not (and cannot become) fit for office use
A similar enclosed space within the fitted-out tenancy floor	Included. This is an office support facility and is fit for office use
An archival store with lighting, temperature and humidity settings for preserving paper, not for comfort	Excluded. This space is not fit for office use .

Example	Interpretation
A compactus file storage facility within the fitted-out tenancy floor with air conditioning and lighting as for the rest of the office	Included. This is an office support facility and is fit for office use
Other spaces	
A professional library in a lawyer's or consultant's office	Included. This is an office support facility for professional work
A public library in an office building	Excluded. This is a facility for the general public and is not an office
A large vault designed as a secure store (such as for paper or gold) and not for continual occupation by people	Excluded. Even if empty, this store is not fit for office use
The same vault that is part of the NLA , converted to office space with air conditioning and lighting	Included. Although originally a store, the space is now fit for office use
Building Manager's office, where it is not part of the NLA and therefore not leased	Included. If the space is serviced at the same condition as the surrounding office space and there is a lease in place Otherwise, Excluded. The space is not part of the NLA (not lettable)
Basement areas	
A basement area not fit for continual occupation by people	Excluded. The space is not fit for office use
A basement area part of NLA and converted to office space and fit for office use	Included. This is an office space and is fit for office use
A basement area that is not part of NLA but has been converted to office space and is fit for office use	Excluded. This space is not office NLA
An enclosed store in the basement part of NLA that is fit for office use and currently used as a storage space	Included. The space is fit for office use and is used as an office support facility

The following diagrams in **Figure 4.1 a), b) and c)** represent an office building over three levels and show how the areas are to be treated:



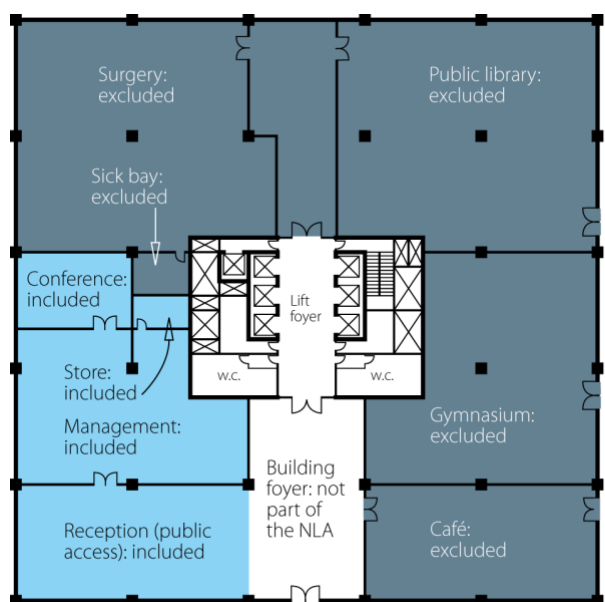
a) Level 1 Office building

-  Not part of the NLA
-  NLA and included in the Rated Area
-  NLA but excluded from the Rated Area




Level 1

Spaces for public access and use (e.g. lifts, stairs and passageways, building services, staff facilities and cleaning facilities) are not part of the NLA.

The library, gymnasium and sick bay on Level 1 are office support facilities exclusively for use by the tenants, therefore they are included in the Rated Area.



b) Ground level Office building

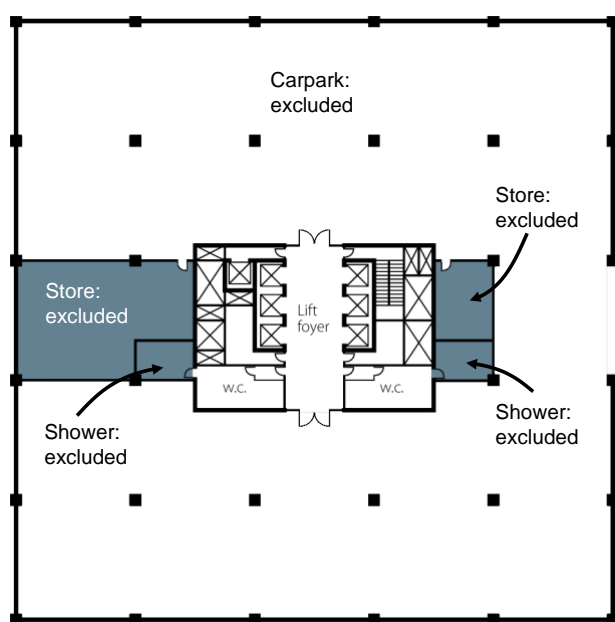
-  Not part of the NLA
-  NLA and included in the Rated Area
-  NLA but excluded from the Rated Area



Ground level

The café, library, gymnasium, surgery (and its sick bay) on the ground level are not office spaces or office support facilities and not exclusively for use by the tenants, so they are excluded from the Rated Area.

The store next to the management area is an office support facility, therefore it is included in the Rated Area.

Note: It can be seen that the two gymnasiums (Level 1 and ground level) are treated differently depending on their use, so the defining criteria is not so much the actual function of the space but the way it is used by the occupants in the context of a specific office.



-  Not part of the NLA
-  NLA but excluded from the Rated Area

Basement

The carpark is not part of the NLA, so it is excluded from the Rated Area.

The shower and change rooms were fitted out by the tenant, exclusively for use by the tenant, but they are not fit for office use so they are excluded from the Rated Area.

The small store is not and cannot become part of an office, so it is excluded from the Rated Area. The larger store has lighting and air conditioning but is used as a commercial storage facility and is not part of an office, so it is excluded from the Rated Area.

c) Basement Office building

Figure 4.1: Examples of Net Lettable Area, rateable area inclusions and exclusions

4.5.4 Excluding computer server rooms and data centres

4.5.4.1 General

A **computer server room** may not always be separated into its own **functional space**, as described in Section 4.4.2.

This section outlines the conditions where a **computer server room** must be excluded.

Note: The inclusion or exclusion of both the energy consumption and the floor area of **computer server rooms** are determined in the same way; see Section 7.3.1.

For documentation requirements for computer server rooms, see Section 8.2.4.

For documentation requirements for data centres, see Section 8.2.5.

4.5.4.2 Computer server rooms: Base Building ratings

Where a **computer server room** has been separated into its own **functional space** and is not considered a **data centre** (as defined in Section 4.5.4.4), the air conditioning arrangement must be checked by the **Assessor** and the computer server room excluded from the **rated area** if:

- a) No **direct HVAC** is provided by the Base Building to that space (i.e. all **direct HVAC** is provided by tenant supplementary units only); or,
- b) **Direct HVAC** is provided by the Base Building but at a lesser standard than that of the surrounding spaces; or,

- c) **Direct HVAC** is provided by the Base Building and is being adequately sub-metered and excluded from the rating in line with Section 7.3.1.1.

Example: **Computer server rooms** provided with condenser water only from the Base Building (i.e. air supply is connected to the tenant electrical distribution board) are serviced at a lesser standard than the rest of the office space. Their area therefore is excluded.

Note 1: Only **computer server rooms** that are not considered to be a **data centre** and have **direct HVAC energy** provided centrally by the Base Building to at least the same standard as the surrounding space (with this **direct HVAC energy** being included in the rating) should be included for the **rated area** calculation.

Note 2: The presence of a tenant supplementary unit does not immediately exclude the **computer server room** from the **rated area**. As long as the Base Building provides **direct HVAC** to the same or higher standard as the surrounding office space, the **computer server room** is still considered to be centrally serviced.

Where it is determined that a **computer server room** must be excluded, the Base Building rating must exclude the area of the **computer server room's functional space** from the **rated area** calculation.

For documentation requirements, see Section 8.2.4.

4.5.4.3 Computer server rooms: Whole Building and Tenancy ratings

When a **computer server room** has been separated into its own **functional space**, the floor area of a **computer server room** must be treated as follows:

- a) **Wholly included** in the calculation of the **rated area**, if the following conditions are satisfied:
- 1) The **computer server room** does not qualify as a **data centre** (see Section 4.5.4.4); and,
 - 2) The **computer server room** is not used as a disaster recovery site for another external **data centre**; and,
 - 3) The **computer server room** is used entirely by internal users.
- b) **Partially excluded** from the calculation of the **rated area**, if the following conditions are satisfied:
- 1) The **computer server room** is a mixture of internal use and external use, to a maximum of 75 % of its capacity dedicated to external use; and,
 - 2) The energy consumption of the externally used IT equipment and/or facility services are separately sub-metered.

The floor area of the **computer server room** that is to be excluded is determined by measuring the area covered by the externally-used IT equipment only.

The **Assessor** must obtain written documentation from the tenant that confirms that the IT equipment in the area to be excluded is either for external use or as a disaster recovery site for another external **data centre**.

- c) **Proportionately excluded** from the calculation of the **rated area**, if the following conditions are satisfied:

- 1) The **computer server room** is a mixture of internal use and external use, to a maximum of 75 % of its capacity dedicated to external use; and,
- 2) The energy consumption of the **computer server room** IT equipment and/or facility services are sub-metered; and,
- 3) The externally used equipment is not or cannot be separately sub-metered from internal use; and,
- 4) The number of internal users and **external users** of the IT equipment can be determined.

Note 1: No proportionate exclusions are available for **external users** of public web servers because of the difficulty in accurately counting the number of users.

The floor area of the **computer server room** that may be excluded is determined through the following steps:

Step 1 – Determine the number of internal users of the IT equipment, based on the computer count.

Step 2 – Determine the number of **external users** of the IT equipment.

Note 2: To determine the number of **external users** of the IT equipment, **Assessors** could analyse system usage logs to establish the number of unique users, and then find the location of each from asset tracking, phone records or similar data.

Note 3: To avoid double counting, occupants of the **rated premises** who access the systems remotely are included in the number of internal users of IT equipment only.

Step 3 – Calculate the area allocated for external use, based on the proportion of **external users** to total users.

Example: If the floor area of a **computer server room** is 50 m² and there are 100 internal users and 400 **external users**, the area to be excluded from the **rated area** is calculated as:

$$50 \times \frac{400}{(400 + 100)} = 40 \text{ m}^2$$

The **Assessor** must obtain either—

- i) written documentation from the tenant that confirms the number of **external users** of the **computer server room**, or,
- ii) records which allow the **Assessor** to accurately calculate (not estimate) the number of **external users**.

For documentation requirements, see Section 8.2.4.

4.5.4.4 Data centres

Where a **computer server room** qualifies as a **data centre**, then—

- a) this space is not considered office space and the area must be excluded from the **rated area** calculation, and

- b) the **Assessor** must obtain written documentation confirming that the **computer server room** is a **data centre** as defined in Chapter 2.

The combination of multiple **computer server rooms** is not considered a **data centre**. Each individual **computer server room** must meet the criteria as defined above to be considered as a **data centre**.

Note: For buildings classed as **data centres**, refer to *NABERS Energy for data centres – Rules for collecting and using data*.

For documentation requirements, see Section 8.2.5.

4.5.5 Excluding other office support facilities

4.5.5.1 General

This Section applies to all **office support facilities**, including **meeting rooms**.

This Section does not apply to **computer server rooms**, which are covered under Section 4.5.4.

4.5.5.2 Base Building ratings

If an **office support facility** or **meeting room** is not required to be separated into its own **functional space** as described in Section 4.4.2, the area of the **office support facility** or **meeting room** must be combined with an adjacent **functional space** included in the **rated area**.

Where an **office support facility** or **meeting room** has been separated into its own **functional space**, the air conditioning arrangement must be checked by the **Assessor** and the space excluded from the **rated area** if:

- a) No **direct HVAC** is provided by the Base Building to that space; or,
- b) **Direct HVAC** is provided by the Base Building to that space but to a lesser standard than the rest of the office. This includes situations where tenant **supplementary air conditioning equipment** is present; or,
- c) The **functional space** is centrally serviced by condenser water only.

Note: Air from the surrounding **functional space** 'spilling' into the **meeting room** or **office support facility** ('spill air') is not considered **direct HVAC**.

4.5.5.3 Whole Building and Tenancy ratings

The floor area of a **meeting room** or other **office support facility** must be included in a Tenancy or Whole Building rating.

Note: For **co-assess** applications, the **Assessor** may need to treat **computer server room**, **meeting room** or **office support facility functional spaces** differently for the Base Building, Whole Building or Tenancy rating as the methods are different to determine the inclusion. In that case, the **functional space** would need to be entered more than once into the NABERS Co-Assess Office Rating Calculator, to capture the differences in area for each **rating type**.

For documentation requirements, see Section 8.2.6.

4.5.6 Functional spaces without consumption data

Where **acceptable data** or **acceptable estimates** of the energy and/or water consumption for a **functional space** are not available for reasons beyond the control of the **Assessor** or customer, the **functional space** must be excluded from calculation of the **rated area**.

Note 1: This includes scenarios where the use of **acceptable estimates** results in a **potential error** above the 5 % threshold.

Examples of **functional space** exclusions include the following:

- a) When **utility** bills for energy consumption within the minimum energy coverage cannot be obtained for **functional spaces** within buildings that do not have an **embedded network**. Situations where this may occur include:
 - 1) When tenants have left the building and cannot be contacted to obtain energy bills; and
 - 2) When, for Base Building and Whole Building ratings, the tenants refuse to provide required energy bills, and these tenants cannot be obligated to do so under the *Building Energy Efficiency Disclosure Act 2010* (more information available at www.cbd.gov.au).
- b) When the **utility** was unable to provide the necessary data to cover the minimum energy and water coverage for the **functional space**;
- c) When a non-utility **metering system** was unable to provide the data necessary to cover the minimum energy coverage for the **functional space** and estimates were above the 5 % **potential error** allowance;
- d) When **functional spaces** are being served by tenant **supplementary air conditioning equipment** meeting standard Base Building air conditioning service requirements and where **acceptable data** or **acceptable estimates** of the energy/water use of the tenant **supplementary air conditioning equipment** (as per Section 7.3.2) is not available.

Note 2: The full range of consumption data required for a **functional space** is specified in Chapter 7.

Note 3: **Functional spaces** without hours data cannot be excluded in the same way as spaces without consumption data. These spaces must be included and another method of measuring hours used. (Such a situation can occur, for example, when tenant has moved out and a **TOS** cannot be obtained.)

For documentation requirements, see Section 8.2.6.

4.6 Medical or educational office facilities and public access spaces

4.6.1 General

After excluding **functional spaces**, the **Assessor** must limit the proportion of **public access spaces** followed by **medical** or **educational office facility** spaces.

For documentation requirements, see Section 8.2.7.

4.6.2 Public access spaces

Note: The **functional spaces** included so far may include some space open to public access such as inquiry desks, courier counters and reception areas. The primary purpose of these spaces is to accommodate arrivals, deliveries and despatches associated with office activities. These spaces are distinct from non-**NLA** or commercially negotiated **NLA** public spaces in building foyers and other common spaces, which are never included in the **rated area** calculation.

In calculating the **rated area** of a **rated premises**, the allowable total floor area of such **public access space** is capped to a maximum of 10 % of the net office **NLA**.

For this section, net office NLA is defined as:

$$\text{Net Office NLA} = \text{Total Office NLA} - \text{Area of Public Access Space}$$

Any additional amount must be excluded from the **rated area** calculation. The maximum **public access space** in a given area that can be included in a rating is calculated using the following formula:

$$\left(\frac{\text{Net Office NLA}}{0.9} \right) - \text{Net Office NLA} = \text{Maximum public access space}$$

The 10 % ratio applies to the aggregate area of the spaces to be included in the rating. It is not calculated separately for individual **functional spaces**, floors or (for Base Building and Whole Building ratings) individual tenancies.

For documentation requirements, see Section 8.2.7.

Example 1:

An office has a total **NLA** of 500 m². A large reception space that measures 5 m x 12 m (60 m²) is located within the total **NLA**.

The net office **NLA** is calculated as:

$$500 \text{ m}^2 - 60 \text{ m}^2 = 440 \text{ m}^2$$

Therefore, the maximum public access space that can be included for this rating is calculated as follows:

$$\left(\frac{440 \text{ m}^2}{0.9} \right) - 440 \text{ m}^2 = 48.9 \text{ m}^2$$

As the reception space is greater than the maximum allowable, only 48.9 m² of the reception space can be included.

Example 2:

An office with a total **NLA** of 1,000 m² has two tenancies.

Tenancy #1 has a total **NLA** of 600 m², including a large reception space that measures 72 m².

Tenancy #2 has a total **NLA** of 400 m² and has no **public access space**.

Base Building or Whole Building Rating

For a Base Building or Whole Building Rating, the net office **NLA** is calculated as:

$$1,000 \text{ m}^2 - 72 \text{ m}^2 = 928 \text{ m}^2$$

Therefore, the maximum public access space that can be included for this rating is calculated as follows:

$$\left(\frac{928 \text{ m}^2}{0.9} \right) - 928 \text{ m}^2 = 103.1 \text{ m}^2$$

As the reception space is less than the maximum allowable, the entire reception area can be included.

Tenancy Rating

For a Tenancy Rating for Tenancy #1, the net office **NLA** is calculated as:

$$600 \text{ m}^2 - 72 \text{ m}^2 = 528 \text{ m}^2$$

Therefore, the maximum public access space that can be included for this rating is calculated as follows:

$$\left(\frac{528 \text{ m}^2}{0.9} \right) - 528 \text{ m}^2 = 58.7 \text{ m}^2$$

As the reception space is greater than the maximum allowable, only 58.7 m² of the reception space can be included.

4.6.3 Medical or educational office facility spaces

4.6.3.1 General

After limiting the proportion of **public access spaces**, the **Assessor** must determine and limit the proportion of **medical** and/or **educational office facility** spaces. The **National Administrator** should be contacted if there is any doubt as to whether a facility or part of a facility is included in either of these categories (medical or educational).

A **medical office facility** may include—

- a) consulting rooms,
- b) patient reception areas,
- c) break-out spaces,
- d) **meeting rooms**,
- e) medical administration areas, and
- f) associated store rooms for medical equipment, supplies or records.

A space within the facility that is not serviced by Base Building services does not qualify as a **medical office facility**.

If a medical facility contains—

- 1) hospitals,
- 2) operating theatres,
- 3) specialist medical imaging practices,
- 4) laboratories,
- 5) day-stay treatment areas,
- 6) wards,
- 7) specialist emergency medicine facilities,
- 8) pharmacies,

then the entire facility cannot be considered as a **medical office facility** and must be excluded from the rating. The determining factor here is whether there is significant medical or scientific equipment present, or a requirement to operate continually.

An **educational office facility** may include—

- i) classrooms,
- ii) seminar rooms,
- iii) break-out spaces,
- iv) **meeting rooms**,
- v) student computer labs,
- vi) administration areas, and
- vii) store rooms.

A space within the facility that is not serviced by Base Building services does not qualify as an **educational office facility**.

Note 1: Workshops, laboratories, art studios, teaching kitchens or associated prep areas are not considered **educational office facilities**.

Note 2: Where the proportion is limited, **Assessors** should refer to the 'exclusions based on area weighting' provisions in Section 7.2.3 of *NABERS The Rules – Metering and Consumption* or *NABERS Energy for Offices – Validation Protocol for Thermal Energy Exclusions* (simplified method), which may provide some exclusion of the energy related to the excluded areas.

For documentation requirements, see Section 8.2.8.

4.6.3.2 Base Building ratings

Although they are not office spaces as such, **medical office facilities** and **educational office facilities** can be included in the calculation of the **rated area** for the purposes of a NABERS Base Building rating. This is acceptable only if **direct HVAC energy** provided by the Base Building to these facilities is not sub-metered, and with the caveat that the inclusion of **medical** and **educational office facilities** combined is capped to a maximum of 25 % of the office **NLA**.

For this section, net office **NLA** is defined as:

Net Office NLA = Total Office NLA – Combined area of medical and educational office facility

Note that this inclusion is calculated after having adjusted the office **NLA** for the **public access spaces** 10 % cap as per Section 4.6.2.

The maximum **medical office facilities** and **educational office facilities** in a given area that can be included in a rating is calculated using the following formula:

$$\left(\frac{\text{Net Office NLA}}{0.75} \right) - \text{Net Office NLA} = \text{Maximum medical and educational office facility}$$

A rating including **medical** or **educational office facilities** must include the energy consumption relevant to the Base Building energy coverage for this space in full. No apportionment is allowed.

If **direct HVAC energy** provided by the Base Building to the facilities is adequately sub-metered, these spaces must be excluded as the associated Base Building **direct HVAC energy** is able to be excluded.

Note: Public reception or patient waiting rooms within **medical** or **educational office facilities** should have already been included in the **public access space** requirement.

Example 1:

A building has a total NLA of 2,500 m². Within this **NLA**, 1,500 m² is **occupied** by a tenant that is an English college.

The net office **NLA** is calculated as:

$$2,500 \text{ m}^2 - 1,500 \text{ m}^2 = 1,000 \text{ m}^2$$

Therefore, the maximum **medical office facilities** and **educational office facilities** that can be included for this rating is calculated as follows:

$$\left(\frac{1,000 \text{ m}^2}{0.75} \right) - 1,000 \text{ m}^2 = 333.3 \text{ m}^2$$

As the English college **occupies** a space greater than the maximum allowable, only 333.3 m² can be included.

Example 2:

A building has a total NLA of 8,000 m². Within this **NLA**:

- 1,500 m² is **occupied** by a tenant that is an English college.
- 400 m² is **occupied** by a tenant that is a doctor's surgery.

The net office **NLA** is calculated as:

$$8,000 \text{ m}^2 - (1,500 \text{ m}^2 + 400 \text{ m}^2) = 6,100 \text{ m}^2$$

Therefore, the maximum **medical office facilities** and **educational office facilities** that can be included for this rating is calculated as follows:

$$\left(\frac{6,100 \text{ m}^2}{0.75} \right) - 6,100 \text{ m}^2 = 2,033.3 \text{ m}^2$$

As the combined area of the **medical office facilities** and **educational office facilities** in this building is less than the maximum allowable, the entire combined area can be included.

4.6.3.3 Whole Building and Tenancy ratings

Medical or **educational office facility** spaces can never be included in the **rated area** for the purpose of Whole Building or Tenancy ratings.

4.7 Adjustment for unoccupied spaces

4.7.1 General

After limiting the proportion of **public access spaces** and **medical** and **educational office facilities**, the **Assessor** must assess the number of occupation days and number of **fitout works** days during the **rating period**.

Occupation days and **fitout works** days are used as adjustment factors to calculate the **rated area** from the office **NLA**.

4.7.2 Occupation days

For Base Building ratings, the number of occupation days for each **functional space** is the number of days (including weekends and public holidays) the space was **ready for occupation**.

For Tenancy ratings, the number of occupation days for each **functional space** is the number of days (including weekends and public holidays) the space was actively used by the tenants as an office, including use as an **office support facility**.

For Whole Building ratings, the number of occupation days for each **functional space** is the number of days (including weekends and public holidays) the space was **ready for occupation** and actively used by the tenants, including use as an **office support facility**.

If a **functional space** has different occupation days for different areas, the **functional space** must be split so the occupation days can be entered separately.

For documentation requirements, see Section 8.2.9.

Note: For **co-assess** applications, the **Assessor** may use different occupation days for the same **functional space** for a Base Building, Whole Building or Tenancy rating as the method for determining occupation days are different. In such cases, the **functional space** might need to be entered more than once to accurately capture the occupation days for each **rating scope**.

4.7.3 Fitout works days

The number of **fitout works** days for each **functional space** is the number of days where the space was being refurbished or **fitout works** were being undertaken and Base Building air conditioning services were required for that space. Up to a maximum of 30 days can be entered for each **functional space**.

It does not include periods of work where the Base Building services were not required for that space. It does not include periods during which the building was under construction or being extensively renovated and was not suitable for normal occupation.

Any period during which it is not possible to clearly distinguish between **fitout works** and other construction activity must not be included. Similarly, if there is no evidence (as per Section 8.2.9) whether or not normal Base Building services were required by the occupiers during that period, then the **Assessor** must assume that the services were not required.

For documentation requirements, see Section 8.2.9.

Note 1: For Whole Building ratings, the period for **fitout works** is discounted by 50 %. For Tenancy ratings, the period for **fitout works** is discounted by 100 % (no fitout days are accounted for). These adjustments are calculated automatically by the **NABERS rating input form**, and the **Assessor** should simply enter the total number of fitout days.

Note 2: For a Base Building rating:

- a) Where a space was not being used as an office while **fitout works** were taking place, the hours of occupation are deemed to be the same as the average hours of occupation for that space for the **rating period**.
- b) Where a space was being used as an office during business hours and **fitout works** were taking place outside the normal business hours, then any additional hours (i.e. while the space was provided with Base Building services) should be added to the **rated hours** calculation. If there are different hours for different times of the year, these should be entered into the **NABERS rating input form** separately. Please contact the **National Administrator** for further information.

5 Rated Hours

5.1 Summary

There are several factors which impact the consumption of energy and water in an assessment and therefore affect a NABERS Energy and Water for Offices rating. The second of these factors is *hours*. The **rated hours** must be correctly determined to allow for fair comparison.

For documentation requirements, see Section 8.3.

5.2 Process overview

Table 5.1 below outlines the process for calculating **rated hours** for:

- Base Building energy ratings;
- Tenancy or Whole Building energy ratings conducted with a Base Building energy rating (i.e. a **co-assess** application including a Base Building rating);
- Stand-alone water ratings;
- Water ratings combined with a Base Building energy rating.

Table 5.1: Process for calculating rated hours for Base Building energy ratings

Step		Reference
1	Use the breakdown of functional spaces within the rated premises	4.4
2	For each other type of functional space , (with the exception of computer server rooms and office support facilities), use one of the following methods in priority order below: 1. OTA Core Hours and AHAC 2. Tenancy Occupancy Survey 3. Average Core Hours 4. Default hours	5.3.2 and 5.3.3 5.3.4 5.3.5 5.3.6
3	Determine hours for computer server rooms	5.3.7
4	Determine hours for other office support facility spaces, including meeting rooms	5.3.8
5	Verify long hours if the rated hours for any functional space is greater than 60 hours per week	5.4

5.2.1 Tenancy and Whole Building

Table 5.2 below outlines the process and priority for calculating **rated hours** for the following:

- a) Tenancy or Whole Building energy ratings conducted without a Base Building energy rating (a stand-alone Tenancy or Whole Building ratings or a **co-assess** application not including a Base Building rating);
- b) Water ratings combined with a Whole Building energy rating.

Calculations for rated hours for Tenancy and Whole Building ratings are given in Appendix B (see Section B.2).

Table 5.2: Process for calculating rated hours for Tenancy and Whole Building energy ratings

Step		Reference
1	Use the breakdown of functional spaces within the rated premises	4.4
2	For each other type of functional space , (with the exception of computer server rooms and office support facilities), use one of the following methods in priority order below: <ol style="list-style-type: none"> 1. Tenancy Occupancy Survey 2. OTA Core Hours and AHAC 3. Average Core Hours 4. Default hours 	<p>5.3.4</p> <p>5.3.2 and 5.3.3</p> <p>5.3.5</p> <p>5.3.6</p>
3	Determine hours for computer server rooms	5.3.7
4	Determine hours for other office support facility spaces, including meeting rooms	5.3.8
5	Verify long hours if the rated hours for any functional space is greater than 60 hours per week	5.4

5.3 Determining rated hours

5.3.1 General

There are several methods for determining **rated hours**. The following sections must be used according to the order specified in **Table 5.1** and **Table 5.2** above, dependent on the **rating type**.

5.3.2 Core Hours

5.3.2.1 Owner/Tenant Agreement (OTA) Hours Method

An **Assessor** may use the **OTA Hours** method if a higher priority method for determining **rated hours** as detailed in Section 5.2 cannot be used.

The **OTA** Hours method can only be used if there are hours defined in the **OTA**. When **OTA** Hours are used, Core Hours are based on the hours mutually agreed upon in writing within the **OTA** by the building owner and the tenant for which the space will be **comfortable for office work**. The **OTA** should be able to be applied to the **rating period**.

The **OTA** may refer to another document, commonly known as the “House Rules”, which contains information about the Core Hours. Where this document is specifically referred to in the **OTA**, the information in it can be used by the **Assessor** to determine the Core Hours. If the “House Rules” are not specifically referred to in the **OTA** they cannot be used. The requirements around language as outlined in the Sections below must still be followed.

For documentation requirements, see Section 8.3.1.

Hours determined using the steps below are considered **acceptable data**.

Step 1: OTA Hours when they directly refer to ‘comfort conditions’

The key question for an **Assessor** is whether the tenants have requested that the space be **comfortable for office work** during specific hours. This is not the same as the operating hours of the plant servicing the space as the plant requires start up time to provide comfort conditions to the space.

The **Assessor** must consider the current lease in relation to building hours as most leases contain specific clauses that describe the Lessor’s obligations to the tenant. Such clauses are to be used to investigate whether the tenants have requested the space to be **comfortable for office work** or not.

The **Assessor** must identify and keep record of these specific clauses as evidence of the correct method being used for determining **OTA** hours.

If it is clear that the hours detailed in the **OTA** are the normal hours for which the space will be **comfortable for office work**, the **OTA** Hours must be used. The wording in the **OTA** must be interpreted carefully to distinguish between plant operation and comfort conditions within the space. Acceptable wording includes, but is not limited to:

- a) “hours for which the space will be **comfortable for office work**”;
- b) “hours of occupation”;
- c) “hours of comfort conditions”; or
- d) hours for which a temperature range compatible with being **comfortable for office work** must be met.

Wording that is not acceptable evidence on its own to demonstrate ‘comfort conditions’ includes, but is not limited to:

- 1) “air conditioning hours” – these may be plant operating hours; or
- 2) “hours of access”, “building availability” or “business hours” – these may be when security doors are open; or
- 3) “hours of restricted access” – these may be when security doors are closed.

Assessors can seek to obtain a new or updated **OTA** with acceptable wording which accurately captures the hours for which the space is **comfortable for office work**. This may be done if the wording used in the **OTA** is not acceptable, or if the existing **OTA** does not accurately reflect the current situation.

If the wording in the most up-to-date **OTA** remains unacceptable, the **Assessor** must move on to *Step 2: OTA Hours and BMS data*. If the **OTA** wording clearly states plant running times, and no updated **OTA** is obtained, the **Assessor** must move straight on to *Step 3: OTA Hours minus 2*.

Step 2: OTA Hours and BMS data

Building Management System (BMS) data demonstrating that the plant starts before the stated **OTA** Hours for the **rating period** can be used to clarify ambiguous wording within the **OTA**.

The **OTA** Hours can be used if it is verified that the plant starts up with enough time prior the start of **OTA** Hours to bring the space to comfort conditions. For example, if an **OTA** uses the words 'air conditioning hours' but the **Assessor** has independently verified that the air conditioning starts one to two hours before the **OTA** time every day, this would be sufficient to know that the words 'air conditioning hours' have been interpreted to mean 'hours of comfort'.

The **Assessor** must obtain additional evidence to determine the **OTA** hours can be interpreted as 'hours of comfort' when—

- a) the plant starts with a small start-up time before **OTA** Hours, for example 30 minutes prior, or
- b) air conditioning plants with an optimised start strategy are present.

For documentation requirements, see Section 8.3.1.

Example: The **OTA** refers to air conditioning hours from 8 am to 6pm. It is unclear if this refers to comfort conditions or plant run times. The BMS shows that the plant starts at 7:00 am every week day. As the hour between the plant start time and the **OTA** Hours is considered sufficient to achieve comfort conditions, the **OTA** Hours can be interpreted as hours for which comfort conditions are met.

This Step 2 can only be used where wording in the **OTA** is ambiguous and/or does not specifically refer to plant running hours, and no new or updated **OTA** with acceptable wording has been obtained. Where BMS data does not demonstrate the **OTA** intention of comfort conditions, the **Assessor** must move on to *Step 3: OTA Hours minus two*.

Step 3: OTA Hours minus two

Two (2) hours per day must be subtracted from the **OTA** Hours when:

- a) the **OTA** clearly refers to plant run times and no new or updated **OTA** with acceptable wording has been obtained; or
- b) wording in the **OTA** is unclear and there is no BMS data available, or the data within the BMS does not clearly demonstrate the intention of the **OTA** being comfort conditions.

Note: The two (2) hours per day is to account for plant start up time.

Step 4: OTA Hours correction for Tenancy and Whole building ratings

When Core Hours are determined using Steps 1, 2 or 3 above for Tenancy or Whole Building ratings, five (5) hours per week must be subtracted from the **OTA** Hours. This may be on top of the two (2) hours per day subtracted as per Step 3, *OTA Hours minus two* if this method has been used to determine Core Hours.

Note 1: The five hours per week have been determined using NABERS data for offices. The analysis showed that, within a building, **OTA** Hours were on average five hours longer than hours determined through a **TOS**.

Example 1: A lease has been provided for a building which states that the space must be **comfortable for office work** between 8am and 6pm (i.e. 50 hours per week).

For a Base Building rating, Core Hours of 50 hours per week can be used.

For a Whole Building and Tenancy rating, Core Hours of 45 hours must be used (50 hours minus five hours).

Example 2: A lease has been provided for a building which states that plant hours are 8am and 6pm (i.e. 50 hours per week).

For a Base Building rating, Core Hours of 40 hours per week can be used:

50 hrs per week minus two hours per day x five days = $50 - 10 = 40$ hours per week

(as per Step 3: *OTA Hours minus two*).

For a Whole Building and Tenancy rating, Core Hours of 35 hours must be used:

50 hours per week minus two hours per day x five days minus five hours per week = $50 - 10 - 5 = 35$ hours/week (as per *Step 3: OTA minus two* and *Step 4: OTA hours Correction for Tenancy and Whole Building ratings*).

Note 2: In the NABERS Co-Assess Office Rating Calculator, this calculation (minus five hours/week) is done automatically. This means **OTA** Hours with no change should be entered. However, when using **NABERS rating input form**, this is not done automatically and five hours per week (one hour per business day) should be manually subtracted from the **OTA** Hours when entering the Core Hours.

5.3.2.2 Conflicting information on Core Hours

Core Hours are the regular hours for which tenants have mutually agreed with the building owner that a space is **comfortable for office work**. The building owner is obligated to provide services during these hours.

However, if the owner knows that all the tenants have gone home by the end of the agreed hours, they might turn the air conditioning off early. This would present the **Assessor** with conflicting information on Core Hours, as in practice the air conditioning plant has shut down before the agreed end time stated in the **OTA**.

This is an effective strategy that should be recognised, as it is not efficient if the plant runs longer than required. Therefore, the Core Hours must remain as those stated in the **OTA**.

5.3.3 AHAC: after-hours air conditioning requests

5.3.3.1 Standard for acceptable data

After-hours air conditioning (AHAC) requests to service spaces outside Core Hours can be included in the calculation of **rated hours** for a **functional space** only if the **OTA Hours** method has been used to determine Core Hours of this space.

Acceptable data for AHAC requests includes:

- a) Logs of AHAC requests by tenants, showing the date and time of each request and the **functional space** to which it applied;
- b) Evidence of other AHAC requests, such as correspondence between the tenant and the owner or building manager or information written into the **OTA** which has been verified to be correct and up-to-date. This evidence must include the date, time and space to which AHAC has been agreed to be applied.

Air conditioning operation records that do not show the date, time and source of requests are not acceptable, even if supported by evidence of after-hours occupation of the space. Similarly, records which only show the total 'hours run' or 'after-hours run' for the air conditioning plant are not acceptable.

The determining factor is the tenant's request to the building owner for air conditioning services outside Core Hours.

For documentation requirements, see Section 8.3.2.

5.3.3.2 Requests related to Core Hours comfort conditions

The **Assessor** must verify that AHAC requests do not overlap with the Core Hours. This includes any requests for service that occur in the normal 'start up' period for the plant or in the hour before the start of Core Hours.

AHAC requests must be reviewed by the **Assessor** to ensure that all **AHAC** in the hour before start-up are due to early occupancy rather than to comfort issues. This can be typically demonstrated by providing correspondence with the tenant. If the **Assessor** cannot accurately assess the duration of the start-up period for the plant to ensure that no AHAC hours have been double-counted during this time, AHAC hours that are included in the entire hour before the start of Core Hours must be disregarded.

5.3.3.3 Maximum duration of individual requests

If a tenant's AHAC request or associated documentation does not include the duration for which a request was made, the maximum duration for each such request must be taken as one hour.

Similarly, if the standard run time per push-button activation is more than one hour and there is no evidence showing that the tenant requested that run time, or agreed to it in an **OTA** with the building owner, the maximum duration for each such request must be taken as one hour.

Note: This is to limit possible overestimation of AHAC hours and to discourage excessive provision of AHAC in response to a single request when it has not been clearly required by the tenant.

5.3.3.4 Spaces that individual requests apply to

An individual AHAC request applies only to the **functional space** for which the request was made. If a single request results in AHAC being provided to multiple **functional spaces**, and the tenant has not specified which **functional space** they want to be serviced, then the request is taken to apply only to the smallest of the affected **functional spaces**. See the list of examples in **Table 5.3** below:

Table 5.3: Examples of spaces that AHAC requests apply to

Example	Interpretation
A functional space that occupies 1 out of 25 floors or 5 % of the building requests AHAC, but 20 % of the building is operated to service this request	The request applies to the smallest affected space of the single floor (5 % of the building)
A tenant occupies a multi-tenanted floor and requests AHAC for the floor	The request applies only to the tenant's functional space on that floor
Push-button request for AHAC from a tenancy that occupies 20 % of the building, with more than one functional space	The request applies only to the smallest functional space serviced by that push-button request

A push-button request cannot apply to more than one **functional space** unless written confirmation from the tenant is available that the request was for a larger number of spaces.

5.3.3.5 Requests serving different zones within a single functional space

When different independent requests are serving different smaller zones within a main **functional space**, each of these smaller zones must become their own **functional space**.

If the **Assessor** cannot obtain detailed areas for the zones served, a simple average calculation (arithmetical mean) must be used. See the examples listed in **Table 5.4** below:

Table 5.4: Example of requests serving different zones

Example	Interpretation
<p>Functional space of 1,000 m² comprising three AHAC zones, where the areas of the AHAC zone(s) are unknown.</p> <p>Total AHAC count for push-button 1: 100 hours</p> <p>Total AHAC count for push button 2: 200 hours</p> <p>Total AHAC count for push button 3: 300 hours</p>	<p>The AHAC hours for the functional space must be taken as:</p> $= (100 + 200 + 300)/3$ $= 600/3$ $= 200 \text{ hours}$

5.3.4 Tenant Occupancy Survey

5.3.4.1 General

An **Assessor** may use the **Tenant Occupancy Survey (TOS)** Core Hours and unusual hours method if a higher priority method for determining **rated hours** as detailed in Section 5.2 cannot be used.

A **TOS** cannot be used for:

- Computer server rooms** not part of a larger **functional space** (refer to Section 5.3.7);
- Meeting rooms** not part of a larger **functional space** (refer to Section 5.3.8);
- Any **office support facility** functional space that is significantly sized and is not usually **occupied**, for example a compactus room that occupies half a floor.

When TOS hours are used, hours are based on the hours confirmed by the manager or the supervisor of the **functional space** for which the space is typically at least 20 % **occupied**.

For documentation requirements, see Section 8.3.3.

5.3.4.2 Standard for acceptable data

For each **functional space**, a **TOS** must be completed by a manager or supervisor who works in that space and has specific knowledge of the levels of occupancy for the space. The **TOS** template is provided in Appendix A.

Each survey should be completed by a different manager or supervisor as it is not expected that any one individual will know the hours of **functional spaces** on all floors. A **TOS** across multiple **functional spaces** completed by a single manager or supervisor is only acceptable where it is reasonable that the individual would be aware of the hours in those spaces. Otherwise, each **TOS** must be completed by a different manager or supervisor. Examples of what is considered reasonable are—

- multiple small **functional spaces** on a single floor, and
- one manager or supervisor covering three floors or less of Activity Based Working, where they work across all those floors on a regular basis.

A **TOS** must also be completed for the following:

- 1) Each shift where more than one shift is worked per **functional space**. For example, a 24-hour call centre is one **functional space** but would require a **TOS** for each shift.
- 2) Each distinct period where the hours of occupation or the numbers of shifts in a **functional space** changed during the **rating period**.
- 3) Each distinct period where the manager or supervisor in a **functional space** changed during the **rating period**. For example, where a staff manager or supervisor is only able to provide information about occupation of a **functional space** for part of the **rating period**, a separate survey needs to be completed by the managers or supervisors responsible for the remaining parts of the **rating period**.

A **TOS** is considered unusable if:

- i) The **TOS** does not verify that the source of information is a staff manager or supervisor responsible for the **functional space** over the full course of the **rating period**. This includes **TOS** completed by building or facility managers; or
- ii) The **TOS** has missing or ambiguous data. This includes **TOS** that do not have name, position; or contact number of the manager who provided the information, dates of validity of the survey or identification of the **functional space** clearly detailed.

Preference is given to **TOS** directly completed and signed by the manager or supervisor of the space. However, documentation provided by an **Assessor** resulting from interaction with the manager/supervisor of the space is acceptable.

5.3.4.3 Unusual hours

Unusual hours from the **TOS** can only be used if the **TOS** method is used to determine Core Hours for the **functional space**. If Core Hours are determined using any other method, no unusual hours can be used.

AHAC cannot be used when using a **TOS**.

5.3.5 Average Core Hours

5.3.5.1 General

An **Assessor** may estimate the average Core Hours if a higher priority method for determining **rated hours** as detailed in Section 5.2 cannot be used.

Core Hours estimated under this method are **acceptable estimates** and must be added to the **potential error** for hours.

After-hours air conditioning or unusual hours cannot be allocated to a **functional space** that uses the Average Core Hours method.

For documentation requirements, see Section 8.3.4.

5.3.5.2 Standard for acceptable estimates

When average Core Hours are used for a **functional space**, the **Assessor** can use the following methods to estimate **rated hours** in order of priority:

- a) Period-weighted Core Hours of the space where **acceptable data** is only available for some shifts or some periods of operation in the **rating period**; or
- b) The average of the Core Hours of nearby **functional spaces** with similar uses and tenants, if **acceptable data** is available for these spaces; or
- c) The average of the Core Hours for the remainder of **functional spaces** included in the rating, if **acceptable data** is available for these spaces.

Exception for **fitout works**: where a space was not being used as an office while **fitout works** were taking place, the hours of occupation are calculated using Method a) above. Additional evidence is not required for the calculation of these hours; and nor does it add to the **potential error**.

Note: Average Core Hours calculated as per the above is entered into the **NABERS rating input form** under the category used for the remainder of the core hours, e.g. lease documentation or **TOS**.

5.3.6 Default Core Hours

Default hours of 45 hours per week may be used for Base Building, Tenancy and Whole Building ratings if a higher priority method for determining **rated hours** as detailed in Section 5.2 cannot be used. Where the **Assessor** estimates less hours than this as Default Hours, the reasons for doing so must be documented for this estimate to be deemed acceptable.

Except for Tenancy ratings within a **co-assess** application, default hours add to a rating's **potential error**. AHAC or unusual hours cannot be allocated to a **functional space** that uses default business hours.

For documentation requirements, see Section 8.3.5.

5.3.7 Computer server rooms

5.3.7.1 Base Building ratings

Where a **computer server room** has been separated into its own **functional space**, and **direct HVAC energy** is provided by the Base Building to the space, the **rated hours** are determined using the following methods in order of priority:

- a) Hours for which the Base Building provides **direct HVAC energy** to the space as confirmed by the **OTA**, BMS evidence or facility manager's written confirmation. This is **acceptable data**.
- b) Section 5.3.5 Average Core Hours.
- c) Section 5.3.6 Default Core Hours.

Where a **computer server room** has been separated into its own **functional space** and no **direct HVAC energy** is provided by the Base Building to the space, the area is excluded from the Base Building rating. Refer to Section 4.5.4.

Where a **computer server room** has not been separated into its own **functional space**, the **rated hours** are the same as the **rated hours** for the adjoining **functional space**.

Note: While **Assessors** do not have to identify **computer server rooms** or separate them as **functional spaces** when their total measured area is less than 5 % of the floor plate **NLA**, the option remains to identify the **computer server room** as a separate **functional space** and allocate the hours as per the methods described above.

5.3.7.2 Whole Building and tenancy ratings

The hours for a **computer server room** are the hours the ventilation or air conditioning is provided. No distinction is made between the provision of **direct HVAC energy** by either the Base Building or the Tenancy for this purpose.

Example:

Documentation for a computer room indicates that:

- Base Building **direct HVAC energy** to the space from 7 am to 6 pm, five days a week; and
- A tenant supplementary unit is serving the space 24 hours, seven days a week.

The corresponding hours for the server room would be:

- For a Base Building rating: 7am to 6 pm, five days a week;
- For a Whole Building or a Tenancy rating: 24 hours, seven days a week.

For **co-assess** applications, the **Assessor** may use different **rated hours** for the same **computer server room functional space** for the Base Building, Whole Building or Tenancy rating as the acceptable method are different to determine hours. In such cases, the **functional space** would need to be entered several times to capture the different hours.

For documentation requirements, see Section 8.3.6.

5.3.8 Other office support facilities

5.3.8.1 General

This Section applies to all **office support facilities**, including **meeting rooms**.

This Section does not apply to **computer server rooms** which is covered under Section 5.3.7.

For documentation requirements, see Section 8.3.7.

5.3.8.2 Base Building ratings

Where an **office support facility** or **meeting room** has been separated into its own **functional space** and **direct HVAC energy** is provided by the Base Building to the space (see Section 4.5.5), the **rated hours** are determined using the following methods in order of preference:

- a) Section 5.3.2 Core Hours
- b) and Section 5.3.3 AHAC: after-hours air conditioning requests. This is **acceptable data**;
- c) Section 5.3.5 Average Core Hours. This is **acceptable data**;
- d) Section 5.3.6 Default Core Hours. This is added to the **potential error**.

Where an **office support facility** or **meeting room** has not been separated into its own **functional space**, the **rated hours** are the same as the **rated hours** for the **functional space** it is located within.

5.3.8.3 Tenancy and Whole Building ratings

Where an **office support facility** has been separated into its own **functional space**, the **rated hours** are determined using the following methods in order of priority:

- a) Hours derived from booking system records, if the **Assessor** has checked with the manager of the space that the records correspond to the actual occupancy of space. This method particularly applies to **meeting rooms** and is **acceptable data**.
- b) The area-weighted average of the Core Hours of all **functional spaces** which contribute to the usage of the office support space. This is **acceptable data**.
- c) Section 5.3.5 Average Core Hours. This is **acceptable data**.
- d) Section 5.3.6 Default Core Hours. Except for Tenancy ratings within a **co-assess** application where this is **acceptable data**, default hours add to a rating's **potential error**.

Where an **office support facility** has not been separated into its own **functional space**, the **rated hours** are the same as the **rated hours** for the **functional space** it is located within.

Note: For **co-assess** applications, the **Assessor** may use different **rated hours** for the same **office support facility functional spaces** for the Base Building, Whole Building or Tenancy rating as the acceptable methods are different to determine hours (see Sections 5.3.8.2 and 5.3.8.3). In that case, the **functional space** would need to be entered several times to capture the different hours.

5.4 Verifying long hours

5.4.1 General

If the **rated hours** for any **functional space** is equal to or greater than 60 hours a week, then the **Assessor** must verify these hours using the following procedures (Sections 5.4.2 and 5.4.3).

Note: The intent of verification of long hours is to ensure **rated hours** outside of the typical range (beyond 60 hours/ week) are expected and reasonable for the space. It is to prevent situations where building services are being operated 'just in case' they are needed, or for a lease that is no longer appropriate for current conditions. For most ratings, verification should not be onerous but a matter of simply double-checking the hours determined are relevant for the space.

5.4.2 Procedure for verifying long OTA and AHAC hours

- a) The **Assessor** must determine if the hours are obviously as expected and reasonable for the space (see Section 5.4.4). If the hours are obviously as expected and reasonable, the hours are considered verified and the **Assessor** must document the reasons for this decision.
- b) If the hours are not obviously as expected and/or reasonable, the **Assessor** must obtain evidence from the tenant of the relevant **functional space** that the **rated hours** are as expected and reasonable, and the reasons they are considered to be so. The documentation must be in writing and be signed by the manager or supervisor of the **functional space**.

- c) If the tenant does not agree that the hours are reasonable and expected, or cannot provide independent documentation of this, the **Assessor** must recalculate **rated hours** using a **TOS**. Where the survey hours are within 10 % of the **rated hours** originally calculated, the original **rated hours** are considered verified and must be used. Where the survey hours are not within 10 %, the lower hours value must be used.
- d) If the tenant cannot be contacted to verify the **rated hours**, an alternative method must be used. Contact the **National Administrator** for approval of an alternative method.

For documentation requirements, see Section 8.3.8.

5.4.3 Procedure for verifying long TOS hours

- a) The **Assessor** must determine if the hours are obviously as expected and reasonable for the space (see Section 5.4.4). If the hours are obviously as expected and reasonable, the hours are considered verified and the **Assessor** must document the reasons for this decision.
- b) If the hours are not obviously as expected and/or reasonable, the **Assessor** must confirm the person surveyed has properly interpreted the **TOS** questions. This may be conducted at the time the **TOS** is completed.
- c) If the person surveyed does not confirm that all questions have been properly interpreted, a second **TOS** must be completed. This **TOS** may be completed by the same manager/supervisor once the **TOS** has been properly explained.

For documentation requirements, see Section 8.3.9.

5.4.4 Checking expected hours

Assessors must complete a common-sense check to determine if the hours are 'obviously as expected and reasonable for the space'. For example:

- a) 24-hour service for a call centre operating three shifts is reasonable, but not for a call centre operating one or two shifts.
- b) 24-hour operation for a **computer server room** is reasonable.
- c) Core Hours of 60 per week plus an additional 20 AHAC hours requested by the floors as needed (such as by push-button requests) is reasonable and based on demand by the tenants.
- d) Core Hours of 60 per week plus an additional 20 AHAC hours requested using a long-standing order written at the start of the **OTA** three years ago may not be reasonable, if the recent occupancy of the space outside the Core Hours is low.
- e) Core Hours of 60 per week plus an additional 1,000 unusual hours per year based on a **TOS** for standard tenancy might not be reasonable.

For documentation requirements, see Section 8.3.10.

6 Counting computers

6.1 Summary

NABERS Energy for Offices ratings for Tenancy and Whole Buildings are affected by the number of computers in regular use. Conducting a proper count is necessary to allow for fair comparison. This chapter sets out the requirements for conducting such a computer count.

For documentation requirements, see Section 8.4.

6.2 Process overview

Table 6.1 below outlines the process for conducting a computer count.

Table 6.1: Process overview

Step		Reference
1	Use the breakdown of the rated premises into functional spaces	4.4
2	Determine which configurations of personal computer systems are present, complete and in regular use	6.3.2
3	Bear in mind acceptable standards for data and Agile and Activity Based Working environments in the space	6.3.3
4	Identify if any computer counts need to be estimated for inaccessible functional spaces	6.3.4
5	Decide which functional spaces will use a default count, and which will have computers counted	6.3.5
6	If it is not possible to conduct a count in a functional space where a count is required, then use the default count, or estimate the count for the space if an estimate is an acceptable value	6.3.4, 6.3.5
7	If there are no more than 10 functional spaces , conduct a full count for spaces where the default count is not used	6.3.3, 6.3.5
8	If there are more than 10 functional spaces , either conduct a full count or a random site survey for spaces where the default count is not used	6.3.6

6.3 Counting computers

6.3.1 Computer count requirements

See **Table 6.2** to determine for which types of office ratings a computer count is required.

Table 6.2: Office ratings requiring computer counts

Rating type and scope	Count of computers
NABERS Energy for Offices Tenancy	Required
NABERS Energy for Offices Base Building	Not required
NABERS Energy for Offices Whole Building	Required
NABERS Water for Offices	Not required

6.3.2 Principle and definitions

6.3.2.1 General

A computer is counted if it is a complete ‘personal computer system’ in regular use within a **functional space**.

‘Personal computer systems’ include networked ‘thin client’ systems used to provide access to software and services comparable to personal computers with autonomous processors and system memory.

No count can be made for servers and other equipment mounted in racks other than the number of personal computer systems in the installation, as identified by monitors in use. Larger stand-alone computer installations with no monitor can be counted as a single computer for each installation.

Only computers in **functional spaces** are counted.

For documentation requirements, see Section 8.4.1.

6.3.2.2 Personal computer system configurations

A ‘personal computer system’ consists of a ‘system unit’ and at least one screen and one keyboard. There are three basic types of ‘personal computer system’ in common use as per **Table 6.3** below.

Table 6.3: Types of personal computer systems

Type of system	Description
Desktop system:	A distinct system unit with an external monitor and external keyboard attached
Laptop (or notebook):	System unit, screen and keyboard in the one unit
All-in-one system:	System unit and screen in one unit, but with an external keyboard attached

All of the configurations in **Table 6.3** are equivalent and acceptable.

Adding additional monitors or keyboards to these basic configurations does not change the number of ‘personal computer systems’ involved. For example, a laptop with a separate monitor attached to it and/or a separate keyboard is still one personal computer system, as is a desktop computer with multiple monitors (see **Figure 6.1**).

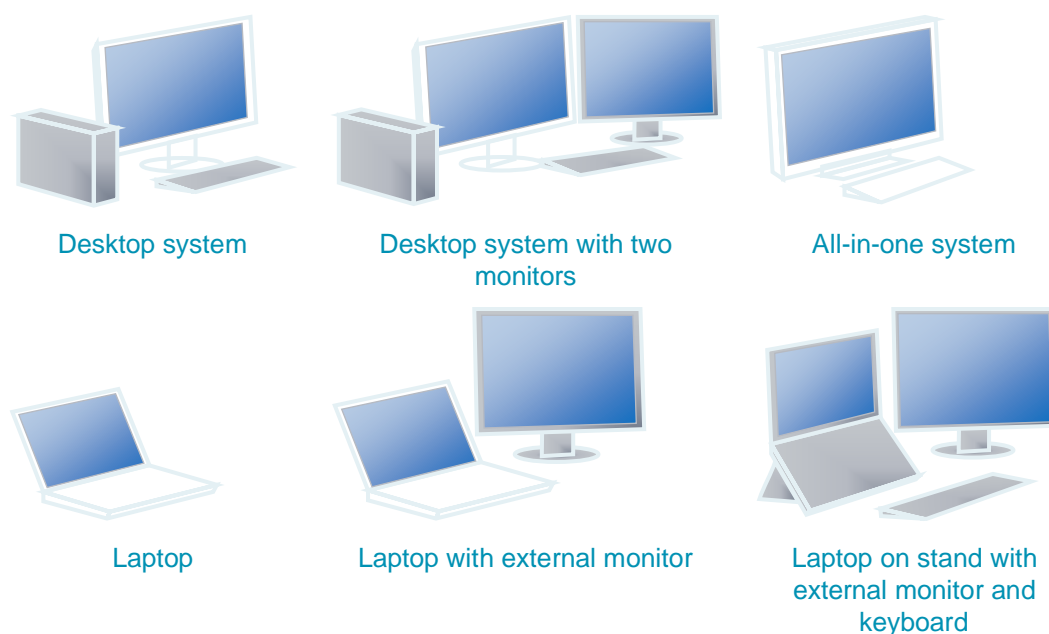


Figure 6.1: Personal computer system configurations

Each of these configurations (**Figure 6.1**) is equivalent to one computer.

If there is any confusion as to how many computers are at a desk then the number of monitors apparently set up for use is the defining factor. Monitors that are obviously not connected to a computer system must be disregarded.

6.3.2.3 Completeness

A personal computer system must not be counted if some components are missing (e.g. a desktop system unit with no monitor, a monitor with no system unit visible and no image on it, or a docking station with no laptop attached). If integral components are not present, it cannot be regarded as a complete system. Such incompleteness indicates a lack of regular use.

Seeing an image on a monitor is evidence that it is attached to a system unit – even if the unit is not visible. It is therefore considered to be complete, as the image is evidence of use.

6.3.2.4 Regular use

To be counted, a personal computer system must be in regular use in the **rated premises**. At least one of the following pieces of evidence of regular use must be present:

- a) A person using the computer system at the time of the count; or
- b) Indirect evidence that a person uses the system, even if they are not there at the time of the count. This may include personal effects or files and in-trays on the desk, or that the computer system is switched on; or

- c) A report by a manager or other authoritative source that the system is in regular use; or
- d) For computers in training rooms, etc., booking or attendance records that the **Assessor** has verified are accurate and which show both the number of computers used and the amount of time they were used for.


A computer must **not** be counted if there is evidence that it is not in regular use. Such evidence includes the computer—


- 1) not being set up for use at a desk (e.g. it is in storage or packed up, or with cables not connected), or
- 2) being obviously inoperable or too obsolete for productive use, or
- 3) being located or set up for occasional use only (in use of less than 50 % of the time), such as in a low-use training room for which there are no acceptable booking or attendance records, or a boardroom, **meeting room** or store.

6.3.2.5 Examples of computer system configurations

Table 6.4 below specifies various computer system configurations and whether these can be counted.

Table 6.4: Examples of computer system configurations

Example	Count	Notes
A desk with one complete desktop computer or a laptop, with a person at the desk	1	One system with evidence of use – the person
A desk with one computer, with no person at the desk but with papers and in-trays as if it is normally occupied	1	One system with evidence of use – the papers and in-trays
A desk with one computer, with no person at the desk and with no papers and no obvious sign that it is being used	0	One system, but no evidence of regular use
The same desk as above, but with a report from the manager that the person is on leave	1	One system with evidence of use (the manager's report)
A desk with a laptop stand or docking station, but no laptop and no evidence of use 	0	No complete system, and no evidence of regular use
A desk in use with a laptop and a stand or docking station, with a separate monitor and keyboard attached	1	One system with evidence of use

Example	Count	Notes
A desk with evidence of use, with a laptop stand with external monitor and keyboard attached, but no laptop	0	No complete system (the laptop may be counted elsewhere)
The same desk as above, but with a report from the manager saying the person is out of the office with the laptop	1	One system with evidence of use (the manager's report means the laptop will not be counted separately)
A desk in use with both a laptop and a desktop computer with monitor and keyboard	2	Two systems with evidence of use
A desk in use with one computer (or laptop), and two monitors used	1	One system with evidence of use
A desk with no computer visible, with two monitors being used: 	2	Two systems (two monitors, no other data) with evidence of use
Eight desks in a training room used no more than two days a week, each with one computer	0	These systems are in used less than 50 % of the time and are therefore considered not in regular use

6.3.3 Conducting a count

6.3.3.1 Standard for acceptable data

The number of computers must be based on an actual site count of computers in each **functional space**. Asset inventory information is not acceptable because it does not differentiate low-use machines and may include old machines no longer in use or on site. Local server counts of computers online at any point in time are not acceptable.

Where **acceptable data** or **acceptable estimates** of the energy consumption for that **functional space** is not available for reasons beyond the control of the **Assessor** or customer, then computers in the **functional space** must not be counted.

For documentation requirements, see Section 8.4.2.

6.3.3.2 Agile and Activity Based Working

Agile and Activity Based Working (ABW) are spaces which typically include a variety of office environments to support different activities in the workplace. ABW spaces typically do not have set desks for workers.

Conducting computer counts in a **functional space** using ABW should be carried out following the same principles outlined above (see Section 6.3.2).

When counting in **functional spaces** which are operating using agile and ABW principles, NABERS recommends conducting computer counts between 09:30 and 12:00, or between 14:00 and 16:30 to ensure an appropriate representation of the number of computers used on-site is obtained.

Computer counts taken at the very start or end of the day, or during lunch hours, may give a lower result than during the premises' typical occupancy, which could impact the rating's result.

In addition, work points outside of traditional **NLA** areas – such as in a café or foyer – may be included in the computer count so long as the computers are still on the premises.

Due to the nature of ABW spaces, it is likely to be more difficult to identify regular use of a computer system (e.g. the absence of personal affects or files at a desk might not equate to non-use). The emphasis around portability in ABW adds to this difficulty. It is important therefore that **Assessors** use their discretion in determining the occupancy of those **functional spaces** through additional means such as asking the tenant about typical occupancy rates on a standard work day and reviewing work points which are highly frequented.

6.3.4 Estimating numbers of computers

If an **Assessor** cannot access a space to physically count all the computers in a **functional space**, then the **Assessor** may discount or estimate the number of computers for that **functional space**. It is acceptable to ask staff familiar with the space, or to estimate the number of computers based on average computer densities for nearby similar spaces.

This Section does not apply to unoccupied spaces. If a **functional space** is unoccupied at the time of the count and there is no acceptable evidence of the number, completeness or regular use of computers, then the default computer count method must be used (see Section 6.3.5).

Computer count estimates add to the **potential error** for computers.

For documentation requirements, see Section 8.4.3.

6.3.5 Default computer count

An **Assessor** may use a default computer count of one computer per 25 m² of **rated area**. This does not add to the **potential error** of the rating.

The default count can be used in place of an actual count, including when access to a **functional space** is limited, or for spaces that were **occupied** during the **rating period** but unoccupied during the computer count.

Note: For **co-assess** applications, if the **functional space** with the default computer count is applicable to both the Whole Building rating and a Tenancy rating, the Tenancy rated area will be used to estimate the number of computers. If no Tenancy rating is associated with the **functional space**, the Whole Building rated area will be used.

For documentation requirements, see Section 8.4.4.

6.3.6 Conducting a survey

6.3.6.1 General

For buildings with 10 or more **functional spaces**, a permitted alternative method is to conduct a random site survey in accordance with this Section. This alternative method can only be applied to **functional spaces** that are expected to have a “normal” density of computers (i.e. typical of an office floor).

For documentation requirements, see Section 8.4.5.

6.3.6.2 Process for conducting a survey

- a) Identify any **functional spaces** likely to have either a significantly higher density of computers (such as call centres) or lower density of computers (such as computer rooms, meeting or conference rooms) than **average**. Count the number of computers in regular use in these spaces. These spaces will not be included in the sampling.
- b) If the *remaining* number of functional spaces at the premises is still 10 or more, it is permitted to continue with the random site survey method. If the remaining number of functional spaces is less than 10, a full computer count must be conducted as per Section 6.3.3.
- c) List the remaining **functional spaces** in random order.
- d) Take the first five **functional spaces** from the random list as the sample and count the number of computers in regular use in each of these spaces.
- e) Enter the computer count data for the sampled **functional spaces** into the **NABERS rating input form**. The **NABERS rating input form** will determine when the sample is large enough.
- f) If the sample is too small (i.e. the statistical uncertainty is greater than 10 %), the **NABERS rating input form** will require additional spaces to be sampled. Take the next **functional space** from the random list, count the number of computers in regular use in that space and add this data to the data already collected. Repeat this step until the statistical uncertainty criteria is met.

Once the sample is large enough and the statistical uncertainty is less than 10 %, the estimated “number of computers in rating” figure can be used. If more data has been collected which has not yet been included in the survey, this is to be added in order to further reduce the statistical uncertainty and consequently improve the reliability of the estimate.

6.3.6.3 Standard for acceptable data

The statistical uncertainty for the figure resulting from the survey, as calculated above, must be less than 10 %. The **NABERS rating input form** will automatically calculate this figure and verify if either the criteria is met or further sampling is required.

If for any reason it is not possible to physically count all the computers in a **functional space** to be sampled, then:

- a) For small spaces within the **functional space** with a combined area of less than 1 % of the total **rated area**, the **Assessor** may assume that there were zero computers in each small space; or

- b) For other cases where the **functional space** cannot be included in the sample, it is *not* acceptable to use an estimate (as outlined in Section 6.3.4) of the number of computers in the random survey, as these two methods are mutually exclusive. Instead, the **Assessor** may remove the **functional space** from the sample and replace it with the next **functional space** from the random list – but only if no more than 10 % of the sample in total is replaced in this way.

If it is not possible to conduct a sample in enough **functional spaces** on the random list to achieve a statistical uncertainty under 10 %, then the premises cannot be rated using this method and a full count must be conducted instead.

7 Minimum energy and water coverage

7.1 Summary

Assessors will need to determine the energy and water a building uses for a NABERS rating. This must be done in compliance with Chapter 3 of *NABERS The Rules – Metering and Consumption* as well as this chapter.

This chapter summarises the minimum energy and water coverage for NABERS Office ratings which must be considered in these calculations.

For minimum energy and water requirements in relation to Shared Services, refer to the following NABERS **rulings**:

a) Ruling – Shared Services for Mixed-Use Buildings

This **ruling** applies to single buildings that have two or more sections that share services but are used for different purposes.

b) Ruling – Shared Facilities

This **ruling** applies to any building which shares common facilities with other buildings. It is not applicable for office Tenancy ratings.

For documentation requirements, see Section 8.5 and NABERS The Rules – Metering and Consumption.

7.2 Minimum energy coverage

7.2.1 General

Assessors must ensure that all the required energy **end uses** as listed in this chapter are covered by the sources and supply points identified in accordance with Sections 3.2 and 3.3 of *NABERS The Rules – Metering and Consumption*.

If an **end use** is required to be included in the rating but is not covered by one of the supply points identified, then the **Assessor** must use one of the alternative allowable methods listed in Chapter 7 of *NABERS The Rules – Metering and Consumption* to ensure the minimum energy coverage requirements can be met.

Note: Alternative allowable methods include small **end use** estimations and, for exclusions, use of financially reconciled utility costs and area weighting. See Sections 7.2.2 and 7.2.3 of *NABERS The Rules – Metering and Consumption*.

For documentation requirements, see Section 8.5.1.

7.2.2 Base Building ratings

The required minimum energy coverage for Base Building ratings is energy consumed in supplying building central services to office lettable and common spaces during the **rating period**. This energy coverage includes:

- a) Common-area lighting and power (e.g. lifts, lobbies, foyers, plant rooms and common-area toilets);
- b) Lifts and escalators;
- c) Air conditioning and ventilation, including:
 - 1) Base Building services to meet normal requirements;
 - 2) Centralised supplementary services provided for tenants (such as supplementary tenant condenser water loops), see Section 7.3.2;
 - 3) Supplementary services provided to ensure the premises are safe, lit and **comfortable for office work**, where there is no **special tenant requirement**;
- d) Exterior lighting;
- e) Generator fuel where it serves central services;
- f) Car park ventilation and lighting, where internal or external car parks within the legal boundaries of the site are provided for tenant use;
- g) Exterior signage that—
 - 1) is primarily used for identifying or advertising the building owners, or
 - 2) displays the building name, even if unrelated to a tenant or building owner, or
 - 3) is provided to a tenant by the building owner as a condition of lease.
- h) Sump pits and hydraulic pumping which serves the building.

7.2.3 Tenancy ratings

The required minimum energy coverage for Tenancy ratings is energy consumed by the occupant in the tenancy to be rated during the **rating period**. This energy coverage includes:

- a) Lighting;
- b) Power to equipment (including computer servers and tenant-installed signage within the building);
- c) Tenant-controlled supplementary air conditioning to meet a **special tenant requirement**;
- d) Generator fuel for tenant usage;
- e) External signage for a tenant not provided by the building owner as a condition of the lease.

7.2.4 Whole Building ratings

The required minimum energy coverage for Whole Building ratings is all energy used by office tenancies and by Base Building services to lettable office and common spaces during the **rating period**.

7.2.5 Unoccupied spaces

The energy use (within the scope of the required minimum energy coverage of the rating) of unoccupied office spaces must always be included, even though the space may have been excluded from or discounted in the **rated area** calculation.

7.2.6 Exclusions

7.2.6.1 General

Energy use may only be excluded from a rating if:

- a) The energy is not part of the minimum energy coverage of the rating; and
- b) There is a methodology within the **Rules** that permits the exclusion; and
- c) The coverage, accuracy and **validation** requirements for the metering of the exclusion are not met.

The metering for any exclusion must not include any **end uses** that are required under the minimum energy coverage.

7.2.6.2 Electric vehicle charging points

The energy associated with electric vehicle charge points does not form part of the minimum energy coverage and is not required to be included. Emissions associated with moving vehicles are not included in the scope of ratings.

7.2.6.3 Transmission towers

The energy used by antennas/transmission towers that provide service to the locality/suburb are not part of the energy coverage. Typically, this would be where a building leases roof space to a telecommunications company to operate their telecommunications equipment for servicing of the locale.

7.2.6.4 Computer server rooms and data centres

Refer to Section 4.5.4 for more information on how to exclude the energy for these spaces.

7.3 Energy end uses requiring additional consideration

7.3.1 Computer server room energy coverage

7.3.1.1 Base Building ratings

Where the area of a **computer server rooms** has been excluded in line with Section 4.5.4.2, the energy associated with providing central services to this area must also be excluded from the rating if adequately sub-metered or thermally metered.

For situations where HVAC services are provided centrally, thermal metering may be required to determine the proportion of energy use. In these situations, the standard methodology given in *NABERS Energy for Offices – Validation Protocol for Thermal Energy Exclusions* must be used.

7.3.1.2 Tenancy and Whole Building ratings

The energy consumption of a **computer server room** may be partially or wholly excluded from Tenancy and Whole Building ratings² on the grounds of external usage of the equipment. However, the same methods and criteria as those used to exclude the floor area of the same **computer server room** from the **rated area** calculation under Section 4.5.4 must be used. Specifically, the following rules apply:

- a) If the floor area of the **computer server room** has been **completely included** in the calculation of the **rated area**, then the energy consumption must be **completely included** in the assessment.
- b) If the floor area of the **computer server room** has been **completely excluded** from the calculation of the **rated area**, then the energy consumption must be **completely excluded** from the assessment.
- c) If the floor area of the **computer server room** has been **partially excluded** from the calculation of the **rated area**, where the externally used IT equipment and/or facility services³ are separately sub-metered, then the measured energy consumption of the externally used IT equipment and/or facility services must be **excluded** from the assessment.
- d) If the floor area of the **computer server room** has been **proportionately excluded** from the calculation of the **rated area**, where—
 - 1) the externally used IT equipment and/or facility services are **not** separately sub-metered but
 - 2) it is possible to determine the number of **external users** of the IT equipment,then the energy consumption of the IT equipment and/or facility services must be **excluded** from the assessment **in the same proportion** as the floor area exclusion.

Example: If the energy consumption over 12 months of a **computer server room** is 25 megawatt hours (MWh) and there are 100 internal users and 400 **external users**, the energy consumption for the **external users** is calculated as:

$$25 \times \frac{400}{(400 + 100)} = 20 \text{ MWh}$$

The documentation required for energy consumption exclusions for **computer server rooms** is the same as the documentation required for exclusions from the **rated area** calculation under Section 4.5.4.3.

For documentation requirements, see Section 8.5.2.

7.3.2 Energy use allocations for services

7.3.2.1 General

Energy used to provide services to office tenants, other than tenant lighting and power, must be allocated according to the requirements of this Section.

² If the consumption of IT equipment and/or facility services to the space are separately metered.

³ Facility services include lighting, power, UPS, air conditioning and dehumidification.

7.3.2.2 Supplementary air conditioning in open plan and cell office spaces

Energy used for supplementary air conditioning services to open plan or cell office spaces in office tenancies (including any space with one or more desks/workstations for normal use, or associated circulation spaces) is allocated to the Base Building. If a **special tenant requirement** exists however, it is allocated to the Tenant.

To determine whether or not a **special tenant requirement** exists, the **Assessor** must conduct site inspections or obtain documentary evidence to establish that an unusual usage of the space has resulted in an increased intensity of the service required.

For documentation requirements, see Section 8.5.3.

The following procedure in **Table 7.1** may be used to determine the allocation of supplementary air conditioning in open plan and cell office spaces:

Table 7.1: Procedure for allocating supplementary air conditioning

Step	Procedure	Notes
1	<p>Check whether the supplementary air conditioning equipment is operated intermittently in response to a tenant-specific requirement, rather than continuously while the space is occupied.</p> <p>If it is operated intermittently in response to a tenant-specific requirement, the energy used for the equipment is allocated to the tenant. If not, go to Step 2.</p>	A special tenant requirement may result from overloading due to unusually dense occupation or intense energy use in the space.
2	<p>Check whether the need for supplementary air conditioning equipment is localised to the tenancy.</p> <p>If supplementary air conditioning equipment is common in spaces elsewhere in the building without a special tenant requirement, the energy used for the equipment in question is allocated to the Base Building.</p> <p>If there are other spaces in the building with similar usage but which do not have supplementary air conditioning equipment, or if a comparison is inconclusive or not possible, go to Step 3.</p>	A special tenant requirement will be limited to spaces where the tenant's unusual usage has resulted in an increased intensity of service required.

Step	Procedure	Notes
3	<p>Check the current tenant load conditions in the space against documented specifications for the Base Building system to determine whether the tenant's unusual usage of the space is outside the system's intended conditions and performance. (For example, a consultant's 'Building performance criteria' document, or information provided to assess the grade of building in terms of the PCA building quality matrix could be used.)</p> <p>If the conditions in the space are clearly based on an unusual usage of the space that is outside that intended, the equipment's energy use is allocated to the Tenant. If not, or if there is no documented specification, go to Step 4.</p>	A check against specifications may show that the tenant's unusual usage of the space has resulted in an increased intensity of service that is higher than the Base Building system was intended to accommodate.
4	<p>The energy used by the supplementary air conditioning equipment must be allocated to the Base Building.</p> <p>Where it is not possible to include all the energy used by the supplementary air conditioning equipment in a Base Building rating, because it is not connected to a Base Building board or separately metered, then the space serviced by this equipment must be excluded from the rated area calculation. See Section 4.4.2.</p>	The energy used for Base Building services (such as central chilled water) to spaces serviced by supplementary air conditioning equipment must always be included in the Base Building energy coverage, whether or not the floor area is included in the rated area calculation.

7.3.2.3 Energy use allocations for other services

Energy used to provide services to office tenants, other than supplementary air conditioning in open plan and cell office spaces, must be allocated according to the following requirements in [Table 7.2](#) and [Table 7.3](#). The energy requirements apply in the order they are listed. Examples of energy use allocations are given in [Table 7.4](#).

Table 7.2: Requirements for Tenant allocations

Requirement	Tenant allocations
	Energy used for the following is always allocated to tenants and must be excluded from an assessment for a Base Building rating.
T1	Supplementary air conditioning equipment installed to meet a special tenant requirement in office support facilities . Examples might include packaged air conditioners (water or air cooled) in meeting rooms , tea rooms, computer server rooms or tenant-only cafés.
T2	Tenant cooling tower(s) and associated pumps that do not service the Base Building and are separately metered.

Requirement	Tenant allocations
	Energy used for the following is always allocated to tenants and must be excluded from an assessment for a Base Building rating.
T3	Stand-alone domestic hot water units in tenant-only kitchens, tea rooms or toilets, unless accessible from a common space or car park without passing through NLA .
T4	Any other system which serves the rated premises and is not specifically allocated to the Base Building through the requirements listed under <i>Base Building allocations</i> in Table 7.3 below.

Table 7.3: Requirements for Base Building allocations

Requirement	Base Building allocations
	Energy used for the following, when associated with offices rather than other uses, is always allocated to the Base Building and must be excluded from an assessment for a Tenancy rating.
B1	Components added or changed to reconfigure the Base Building air conditioning system for office fitout requirements (for example, reheats and other additional terminal components).
B2	Centrally provided services that are— <ul style="list-style-type: none"> a) sized and located to provide a generic service for occupant end uses in different parts of the building, rather than a custom service for a designated set of applications, and b) accessible (whether or not they are used) to at least 30 % of the office tenants in the building or 30 % of the office NLA. <p>Examples:</p> <ul style="list-style-type: none"> a) supplementary tenant condenser water, and chilled and heating water b) supplementary outdoor air, tempered or otherwise c) domestic hot water
B3	Services whose main characteristics (e.g. temperature, speed or flow volume) are managed by a Base Building control system (other than a master switch for enabling or disabling the service overall).
B4	Services to— <ul style="list-style-type: none"> a) non-NLA spaces such as lifts, lobbies, common area amenities and foyers, and b) any amenities space (e.g. a shower or toilet block) that is accessible from a common space or car park without passing through NLA, whether the amenities space is being used by a single tenant or otherwise.

Table 7.4: Examples of energy use allocations

Example	Allocation	Reasons
Supplementary chilled water loop with blanked or in-use connection on each floor (i.e. more than 30 % of the floor area) serving a range of fan coils throughout the building	Base Building	Requirement B2
Supplementary condenser or chilled water application designed specifically to service a computer server room for a single tenant, not generally available to other tenancies	Tenant	Requirements T1 and B2
Supplementary chiller and associated equipment (e.g. pumps and cooling towers) sized to serve a set of fan coils and computer cooling room units affecting less than 30 % of the tenants or total office NLA , without blanked connections available to other applications	Tenant	Requirements T1 and B2
Packaged air conditioners under Base Building control	Base Building unless T1 applies	Requirements T1 and B3
Air conditioning services to meeting rooms , operating from the primary Base Building air conditioning system	Base Building	Requirement B1
Outdoor compressor unit for an air-cooled package unit that is allocated to the tenancy under T1	Tenant	Requirement T1
Separate supplementary air conditioning for a leased café that is exclusively for the use of office tenants	Tenant	Requirement T1
A lift that connects areas leased by a tenant, installed in addition to existing Base Building lifts, and serving less than 30 % of the total office NLA	Tenant	Requirements T4 and B2
Domestic hot water serving common areas and some tenant-specific applications	Base Building	Requirement B2
Hot water for a shower block wholly within a single tenant's leased space, with no access from common areas, and under tenant control	Tenant	Requirements T3 and B1

7.3.3 Energy consumption in excluded spaces

7.3.3.1 Spaces for the exclusive use of tenants

Any space that is for the **exclusive use of office tenants** is considered part of the office **rated premises**. The energy used in these spaces must be included if it is in the **rating scope** (e.g. a Tenancy or Whole Building rating). This is the case regardless of whether that space is included or excluded from the **rated area** calculation.

7.3.3.2 Other spaces

Energy use associated with other spaces which are—

- a) *not* for the **exclusive use of office tenants** and
- b) *not* included in the **rated area** calculation

may be excluded from energy coverage under all of the following conditions:

- 1) The energy consumption is not included in the minimum energy coverage for this type of rating; and
- 2) The energy consumption is properly metered, and the metering meets the requirements of *NABERS The Rules – Metering and Consumption*; and
- 3) The exclusions meet the requirements of *NABERS The Rules – Metering and Consumption* or, for thermal exclusions only, the *NABERS Energy for Offices – Validation Protocol for Thermal Energy Exclusions*.

This does not apply to **medical office facilities** or **educational office facilities**.

For documentation requirements, see Section 8.5.4.

7.3.4 Car parks

7.3.4.1 General

Car parks are only considered for Base Building and Whole Building ratings, not for Tenancy ratings.

For Base Building and Whole Building ratings, the energy use of lighting and ventilation in car parks in the **rated premises** must be included in the rating to the extent that parking is provided to office tenants as a benefit of their Tenancy (e.g. as part of an agreement associated with a lease). This applies whether the energy use is separately metered or not.

It is not uncommon for car park metering to also include other basement services such as hydraulic pumping. In such cases, proportioning of consumption data, as outlined in this section, is not permitted.

Note: Where parking is provided to a tenant as a result of a separate agreement (e.g. a standard contract with a public car park operator that is independent of building ownership and management) then it is not a benefit of the tenancy and is not included.

7.3.4.2 Complete exclusion

The energy use of lighting and ventilation in car parks provided for office use may be **completely excluded** from the rating where—

- a) the car park is not located on the site of the **rated premises**, or
- b) both:
 - 1) The ownership and management of the car park are independent of the ownership and management of the **rated premises**; and
 - 2) There is a separate meter (or group of meters) that covers the entire energy use associated with the car park, but does not cover any other aspect of the building's central services energy use that must be included in the assessment.

Note: No complete exclusion applies based solely on the grounds that the car park is leased to, or otherwise operated by, a manager separate from the building owner and building facilities manager. The car park can, however, be excluded if tenants do not have access to the car park, in accordance with the following Section 7.3.4.3.

7.3.4.3 Proportional exclusion of energy use

Where building office tenants do not have use of all of the building's car park, then a proportion of the energy use associated with the non-office tenant car parking spaces may be excluded from the rating in accordance with the following:

- a) Proportional exclusion of car park energy use is only permitted where there is a separate meter (or group of meters) that covers the entire energy use associated with the car park, but does not cover any other aspect of the building's central services energy use that must be included in the assessment.
- b) Where lease documents explicitly assign a proportion of the measured car park energy use to the office tenants, then the share(s) specified in the documentation must be used in the assessment.
- c) If no specific allocation of the energy use is given to office tenant(s) in lease documentation, the relevant proportion is calculated by dividing the number of parking spaces allocated to office tenants by the total number of parking spaces.

Where pass cards or keys have been issued to office tenants, the number of parking spaces allocated to office tenants is the greater of—

- 1) the number of physically dedicated parking spaces, and
- 2) the number of pass cards or keys issued (to a limit of the total number of parking spaces).

Dedicated parking space, pass or key allocation data must be sourced from the lease documentation.

- d) If there is no lease documentation available, then it is acceptable to determine the proportions by obtaining documentation signed by office tenants that identifies the proportion of allocation.
- e) If there is no documentation and office tenants are unable to identify proportions, then all of the energy use associated with the car park must be included in the assessment.
- f) Regardless of the method used to proportion the energy use, the maximum that can be excluded is 100 % of the measured car park energy usage.

The **Assessor** must fully document both the method and all data used to proportion car park energy usage.

Where car parks are solely associated with education and medical office tenants, the following applies:

- i) For Base Building ratings, the energy consumption for these spaces must be included in the rating, even where some of the area has not been included in the rating.

- ii) For Whole Building ratings, these spaces can be considered as “non-office” tenants and the energy can be excluded, provided the requirements listed above in a) to f) are met.

Note: Where no spaces are provided to office tenants as a benefit of their tenancy and there is no car park energy use assigned to the Base Building in lease documentation then the proportion that can be excluded is 100 %.

7.3.4.4 Standard for acceptable data

Compliance with this Section on car parks is deemed to satisfy the accuracy requirements of Section 3.3.

For documentation requirements, see Section 8.5.5.

7.4 Minimum water coverage

7.4.1 General

Once the water sources and their supply points have been determined, **Assessors** must ensure that all the required water **end uses** as listed in this chapter are covered.

If an **end use** is required to be included in the rating but is not covered by one of the supply points identified, then the **Assessor** must use one of the alternative allowable methods listed in Chapter 7 of *NABERS The Rules – Metering and Consumption* to ensure the minimum water coverage requirements can be met.

For documentation requirements, see Section 8.5.6.

7.4.2 Water ratings

The required minimum water coverage is all the water uses within the building used to support the office during the **rating period**. This includes water use in—

- a) taps and sinks,
- b) air conditioning and other Base Building services (for example, general cleaning, façade cleaning, etc.),
- c) all services supplied exclusively to office occupants, such as showers, swimming pools, etc,
- d) fire services, in accordance with Section 7.4.4,
- e) water features and irrigation associated with the office building (including areas outside the building not considered **NLA**, but within site boundaries), unless primarily associated with non-office facilities such as retail spaces, and
- f) toilets and washing facilities serving office areas.

7.4.3 Water consumption in excluded spaces

7.4.3.1 Spaces for the exclusive use of tenants

Any space for the **exclusive use of office tenants** is considered part of the office **rated premises**, and the water used in any such spaces must be included in the rating. This rule applies regardless of whether that space is included in or excluded from the **rated area** calculation.

7.4.3.2 Other spaces

Water use associated with spaces that are—

- a) *not* for the **exclusive use of office tenants** and
- b) *not* included in the **rated area** calculation,

may be excluded from water coverage under the following conditions:

- 1) The water consumption is not included in the minimum water coverage, and
- 2) The water consumption is properly metered and meets the requirements of *NABERS The Rules – Metering and Consumption* as appropriate.

7.4.3.3 Unoccupied spaces

The water use (within the scope of the required minimum water coverage of the rating) of unoccupied office spaces must always be included, even though the space may have been excluded from or discounted in the **rated area** calculation.

7.4.4 Fire system water consumption

Water consumption from the operation of a building's fire system, whether consumed in an emergency or during testing, is considered a cost of operating a building and must be included in the calculation of water consumption if it is metered. If it is not metered, fire system consumption need not be included.

Note: Metered fire system consumption that is re-used within the building will tend to improve the rating.

7.4.5 Exclusions

Water use may only be excluded from a rating if—

- a) the water is not part of the minimum required water coverage of the rating, and
- b) there is a methodology within the **Rules** that permits the exclusion, and
- c) the coverage, accuracy and **validation** requirements for the metering of the exclusion are met.

The metering for any exclusion must not include any **end uses** that are required under the minimum water coverage.

8 Documentation required for accredited ratings

8.1 Summary

Assessors must keep all records on which an assessment is based such that the entire rating can be recreated for audit based only on those documents. Data retained for audit must be in a form which facilitates reviews and makes anomalies easily apparent.

Access to original documents, if available, is highly desirable. Copies of original documents may be used as evidence as long as the **Assessor** is satisfied that they are, or can be verified to be, true and complete records of the original documents or files.

The information in the tables below will assist in determining the documentation required for a rating. The required documentation includes but is not limited to the documents in this section. It is organised based on the divisions of previous chapters (Chapter 4 through to Chapter 7). All the required information should be obtained from the building owner/manager before a site visit, and then confirmed during the site visit and subsequent assessment. A site inspection is required to verify that the information provided is accurate, current and complete. Comprehensive site inspection notes and photographs are required documents.

Individual ratings may require additional information or documentation depending on the individual circumstances of the **rated premises**.

8.2 Documentation required for Chapter 4: Rated area

Topic	Requirements	Documentation
8.2.1 Office NLA	Section 4.3	<p>To confirm and validate the office NLA, the following is required, in order of preference:</p> <ul style="list-style-type: none"> a) Surveys; b) Leases (including information about tenancy types, hours of operation and subsequent negotiations and changes); c) Other third-party documentation; d) Direct measurement from drawings, plans or prints; and/or e) Site measurement verified by the Assessor identifying the rated premises. <p>All of the documentation listed above must be made to/based on the measurement standard for rated area.</p>
8.2.2 Functional space	Section 4.4	<p>To confirm the division of office NLA into functional spaces, the following is required:</p> <ul style="list-style-type: none"> a) A complete list of functional spaces identified by the Assessor, including details of— <ul style="list-style-type: none"> 1) each individual and distinct tenancy, and 2) all spaces with different AHAC zones or operating hours, and 3) office support facilities. b) Measurements and calculations for the functional spaces and the method of measurement employed in these determinations. For example, measurement standard for rated area. c) Any documentation relating to significant construction activity during the rating period. d) Evidence of any smaller divisions of spaces made by the Assessor in order to improve the rating accuracy.

Topic	Requirements	Documentation
8.2.3 Exclusions	Section 4.5.1	For an excluded functional space , the following is required: <ul style="list-style-type: none"> a) Written information and/or Assessor's notes relating to the usage of spaces and the services provided to them, and b) The grounds for their exclusion from the rated area calculation.
	Section 4.5.2	The following documentation must be provided for any office areas that have been subject to commercial negotiation: <ul style="list-style-type: none"> a) Evidence of commercial negotiation between owners and tenants regarding those areas; b) Evidence regarding the nature of the use of those areas and whether they should be included or excluded from the rating.
	Section 4.5.3	A list of all areas which cannot be considered offices must be retained. The appropriate reason for exclusion of the space must be stated in terms of the following categories: <ul style="list-style-type: none"> a) It cannot be used as an office or office support facility; or b) It is not occupied; or c) It is not fit for office use.
8.2.4 Computer server rooms	Section 4.5.4.2	For the exclusion of computer server rooms from Base Building ratings, the following must be retained: <ul style="list-style-type: none"> a) Location of the computer server room; b) Details of air conditioning arrangements; c) Documentation regarding the area to be excluded from rated area calculation; d) Energy and water usage for the area to be excluded (if metering permits); e) Any thermal energy to be excluded from the rating (if metering permits).

Topic	Requirements	Documentation
	Section 4.5.4.3	<p>For the exclusion of computer server rooms from Tenancy and Whole Building ratings, the following must be retained:</p> <ul style="list-style-type: none"> a) Written documentation from the tenant that confirms that the computer server room is either used entirely for external users or as a disaster recovery site for another external data centre, or b) Written documentation from the tenant that confirms that the IT equipment in the excluded area is either used entirely for external users or as a disaster recovery site for another external data centre, or c) Credible written documentation provided by the tenant, completed and signed by an appropriate person, that either: <ul style="list-style-type: none"> 1) states the number of external users of the computer server room, or 2) contains records which allow the Assessor to accurately calculate (not estimate) the number of external users.
8.2.5 Data centres	Section 4.5.4.4	<p>For data centres, the following documentation is required:</p> <ul style="list-style-type: none"> a) Fitout drawings that show the size of the data centre or lease plans/drawings that clearly define the area of the data centre; and b) A list of active users identified as either internal users or external users. A signed letter from the data centre confirming the percentage of external users is also permissible. <p>Assessors are required to sight and obtain copies of the kinds of documentation listed above to demonstrate the data centre meets the criteria to qualify as a data centre.</p>
8.2.6 Other exclusions	Section 4.5.5	<p>The documentation required for the exclusion of other office support facilities (not classified as computer server rooms or data centres) is as follows:</p> <ul style="list-style-type: none"> a) For Base Building ratings: <ul style="list-style-type: none"> 1) Location of the meeting room;

Topic	Requirements	Documentation
		2) Details of air conditioning arrangements; 3) Documentation regarding the area to be excluded from rated area calculation; 4) Energy and water usage for the area to be excluded (if metering permits); 5) Any thermal energy to be excluded from the rating (if metering permits). b) For Tenancy and Whole Building ratings: documentation of the floor area.
	Section 4.5.6	Where either a whole or a part of a functional space is excluded, full documentation in relation to the space must be retained. Detailed reason(s) why acceptable consumption data or estimates were not available for the rating period must also be given.
8.2.7 Limiting public access spaces	Section 4.6.2	Documentation such as measurements and calculations must be retained of the floor area of the public access spaces . The Assessor must report if such spaces comprise more than 10 % of the office NLA and, if so, what proportion cannot be included in the rating.
8.2.8 Limiting medical and educational office facilities	Section 4.6.3	For all Base Building ratings, any medical and educational office facilities must be identified and the following documentation retained: a) The nature of the facility (e.g. consulting room, store room, meeting room, etc.); b) Information regarding whether the space is serviced by Base Building services; c) All calculations and measurements used to determine whether or not the space occupied by the medical or educational office facility can be included in the rating. The Assessor must retain documentation substantiating the grounds for any exclusion from the rated area calculation for the rating.

Topic	Requirements	Documentation
8.2.9 Adjustments for unoccupied spaces	Section 4.7	<p>The documentation required for adjusting for unoccupied spaces includes:</p> <ul style="list-style-type: none"> a) Written evidence obtained from building manager, owner or tenants confirming the number of fitout days for the space and evidence showing that Base Building air conditioning services were required. This may include notes that fitout days occurred during the lease period and tenant confirmation that they did not require Base Building air conditioning services to be turned off or down. b) Written evidence confirming the number of occupation days. Depending on the rating scope, this might include evidence showing that the space was ready for occupation and evidence showing that the space was used by the tenants during these days. <p>For Base Building and Whole Building ratings, the Assessor must obtain documentation that shows for how much of the rating period the occupiers—</p> <ul style="list-style-type: none"> 1) had the right to make exclusive use of that part of the rated premises (e.g. leases or similar agreements when the fitout works days are before the start date of the lease), and 2) required services to be supplied to that part of the rated premises (e.g. copies of requests to the building owner for service, or a statement by the building owner or facility manager). <p>For Whole Building and Tenancy ratings, the Assessor must also obtain documentation that shows for how much of the rating period the occupiers were actively using the space as an office (e.g., Tenant Occupancy Survey or confirmation from the building manager that the space has been used by the tenants).</p>

8.3 Documentation required for Chapter 5: Rated hours

The documentation required to determine correctly the **rated hours** depends on the data available and the method used. For each rating, the **Assessor** must ensure that the method used is clearly stated and any documentation listed below is included, relevant to the methods used.

Topic	Requirements	Documentation
8.3.1 Core Hours	Section 5.3.2	<p>For the confirmation of the rated hours under this method, the following documentation is required:</p> <ul style="list-style-type: none"> a) Written documentation stating the hours of service for normal and after-hours operation as agreed upon by the building manager and tenant; b) Copies of most up-to-date OTA; c) Records of specific lease clauses referring to Lessor's obligations; and d) Details of any conflicting information regarding Core Hours (if applicable). <p>If the OTA Hours and BMS data method is used, the Assessor must retain BMS data representative of the plant operation for the rating period – meaning at a minimum one day from each of the four seasons for each primary air handling system serving the space under the OTA.</p> <p>The Assessor must obtain additional evidence to determine the OTA hours can be interpreted as 'hours of comfort' when—</p> <ul style="list-style-type: none"> 1) the plant starts with a small start-up time before OTA Hours (e.g. 30 minutes prior), or 2) air conditioning plants with an optimised start strategy are present. <p>The additional evidence may include a BMS or mechanical contractor signed statement or temperature data within the space from the BMS, demonstrating that the system is programmed to bring the space to comfort conditions in time for the start of OTA Hours. This evidence should represent at minimum one day from each of the four seasons for each primary air handling system serving the space under the OTA.</p> <p>The National Administrator may allow alternative documentation on a case-by-case basis for the use of OTA Hours and BMS data. If an Assessor is unable to provide documentation matching the above, they should contact the National Administrator.</p>

Topic	Requirements	Documentation
8.3.2 AHAC	Section 5.3.3	<p>For the confirmation of the rated hours under this method, the following documentation is required:</p> <ul style="list-style-type: none"> a) Copies of AHAC request data showing the date and time of each request and the space to which it applied; and b) Evidence of run times for each request showing that the tenant requested that run time, or agreed to it in an OTA or related written agreement with the building owner; and c) Evidence that no AHAC has been counted during the Core Hours and during the plant start-up period or the hour before the start of Core Hours if the plant start-up period is unknown; d) Drawings and measurements showing AHAC zones for requests serving different zones within a single functional space.
8.3.3 TOS	Section 5.3.4	<p>For the confirmation of the rated hours under this method, a completed and signed TOS for each functional space and shift must be retained.</p>
8.3.4 Average Core Hours	Section 5.3.5	<p>For the confirmation of the rated hours under this method, the following evidence must be retained:</p> <ul style="list-style-type: none"> a) Details of how the estimates have been calculated; b) A clear list of functional spaces; and c) Associated Core Hours used to determine average Core Hours for each space.
8.3.5 Default Core Hours	Section 5.3.6	<p>For the confirmation of the rated hours under this method, evidence that no other method with a higher priority could be used for the functional space must be retained (i.e. evidence that OTA and AHAC, TOS or average Core Hours could not be used for the functional space).</p> <p>Note: Tenancy ratings and co-assess applications are not required to provide this documentation.</p> <p>The Assessor must state his/her reasons if giving an estimate of less than the Default Hours of 45 hours per week.</p>

Topic	Requirements	Documentation
8.3.6 Computer server rooms	Section 5.3.7	<p>For confirmation of the rated hours for computer server rooms, the following must be retained:</p> <ul style="list-style-type: none"> a) Evidence showing if Base Building direct HVAC is serving the space (for Base Building rating only); and b) BMS data showing computer server room air conditioning hours for a typical week or facility manager confirmation of air conditioning hours for the space. These hours must be Base Building direct HVAC hours for a Base Building rating or air conditioning hours for a Tenancy or Whole Building rating.
8.3.7 Other office support facilities	Section 5.3.8	<p>Depending on the method used, confirmation of the rated hours for other office support facilities including meeting rooms must be retained in the following formats:</p> <ul style="list-style-type: none"> a) For Base Building ratings: copies of OTA and AHAC requests, or evidence on how the average Core Hours have been calculated or, if default values are used, evidence that no other method could be used. b) For Tenancy and Whole Building ratings: copies of booking system records or evidence of area-weighted average calculations, or evidence on how the average Core Hours have been calculated or, if default values are used, evidence that no other method could be used.
8.3.8 Verifying long OTA and AHAC Hours	Section 5.4.2	<p>Depending on the process used, confirmation of the rated hours must be retained as follows for long OTA and AHAC hours:</p> <ul style="list-style-type: none"> a) Where the hours are obviously as expected and reasonable for the space: Assessor's notes explaining the reasons why long hours are obviously expected and reasonable; or b) Where the hours are not obviously as expected and reasonable for the space: written and signed tenant confirmation that the rated hours are as expected and reasonable and the reasons why they are considered so.

Topic	Requirements	Documentation
8.3.9 Verifying long TOS hours	Section 5.4.3	Depending on the process used, confirmation of the rated hours must be retained as follows for long TOS hours: <ul style="list-style-type: none"> a) Where the hours are obviously as expected and reasonable for the space: Assessor's notes explaining the reasons why long hours are obviously expected and reasonable; or b) Where the hours are not obviously as expected and reasonable for the space: written evidence showing that the TOS questions have been properly interpreted by the person surveyed. This can take the form of copies of email exchanges or detailed minutes of a phone conversation.
8.3.10 Checking expected hours	Section 5.4.4	For confirmation of the rated hours for all functional spaces , a common-sense check of the hours must be performed. This must take the form of Assessor's notes stating their judgment of whether the hours are 'obviously as expected and reasonable for the space' and giving reasons why or why not.

8.4 Documentation required for Chapter 6: Counting computers

Computer counts are applicable for Tenancy and Whole Building ratings only.

Topic	Requirements	Documentation
8.4.1 Principle and definitions	Section 6.3.2	As evidence of a site visit to count computers, the following must be retained: <ul style="list-style-type: none"> a) A record of how many personal computer systems have been identified within each functional space. b) Where necessary, evidence of regular use of computers, such as: <ol style="list-style-type: none"> 1) A report by a manager or other authoritative source that a system is in regular use; 2) For computers in training rooms, etc. booking or attendance records that the Assessor has verified to be accurate and which show both the number of computers used and the amount of time they were used for.

Topic	Requirements	Documentation
8.4.2 Conducting a count	Section 6.3.3	<p>As evidence a computer count has been conducted, the following must be retained:</p> <ul style="list-style-type: none"> a) Marked-up desk layouts for all spaces in the rated premises, if available; b) Marked-up desk layouts completed by the Assessor and showing the computer count; or c) Copies of the Assessor's site notes taken during the count, if desk layouts are not available. <p>In addition, the Assessor must identify which spaces (if any) are agile and ABW spaces, and document at which times counts have been conducted.</p>
8.4.3 Estimating numbers of computers	Section 6.3.4	<p>Whenever an estimate of computer numbers has been made, the following must be retained for each functional space:</p> <ul style="list-style-type: none"> a) Statements giving reason(s) why the estimate had to be made; and b) Calculations of the figure used (including all assumptions, estimates and interpretations involved).

Topic	Requirements	Documentation
8.4.4 Default method	Section 6.3.5	The Assessor must list each functional space for which the default method of counting computers has been used.
8.4.5 Conducting a survey	Section 6.3.6	Whenever a survey has been conducted, the following must be retained: <ul style="list-style-type: none"> a) A record of the sampling method used, including a copy of the random list that clearly shows which of the functional spaces were selected. b) For each functional space in which a computer count was conducted: <ul style="list-style-type: none"> 1) Marked-up desk layouts completed by the Assessor and showing the computer count; or 2) If desk layouts are not available, copies of the Assessor's site notes taken during the count.

8.5 Documentation required for Chapter 7: Minimum energy and water coverage

The documentation requirements for minimum energy and water coverage are covered in Section 5.7 of *NABERS The Rules – Metering and Consumption*. Additional documentation requirements specific to offices are listed below:

Topic	Requirements	Documentation
8.5.1 Minimum energy coverage	Section 7.2	For documentation required to confirm minimum energy coverage see Section 9.2.3 of <i>NABERS The Rules – Metering and Consumption</i> .

<p>8.5.2 Computer server room energy coverage</p>	<p>Section 7.3.1</p>	<p>The documentation required for energy consumption exclusions for computer server rooms is the same as the documentation required for exclusions from the rated area calculation as specified in Section 8.2.4.</p>
<p>8.5.3 Energy use allocations for services</p>	<p>Section 7.3.2</p>	<p>For the determination of all energy and water use allocations, the following is required:</p> <ul style="list-style-type: none"> a) Existing agreements and other official documentation between the builder, owner and tenants, or between tenants; and b) Descriptions and/or drawings of service arrangements, including exclusions. The preference is a service drawing, however detailed reports and Assessor's sketches are permissible; c) Where possible, list of tenant supplementary units in the building in order to determine any spaces that need to be excluded. <p>Any instances of special tenant requirements must also be documented. If such requirements exist, the Assessor must obtain evidence to establish that an unusual usage of the space has resulted in an increased intensity of the service required. Such documentation includes:</p> <ul style="list-style-type: none"> 1) Documentation that either— <ul style="list-style-type: none"> i) confirms the building has been checked and no such systems exist, or ii) identifies all tenant powered supplementary A/C systems serving open office or cell office spaces within the rated area. This must include location and type of area served. 2) Documentation that verifies a special tenant requirement exists. This must include details of unusual usage of the space and increased intensity of the services compared to the bulk of the office, as per the building design criteria (see Table 7.1, Step 3). 3) Additional documentation associated with the relevant procedures of Tables 7.1 to 7.3. Where applicable, this may include:

		<ul style="list-style-type: none"> i) Method of control of supplementary systems by Base Building or Tenant control systems (see Table 7.3, Rule B3 and Table 7.1, Step 1). ii) Location of similar supplementary systems throughout the building (see Table 7.1, Step 2). iii) Chilled water, heating water, condenser water, air supply and electric schematics for tenant supplementary and Base Building services (see Table 7.3, Rule B2). iv) Base Building and tenant fitout mechanical and electrical services drawings (see Table 7.3, Rule B1). v) Percentage area and tenant calculations for centrally provided services (see Table 7.3, Rule B2). vi) Documents identifying Base Building amenities on each floor which may be serviced from tenant switchboards/meters. (see Table 7.3, Rule B4).
8.5.4 Energy consumption in excluded spaces	Section 7.3.3	<p>For energy consumption in excluded spaces, the following must be retained:</p> <ul style="list-style-type: none"> a) A comprehensive list of all spaces for the exclusive use of office tenants, whether or not the space is included or excluded from the rated area calculation; b) Calculations and information relating to the energy use of other spaces which are <u>not</u> for the exclusive use of office tenants, with reference to the metering and exclusion requirements of other NABERS Rules documents, as appropriate.
8.5.5 Car parks	Section 7.3.4	<p>The Assessor must fully document both the method and all data used to proportion car park energy usage.</p> <p>Dedicated parking space, pass or key allocation data must be sourced from the lease documentation.</p> <p>Documentation to support the proportioning of energy use, includes either—</p> <ul style="list-style-type: none"> a) lease documentation, or b) documentation signed by office tenants that identifies the proportion of allocation, or c) Assessor's calculation of relevant proportions.

8.5.6 Minimum water coverage	Section 7.4.1	For documentation required to confirm minimum water coverage, see Section 9.2.3 of <i>NABERS The Rules – Metering and Consumption</i> .
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Appendices

Summary

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Appendix A – Tenant Occupancy Survey

The following form must be completed by a staff manager or supervisor responsible for the nominated **functional space**. At least one form must be printed and completed for every shift operating in each **functional space**, and kept on file for auditing purposes.

The questions in this survey are aimed at finding the average number of hours per week that at least 20 % (one in five) of people who work in the **functional space** were present for the **rating period**. This information is only used to assess the energy and water consumption and greenhouse gas performance of the building relative to how many hours it is used.

Functional space:

Rating period: From _____ to _____

(to be completed by the **Assessor**)

Please answer the following questions with respect to the **functional space** and **rating period** specified above.

Name of manager/supervisor:

Position:

Location of staff under your supervision:

What are the typical days of work within the area you manage?

By what time at the start of the typical day have approximately 20 % (1 in 5) people arrived within the area you manage?

By what time at the end of the typical day have most people gone except for approximately 20 % (1 in 5) people who are still in the area you manage?

Describe any periods where more than 20 % of people would be present outside these typical hours:

(e.g., '4 hours one Saturday each month', or, 'a total of 50 hours at the end of financial year'.)

Do all the answers above apply for the whole **rating period** (shown at top)?

If not, what period do the answers apply to? Please give alternative responses for the rest of the **rating period** (ignoring periods when the space was vacant):

Signature of manager/supervisor:

Date:

Appendix B – Calculations

B.1 Rated area calculation

Calculate the **rated area** as follows:

- Identify the **functional spaces** according to Section 4.4.
- For each **functional space**, determine the proportion of time the space is **occupied** (not vacant).
- For each **functional space**, determine the time-weighted area by multiplying the floor area of the space by the proportion of time the area was **occupied**.
- Determine the **rated area** by adding all the time-weighted areas for each of the **functional spaces**.

This calculation is expressed in the formula below:

$$A = \sum_{i=1}^N o_i a_i$$

where:

A = **rated area** (m²)

i = each **functional space**

a_i = floor area of each **functional space** (m²)

o_i = the proportion of the **rating period** that the space was **occupied**.

Example: A building has two 1,000 m² **functional spaces**, but one of them has been vacant for three months during the **rating period**.

The **rated area** is assessed as:

$$A = \left(\frac{12}{12}\right) 1,000 + \left(\frac{9}{12}\right) * 1,000 = 1,000 + 750 = 1,750$$

B.2 Tenancy and Whole Building rated hours calculation

The **rated hours** for Tenancies and Whole Buildings are calculated through the **Tenant Occupancy Survey** data, and should not be calculated by other means.

The occupation-weighted area is calculated by the **NABERS rating input form** with data input by the **Assessor**. The **NABERS rating input form** does this for each **functional space** determined in Section 4.4 with the following methodology:

- a) For each distinct period during the **rating period** in which the space was **occupied** and the hours of occupation were constant, multiply its hours per week by the proportion of the 12-month **rating period** that the distinct period represents.
- b) Add the hours for each such distinct period.
- c) Multiply the area of the **functional space** by the total number of hours per week.
- d) Add the occupation-weighted areas of all the **functional spaces** together and then divide by the total **rated area** to calculate the area-weighted average hours per week for the **rated premises**.

This method applies equally to normal and after-hours operation. This calculation is expressed in the formula below:

$$H = \frac{\sum_{i=1}^N h_i o_i a_i}{A}$$

where:

H = **rated hours** (hours/week)

A = **rated area** (m²)

i = each **functional space**

h_i = hours allocated to each **functional space** (hours/week)

a_i = area of each **functional space** (m²)

o_i = the proportion of the **rating period** that the space is **occupied**

B.3 Base Building rated hours calculation

The total **rated hours** is calculated by the **NABERS rating input form** with data input by the **Assessor**. The **NABERS rating input form** does this with the following methodology:

- a) Core Hours **H_c** is calculated according to the method described above in B.2.
- b) After-hours times **H_a** is calculated using the following method:
 - 1) The after-hours air conditioning (AHAC) hours in equivalent hours per week are determined for **functional space**.
 - 2) The equivalent AHAC hours for the **rated premises H_a** is determined with the following formula:

$$H_a = \frac{\sum_{i=1}^N h_{a,i} o_i a_i}{A}$$

where:

H_a = equivalent AHAC hours for the **rated premises**

h_{a,i} = equivalent AHAC hours for each **functional space** (hours/week)

- c) The equivalent AHAC hours is added to the core hours H_c to calculate the total **rated hours** H :

$$H = H_c + H_a$$

B.4 Sampling uncertainty for estimated computer counts

Analyse the sample **data** to determine an **estimate** of the total number of computers, as follows:

- Calculate the computer density (average number of computers per unit floor area) for each individual **functional space**, x ; and the sample mean (average over the whole sample of spaces) X = total computers divided by total floor area of the sampled **functional spaces**.
- Calculate the sample standard deviation, S , of the individual computer density figures, x , using the formula:

$$S = \sqrt{\frac{\sum_j [(x_j - X)^2 a_j]}{a - 0.05A}}$$

where:

j is the number of spaces surveyed to date

A is the total area subject to the sampling methodology, and

$$a = \sum_j a_j$$

- Calculate the sampling uncertainty, U , in the **functional spaces** you have sampled, as follows:

$$U = 0.44S \sqrt{\frac{A}{a} - 1}$$

If $U \geq 0.1X$ then the sampling uncertainty is 10 % or more, and the sample is too small. Take the next **functional space** from the random list, count the number of computers in regular use, add this data to the data already collected, and repeat the estimation of the sampling uncertainty. Repeat adding data for additional spaces while $U \geq 0.1X$.

When $U < 0.1X$ the statistical uncertainty in your figure is now less than 10 %, and the figure can be used. If more data has been collected than what is essential, it is better to use the extra data to improve the uncertainty.

- Multiply the sample mean, X , by the total area subject to the sampling methodology, A . This is the **rated area** excluding any **functional spaces** in which the computers were counted separately in the first step of this process.

B.5 Accuracy calculations procedure

Note: The **NABERS rating input form** includes sections for calculating the error that could result if inaccurate assumptions, approximations or un-verified **data** are used in an assessment. It is important that this 'worst-case' error is known and is kept within limits so that NABERS ratings can be relied upon for comparison.

B.5.1 Potential error – area, computer count, energy and water consumption

For all data inputs except hours, the **potential error** is the total of all **acceptable estimates** (including assumptions, approximations, and un-verified data) used in place of **acceptable data**.

B.5.2 Potential error – hours

Potential error is calculated differently for hours because potential inaccuracy in the area-weighted average is not readily apparent from the raw occupancy data. The calculations are based on the following procedure:

- a) Calculate the **rated hours** as specified in Chapter 5 and record the result.
- b) Set the hours for all **functional spaces** with uncertain hours to zero and record the value for **rated hours** that would result. This is the worst-case figure. Return the hours to their 'rated' values.
- c) The overall **potential error** in hours is then the **rated hours** from step a) above minus the worst-case total calculated in step b).

B.5.3 Total rating accuracy

The combined effect of all assumptions, **acceptable estimates**, and un-verified data on a rating is calculated in the **NABERS rating input form** as follows:

- a) Calculate a 'Case A' rating using all the assumptions, **acceptable estimates**, and un-verified data intended to be used in the assessment.
- b) Calculate the **potential error** for each data input.
- c) Calculate a 'Case B' rating in which the **potential errors** are—
 - 1) (for **rated area**, **rated hours** and computer count data) added to the 'case A' inputs, or
 - 2) (for energy and water consumption data) subtracted from the 'case A' inputs.
- d) The 'case A' rating meets the accuracy requirements of this Section if the results for the 'case A' and 'case B' ratings differ by no more than 5 % (in kgCO₂/m² or kL/m², as appropriate)

Appendix C – The rating period

C.1 Allowance for lodgement

A NABERS rating is based on 12 months of **acceptable data**, called the **rating period**. Once certified, the rating is valid for up to 12 months, called the **validity period**.

It can take time for an **Assessor** to complete a rating. Therefore, a period of 120 calendar days is given to lodge the rating after the end of the **rating period**. Ratings lodged after the 120 calendar days will have a reduced **validity period** to ensure all ratings are based on current data.

The following scenarios illustrate this principle.

Scenario 1

A NABERS rating is lodged with the **National Administrator** within 120 calendar days of the end of the **rating period**. It will be valid for 365 days from the date of certification. See **Figure C.1**.

Example:

- The **rating period** is 1 January 2017 to 31 December 2017. The due date is therefore 30 April 2018.
- The **Assessor** lodges the rating on 1 February 2018, and the Administrator certifies it on 5 February 2018. This is before the due date.
- The rating will therefore be valid for 365 days from the date of certification (5 February 2018).
- It will expire on 5 February 2019.

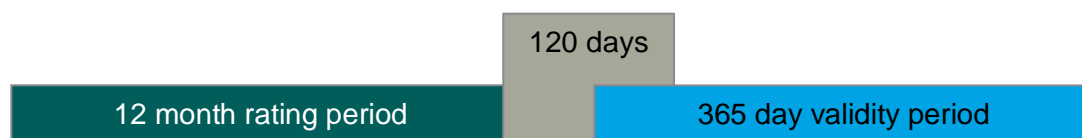


Figure C.1: A rating lodged within 120 days of the end of rating period

Scenario 2

A NABERS rating is lodged with the **National Administrator** more than 120 calendar days after the end of the **rating period**. It will be valid for 365 days from the end of the **rating period**. See **Figure C.2**.

Example:

- The **rating period** is 1 January 2017 to 31 December 2017. The due date is therefore 30 April 2018.
- The **Assessor** lodges the rating on 1 June 2018, and the Administrator certifies it on 6 June 2018. This is after the due date.
- The rating will therefore be valid for 365 days from the end of the **rating period** (31 December 2017).
- It will expire on 31 December 2018.

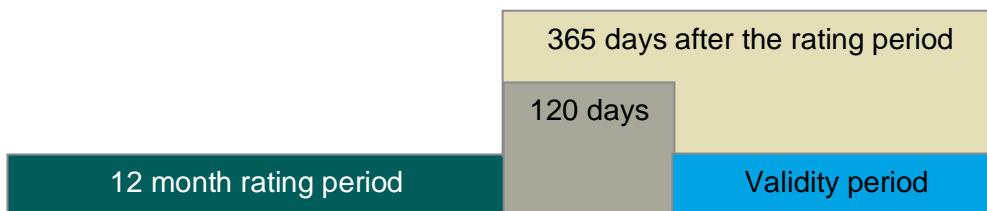


Figure C.2: A rating lodged after 120 days from the end of rating period

C.2 Allowance for responses

Assessors are given 120 days after the **rating period** to lodge ratings with the **National Administrator**. The **Assessor** should allow 10 working days within this 120-day period for a response from the **National Administrator**. The **National Administrator** then allows a further 10 working days for the **Assessor** to respond to any queries that arise from quality assurance checks before certification.

When the **Assessor** is required to provide clarification multiple times, this must be done within the allowable 10 working days period.

If the **Assessor** has not responded adequately to all queries and the rating has not been certified within 120 days of the end of the **rating period** + 10 working days, the rating will only be valid for up to 365 days from the end of the **rating period**. This does not include the time taken by the **National Administrator**.

The following scenario illustrates this principle.

Scenario 3

A NABERS rating is lodged with the **National Administrator** one day before the lodgement due date (120 days from the end of the **rating period**). Depending on how quickly the **Assessor** responds to clarifications, the rating will either be valid for 365 days from the date of certification or 365 days from the end of the **rating period**.

Example:

- a) The **rating period** is 1 January 2017 to 31 December 2017. The due date is therefore 30 April 2018.
- b) The **Assessor** lodges the rating on 29 April 2018, 119 days after the end of the **rating period**.
- c) The **National Administrator** responds on 3 May 2018 requesting further clarification. The **Assessor** must provide adequate clarification by 14 May 2018 (120 days from the end of the rating period plus 10 working days) for the rating to be valid for 365 days from the date of certification.
- d) If the **Assessor** responds on the 8 May 2018, the rating will be certified and valid until the 8 May 2019.
- e) If the **Assessor** does not respond with clarification until the 30 May 2018, the rating will only be valid until 365 days from the end of the **rating period** and therefore will expire on the 31 December 2018.

C.3 Adjusting the rating period

After the rating has been lodged, the **Assessor** may require the **rating period** to be changed. The **rating period** may only be adjusted by a maximum of 62 days from the first lodgement. A new rating will need to be created if the **Assessor** would like to adjust the **rating period** by more than this.

Note: A rating is required to comply with the **Rules** that are current at the time of lodgement. **Assessors** are advised to seek advice and request a **ruling** (if needed) prior to lodging ratings that may require one.

C.4 Lodging successive ratings

For a building which already has a current rating, there are two options to complete another rating of the same type: Replace or Renew.

Note: The **Assessor** will be prompted to select Replace or Renew when creating a rating. This selection can be changed just before the rating is lodged but not after.

Option 1: Replace

The Replace option allows the new certified rating to replace the existing rating immediately upon certification.

There will be loss of the existing rating's remaining **validity period**. This option might be chosen if the new rating is better than the existing rating. See **Figure C.3**.



Figure C.3: The existing rating replaced by a new rating

Option 2: Renew

The Renew option allows the new certified rating to begin its **validity period** immediately after the existing rating **validity period** expires. This option is often chosen when a site is most concerned with maximising the **validity period**.

As ratings are based on current data, the new **validity period** cannot not exceed 485 days from the end of the **rating period**. To ensure the new rating maximum **validity period** is achieved, the **validity period** must start within 120 days after the end of the rating period.

The following scenario illustrates this principle.

Scenario 4

A NABERS rating is lodged with the **National Administrator** and the Renew option has been selected. The new rating begins its **validity period** within 120 days after the end of the **rating period**. See **Figure C.4**.

Example:

- The current rating's **validity period** expired 31 December 2017.
- The **rating period** is 1 October 2016 to 30 September 2017 for the renewal rating.
- The **Assessor** lodges the renewal 1 November 2017 and it is certified by the **National Administrator** 7 November 2017.
- The **validity period** for the renewal will be 1 January 2018 to 31 December 2018.

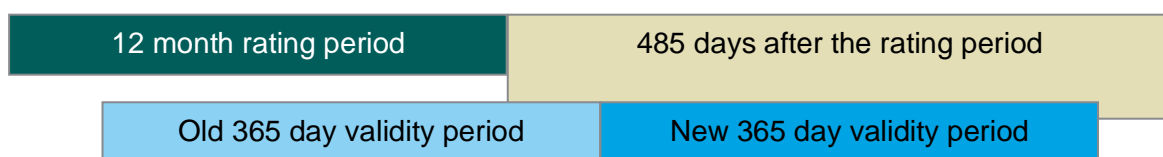


Figure C.4: The validity period for the new rating begins once the old rating expires and the new validity period is 365 days

If the new rating's **validity period** begins more than 120 days after the end of the **rating period**, the validity will be reduced as the **validity period** will exceed 485 days from the end of the **rating period**.

Note: An expired rating can be renewed. The **validity period** will begin on the date of certification, rather than the date the previous rating expired.

The following scenario illustrates this principle.

Scenario 5

A NABERS rating is lodged with the **National Administrator** and the Renew option has been selected. The new rating begins its **validity period** over 120 calendar days after the end of the **rating period**. See **Figure C.5**.

Example:

- a) The current rating's **validity period** expired 31 December 2017.
- b) The **rating period** is 1 August 2016 to 31 July 2017 for the renewal rating.
- c) The **Assessor** lodges the renewal 1 November 2017 and it is certified by the **National Administrator** 7 November 2017.
- d) The **validity period** for the renewal will be 1 January 2018 to 28 November 2018, 485 days after the end of the **rating period**.

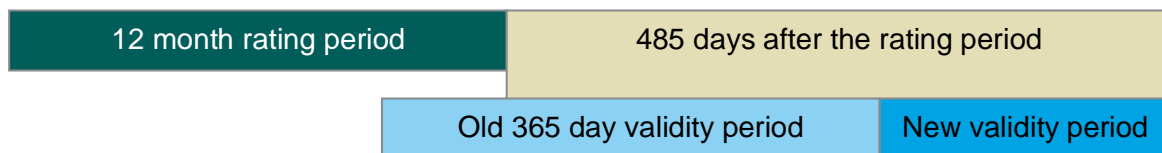


Figure C.5: The validity period for the new rating begins once the old rating expires and the new validity period is less than 365 days

Appendix D – Lists of changes

The following table records the changes made to v4.0 of *NABERS Rules – Energy and Water for Offices* in order to produce this minor update (v4.1).

Energy and Water for Offices – details of the update to version 4.1	
Location	Changes made
Throughout	Minor formatting changes.
1.6 Chapter 2	2017 versions added to the BOMA references
Chapter 2	Definition of utility clarified (as highlighted): “Landlords which on-sell electricity or water where they neither hold a licence nor have an exemption deemed valid by the National Administrator for needing a licence;”
4.5.1	Note 3 added which advises that ‘the area of spaces which have been excluded should be entered into the NABERS rating input form but their occupancy days should be marked as 0.’
4.5.6	First paragraph slightly reworded for clarity.
4.6	Heading made more concise.
5.3.2.1	OTA Hours Method: Permission to use “House Rules” that contain information regarding the Core Hours added, if mentioned in the OTA. Same language requirements kept. Under Step 2, the documentation requirements before the example were removed as they are repetitious with Section 8.3.1.
5.3.2.2	Meaning of text clarified and paragraphs re-worded.
5.3.8.2 a)	Preference list of methods corrected.

7.2.2	Sump pits and hydraulic pumping clarified in the list of energy coverage for Base Building ratings.
7.3.1.2	Note deleted as presented repetitious information.
Chapter 8	Wording change from 'provided' to 'retained' in relation to documentation requirements.
8.2.9 a)	Examples of type of evidence to demonstrate fitout days in relation to Base Building air conditioning services added.
8.3.1	Point d) changed to point e). Previous point d) stating evidence requirements if the OTA Hours and BMS data method is used has been expanded. Requirements include additional evidence of a 'minimum of one day from each of the four seasons for each primary air handling system serving the space under the OTA'. If Assessors cannot provide this level of documentation they should contact the National Administrator.

The following tables record the changes made to v3.2 of *NABERS Rules – Energy and Water for Offices* in order to produce version 4.0.

Energy and Water for Offices – Chapter 1 – Overview		
The structure and contents of Chapter 1 has been largely revised and updated. Several new sections were added: Interpretation of the Rules (1.2), Situations not covered by the Rules (1.3), Purpose and overview (1.4.1) and Formatting conventions and referencing (1.4.4). The summary about the NABERS rating system and assessment has been re-written.		
Version 3.2 (old location)	Version 4.0 (new location)	Changes made
1.1 About NABERS Energy and Water for Offices ratings	1.4.2 and 1.4.3	Minor editorial changes. Only the basic outline of the three rating scopes is now included. Detailed information about Tenancy, Base Building and Whole Building ratings has been added to Section 7.2 <i>Minimum energy coverage</i> .
1.2 About this document	1.5 and 1.6	Table of main changes – updated Related documents section expanded to list secondary material referenced in the text: <ul style="list-style-type: none"> <i>NABERS The Rules – Metering and Consumption</i>, v 1.0, 2020

		<ul style="list-style-type: none"> • <i>NABERS Energy for Data Centres – Rules for collecting and using data, v 1.1, 2014</i> • <i>NABERS Energy for Offices – Validation Protocol for Thermal Energy Exclusions</i> • <i>NABERS Ruling – Shared Services for Mixed-Use Buildings</i> • <i>NABERS Ruling – Shared Facilities</i> • Property Council of Australia (PCA), <i>Method of Measurement: Commercial – 2008</i> • Building Owners and Managers Association (BOMA), <i>Method of Measurement</i>, 1989 or 2017 • Building Owners and Managers Association (BOMA), <i>Method of Measurement (Net Rentable Area)</i>, 1985 or 2017 • Commercial Building Disclosure, <i>What is a 'building' under the CBD program</i>
Chapter 1	Chapter 1	<p>New structure:</p> <ul style="list-style-type: none"> • Summary • Interpretation of the Rules • Situations not covered by the Rules • How to use this document • What is new in this version? • Related documents

Energy and Water for Offices – Chapter 2 – Overview

Chapter 2 has undergone considerable editing and has had a title change from 'Key concepts' to 'Terms and definitions'. Most of its content moved to other chapters (or documents). Chapter 2 in v4.0 contains solely the terms and definitions integral to the proper understanding and use of the document.

Version 3.2 (old location)	Version 4.0 (new location)	Changes made
2.1 The Assessment Process	–	Removed.

2.2 Definitions	Chapter 2	<p>Upgraded to its own standalone chapter. All terms and definitions were reviewed and most definitions were clarified. The following have had major updates:</p> <ul style="list-style-type: none"> • complete tenancy • data centre • educational office facility • end use • medical office facility • metering system • supplementary air conditioning equipment (formerly supplementary equipment) • utility <p>The following new definitions were added:</p> <ul style="list-style-type: none"> • embedded network • public access space • rating period • rated premises • rating scope • rating type • ruling • validity period <p>The following definitions have been deleted:</p> <ul style="list-style-type: none"> • Alternative method • Average • Data • Data type • Estimate • Metering system requiring validation • Non-utility meter • Office • Source • Unvalidated metering systems • Used by the tenants • Utility meter • validation • verification
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2.3 Interpretation	Chapter 1	Integrated into the Introductory chapter.
2.4 Proposed New Methods	–	Removed.
2.5 Summary of Data & Documentation Needed	Chapter 8	Content incorporated into new Chapter 8.
2.6 The Rating Period	Appendix C	Content incorporated into new Appendix C.
2.7 Acceptable Data & Acceptable Estimates	Metering & Consumption Rules	Separated and incorporated into new <i>NABERS The Rules – Metering & Consumption Data</i>
2.8 Site inspection	Section 3.4	Minor editorial changes.
2.9 Documentation and record-keeping	Section 8.1	Content incorporated into new Chapter 8.
2.10 Eligibility criteria	3.1	Minor editorial changes.

Energy and Water for Offices – Chapter 3 – Overview

Chapter 3 of v3.2 is now Chapter 4 of v4.0.

The structure and general content are essentially the same, but important updates have been made in relation to determining and dividing NLA, excluding functional space areas and medical / educational office facilities.

Version 3.2 (old location)	Version 4.0 (new location)	Changes made
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3.1 Summary	4.1	Reworded for clarity.
3.2 Process overview	4.2	Explanatory text following table deleted. Remaining text unchanged.
3.3 Determining Office Net Lettable Area	4.3	<ul style="list-style-type: none"> Section on tenancies expanded to include specifics of government tenancies Standard for acceptable data clarified Area measurement estimates is the same Documentation requirements moved to Chapter 8
3.4 Dividing the office Net Lettable Area into Functional Spaces	4.4	<ul style="list-style-type: none"> Format updated Paragraph regarding office support facilities added Two further conditions added with regard to exclusion, complementing the requirements under Section 4.5.6.1 Additional information separated and clarified into notes and examples Documentation requirements moved to Chapter 8
3.5 Excluding Functional Space areas	4.5	<ul style="list-style-type: none"> Excluding spaces that are office NLA subject to commercial negotiations reformatted Excluding computer server rooms reworded for clarity and the treatment of data centres added Excluding other office support facilities has undergone slight changes Spaces without consumption data has been clarified
3.6 Limiting the proportion of Medical or Educational office facilities and public access spaces	4.6	<ul style="list-style-type: none"> Format updated NABERS concepts of medical office facility and educational office facility have been clarified Text edited for clarity and information included in notes and examples revised
3.7 Adjusting for unoccupied spaces	4.7 and Chapter 8	<ul style="list-style-type: none"> Format updated Documentation requirements moved to Chapter 8

Energy and Water for Offices – Chapter 4 – Overview

Chapter 4 of v3.2 is now Chapter 5 of v4.0.

The structure and general content are essentially the same, but important updates have been made in relation to determining rated hours section. Repetitious information has been removed and the procedures have been clarified.

Version 3.2 (old location)	Version 4.0 (new location)	Changes made
4.1 Summary	5.1	Reworded but essentially the same.
4.2 Process overview	5.2	No change, only reformatted.
4.3 Determining Rated Hours	5.3	<ul style="list-style-type: none"> • Determining rated hours; introductory section revised • Core hours have been reviewed and clarified. Step 1 expanded; Step 2 rewritten for clarity; Steps 3 and 4 are the same. • Application of individual requests for AHAC hours and examples; revised and clarified. • OTA – same • AHAC requests – same • TOS – same • Average core hours – same • Default core hours – same • Other office support facilities, Base Building – clarified and some requirements moved to Section 4.5.5.2 • All documentation requirements have been moved to Chapter 8
4.4 Verifying long hours	5.4	<p>Format updated</p> <p>Same content but title of last section (Section 5.4.4) changed to <i>Checking expected hours</i></p> <p>Documentation requirements moved to Chapter 8</p>

Energy and Water for Offices – Chapter 5 – Overview

Chapter 5 of v3.2 is now Chapter 6 of v4.0.

Process overview has been moved from Section 5.2.3 in v3.2 to Section 6.2 in v4.0, in keeping with flow of previous chapters. Minimal new information added; wording and formatting clarified throughout.

Version 3.2 (old location)	Version 4.0 (new location)	Changes made
5.1 Summary	6.1	Reworded for clarity.
5.2 Counting computers	6.3	<ul style="list-style-type: none"> Standard for acceptable data clarified Agile and activity based working (ABW) section added Estimating numbers of computers revised for clarity Process for conducting a survey clarified and messages relating to data entry in NABERS rating input form removed Figure 16 describing a random survey removed Mention of the Rating Assessment Form removed Documentation requirements moved to Chapter 8

Energy and Water for Offices – Chapter 6 – Overview

This chapter on energy coverage has been combined with Chapter 7 Water coverage. It has then been moved into various sections in both *NABERS The Rules – Metering and Consumption* and *NABERS The Rules – Energy and Water for Offices v4.0*.

Sections such as on-site generation and Greenpower™ have been significantly expanded upon and now form parts of other chapters.

Version 3.2 (old location)	Version 4.0 (new location)	Changes made
6.1 Interpretation of scope	7.2 and 7.3 of <i>NABERS The Rules – Energy and Water for Offices v4.0</i>	<ul style="list-style-type: none"> The following sections were moved to Section 7.2 and reworded as necessary: General, Interpretation of scope (Base Building, Tenancy and Whole Building ratings), Unoccupied spaces, Exclusions Allocating energy use for services moved to Section 7.3.2 with minor changes Energy consumption of included and excluded spaces are the same Exterior signage revised and moved to Section 7.2.6.4 Further items under Exclusions section added, including: <ul style="list-style-type: none"> Electric vehicle charging points, Transmission towers Exterior signage Computer server rooms / data centres Computer room energy coverage re-worded

		<ul style="list-style-type: none"> References to shared services (and rulings) added to the beginning of Section 7.2 Section on carparks expanded to include information on medical and educational office tenants
6.2 On-site generation	–	Removed.
6.3 Greenpower™	4.5 of <i>NABERS The Rules – Metering and Consumption</i>	<ul style="list-style-type: none"> Relationship between Greenpower™ and NABERS ratings clarified Wording revised and exclusions section added Information on recycled water added to become Section 4.6
6.4 Documentation required	<p>Chapter 8 of <i>NABERS The Rules – Energy and Water for Offices v4.0</i></p> <p>Chapter 9 of <i>NABERS The Rules – Metering and Consumption</i></p>	<p>All documentation requirements revised and moved to Chapter 8 of v4.0 or Chapter 9 of <i>NABERS The Rules – Metering and Consumption</i> as per the new locations.</p> <p>Specific requirements added for Greenpower™ and recycled water.</p>

Energy and Water for Offices – Chapter 7 – Overview

This chapter on water coverage has been combined with Chapter 6 Energy coverage. It has then been moved into various sections in both *NABERS The Rules – Metering and Consumption* and *NABERS The Rules – Energy and Water for Offices v4.0*.

Version 3.2 (old location)	Version 4.0 (new location)	Changes made
7.1 Interpretation of scope	3.2 of <i>NABERS The Rules – Metering and Consumption</i>	<ul style="list-style-type: none"> Interpretation of scope of water sources incorporated into site visit requirements Unmetered supplies – wording revised

	8.3 of <i>NABERS The Rules – Metering and Consumption</i>	<ul style="list-style-type: none"> On-site capture and recycling – wording revised and mention of adjustments and discounts removed
	7.4 of <i>NABERS The Rules – Energy and Water for Offices v4.0</i>	<ul style="list-style-type: none"> Required minimum water coverage – same, but title changed to ‘water ratings’ in Section 7.4.2 Water consumption in excluded spaces – slight changes Unoccupied spaces – same with slight rewording Fire system water consumption – same
7.2 Documentation required	<p>Chapter 8 of <i>NABERS The Rules – Energy and Water for Offices v4.0</i></p> <p>Chapter 9 of <i>NABERS The Rules – Metering and Consumption</i></p>	All documentation requirements revised and moved to Chapter 8 of v4.0 or Chapter 9 of <i>NABERS The Rules – Metering and Consumption</i> as per the new locations.

Energy and Water for Offices – Chapter 8 – Overview

The whole of this chapter has been incorporated into *NABERS The Rules – Metering and Consumption* as it relates to metering systems in a variety of building types, not just offices. The spread across chapters in *NABERS The Rules – Metering and Consumption* is due to the division between utility metering systems and non-utility metering systems. A considerable portion (from Section 8.4 onwards) regarding the validation of non-utility metering systems has been reworked into a new chapter (Chapter 6) in *NABERS The Rules – Metering and Consumption*.

<i>NABERS The Rules – Energy and Water for Offices Version 3.2</i> (old location)	<i>NABERS The Rules – Metering and Consumption Version 1.0</i> (new location)	Changes made
8.1 Summary	–	Removed – no longer applicable due to restructure.
8.2 High-voltage electricity metering	3.4.5	Section reworded for clarity and in relation to new structure.
8.3 Non-utility meter records	5.3.4	‘Minimum frequency of readings’ title changed to ‘meter reading dates’ and information on cumulative meters added.
	5.2	<ul style="list-style-type: none"> • ‘Measurements and formats required’ title changed to ‘data unit and format checks’ • Gas pressure correction factor requirements updated in Table 5.2
8.4 Non-utility metering system validation	Chapter 6	<ul style="list-style-type: none"> • Process to calculate validation (table) – added • Metering systems requiring validation – revised and pulse meter information moved down to Section 6.2.2.3 • Non-utility meter management plan and Figure 17 – removed • Concept of a checking a random sample of meter types – removed • Validation of meters in embedded networks – added • Validation checks – information greatly expanded upon and reworked to incorporate non-utility validation information

Energy and Water for Offices – Chapter 9 – Overview

The whole of this chapter has been incorporated into *NABERS The Rules – Metering and Consumption* as it relates to consumption of energy and water in a variety of building types, not just offices. The spread across chapters in *NABERS The Rules – Metering and Consumption* is due to the division between utility metering systems and non-utility metering systems.

<i>NABERS The Rules – Energy and Water for Offices Version 3.2</i> (old location)	<i>NABERS The Rules – Metering and Consumption Version 1.0</i> (new location)	Changes made
9.1 Summary	–	Removed – no longer applicable due to restructure.
9.2 Measuring consumption	3.2	<ul style="list-style-type: none"> • ‘Measuring consumption’ – title changed to ‘Energy and water sources and supply points’ • All information revised and separate energy and water sections merged together • Process tables – removed • Processes for determining consumption – removed • Figures 18, 19 and 20 – removed
9.3 Including or excluding consumption	7.2.2	<ul style="list-style-type: none"> • List of methods at beginning of Section 9.3 – removed • ‘Exclusions based on financially reconciled utility costs’ – reworded for clarity • ‘Determining the fixed proportion’ – reference to OTA rather than lease documentation • ‘Energy exclusions based on area weighting’ – reference to GLAR added and references to small retail, educational and medical spaces
	7.2.1	<ul style="list-style-type: none"> • ‘Estimating small un-metered end uses’ – title changed to ‘Including small un-metered electricity uses’ • Method revised and wording clarified • Example – removed • Paragraphs on thermal energy – removed
9.4 Batch-delivered supplies	7.3	<ul style="list-style-type: none"> • ‘Measurement and estimation’ – title changed to ‘Real consumption measurement’ and wording revised • ‘Estimating from capacity measurements’ – title changed to ‘Calculating an alternative estimate’ and wording revised • ‘Batch-delivered recycled water’ – edited for clarity • ‘Batch-delivered water for direct uses’ – edited for clarity • ‘Standard for acceptable data’ – removed
9.5 Utility bill units and formats	4.2	<ul style="list-style-type: none"> • Table 4.2 – same • Note after table – added • ‘Natural gas bill formats’ – section added

		<ul style="list-style-type: none"> • ‘Energy bill formats’ – formula is the same; text revised
9.6 Periods covered by utility data	4.3.5 and 5.3.5	<ul style="list-style-type: none"> • ‘Stand-alone NABERS energy or water for offices ratings – information split to cover utility metering systems (Chapter 4) and non-utility metering systems (Chapter 5)
	5.4.2	<ul style="list-style-type: none"> • ‘Adjusting for gaps at the start or end of the rating period’ – reworded for clarity
	5.4.3.2	<ul style="list-style-type: none"> • ‘Estimating unrecorded consumption’ title changed to ‘Metering data used for inclusions’ • Slightly reworded for clarity
	4.4.4	<ul style="list-style-type: none"> • ‘Using valid meter readings before and after missing data’ title changed to ‘Adjusting for gaps during the billing period – where cumulative meter readings are available’ • Some slight rewording • Default heating values updated in Table 4.3
9.7 Correcting non-utility meter readings	6.4	<ul style="list-style-type: none"> • Correcting non-utility meter readings – title change to ‘Adjustments resulting from validation checks’; requirements for validation (under points a) and b)) and for licensed and qualified persons added • Assessments where corrections can be made – same • Assessments where corrections cannot be made – reworded; Figure 22 removed
9.8 Documentation required	Chapter 9 of <i>NABERS The Rules – Metering and Consumption</i>	All documentation requirements revised and moved to Chapter 9 of <i>NABERS The Rules – Metering and Consumption</i> .

Energy and Water for Offices – Appendices – Overview

The Appendices have been renumbered alphabetically in order to distinguish them from numerical chapters in the texts. They have mostly been reproduced in *NABERS The Rules – Energy and Water for Offices* with the exception of Appendix D of v3.2 that was (mostly) incorporated into Chapter 7 of *NABERS The Rules – Metering and Consumption*.

Appendix C in *NABERS The Rules – Energy and Water for Offices v4.0* has been created from information from Section 2.6 of v3.2, The Rating Period.

Version 3.2 (old location)	Version 4.0 (new location)	Changes made
Appendix A	Chapter 8	Information in table of previous Appendix A combined with individual documentation requirements of each chapter to form a new Chapter 8 in <i>NABERS The Rules – Energy and Water for Offices v4.0</i> and Chapter 9 in <i>NABERS The Rules – Metering and Consumption</i> .
Appendix B	Appendix A of <i>NABERS The Rules – Energy and Water for Offices v4.0</i>	No changes except updated formatting.
Appendix C	Appendix B of <i>NABERS The Rules – Energy and Water for Offices v4.0</i>	<ul style="list-style-type: none"> • Updated formatting • 'Adjusting consumption data to match the rating period' – removed • All other sections – same content
Appendix D	Appendix A and Chapter 6 of <i>NABERS The Rules – Metering and Consumption</i>	<ul style="list-style-type: none"> • All textual content incorporated into Chapter 6 of <i>NABERS The Rules – Metering and Consumption</i> • Figures of various types of meters – removed • Validation record templates separated to form new Appendix A of <i>NABERS The Rules – Metering and Consumption</i> • Validation record for water – removed • Separate RMRS validation record created and other non-utility validation forms simplified

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