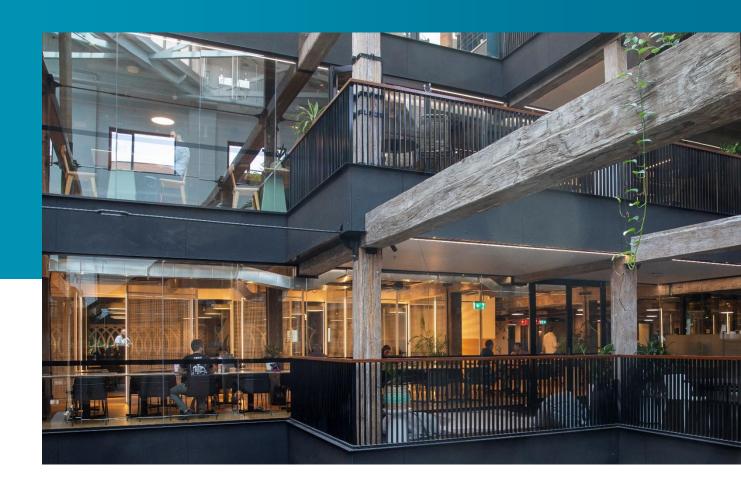


### The Rules

## **Energy and Water for Offices**

Version 5.1 — June 2023





Cover photo: Interior atrium of a modern office building showing two floors with balconies, reclaimed timber and plants.

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## 1 Introduction

#### 1.1 General

#### 1.1.1 About NABERS

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, as follows:

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 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.

#### 1.1.2 About this document

This document contains **Rules** for **Assessors** conducting an energy and/or water rating for office buildings and office tenancies and provides the framework for assessing offices as follows:

- a) Calculating the rated area, see Chapter 4.
- b) Calculating the **rated hours**, see Chapter 5.
- c) Conducting the computer count, see Chapter 6.
- d) Minimum energy and water coverage, see Chapter 7.
- e) Documentation requirements for accredited ratings, see Chapter 8.

For the purpose of a NABERS rating, 'offices' are understood as being commercial buildings whose primary use is for administrative, clerical, professional and similar information-based activities.

#### 1.1.3 Scope for NABERS energy for office ratings

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**.

The rating scope is determined as per Table 1.1.3:

**Table 1.1.3: 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 <b>Net Lettable Area (NLA)</b> 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.	

#### 1.1.4 Scope for NABERS water for office ratings

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.

#### 1.2 Interpretation of the Rules and Rulings

These **Rules** are to be read in conjunction with the respective NABERS **Rulings** as they apply to the specific building type. **Rulings** are used to address specific issues that may arise after the publication of the **Rules**.

**Note:** Rules texts are amended as required by additional Rulings which are published on the NABERS website at <a href="https://www.nabers.gov.au">www.nabers.gov.au</a>.

Where a conflict between these **Rules** and existing **Rulings** is present, the requirements of the **Rulings** take precedence over the **Rules**.

#### 1.3 Situations not covered by the Rules

**Assessors** need to comply with these **Rules** unless prior approval has been sought and approved by the **National Administrator**.

Where appropriate, **Assessors** may contact the **National Administrator** to propose an alternative methodology, outlining the circumstances and rationale. Prior approval for use is required and may be granted conditionally, on a case-by-case basis and at the **National Administrator**'s discretion.

Chapter 1 | Introduction



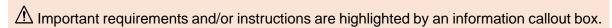
Procedures not contained within these Rules may only be used for a particular rating with prior written approval from the National Administrator. Approval to use the same procedure needs to be sought from the National Administrator each time it is proposed to be used. Approval is entirely at the discretion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

#### 1.4 How to use this document

The term 'Rules' refers to a body of works produced by NABERS that specify what needs to be examined, tested and documented when an Assessor conducts a rating. Wherever the term is used in this document from Chapter 3 onwards, it refers to this document, NABERS Rules — Energy and Water for Offices. Other Rules documents mentioned in the text are distinguished from the present document by the inclusion of their title.

Text appearing dark green and bold is a defined term. Defined terms can be found in Chapter 2 of these Rules or in the terms and definitions chapter of the respective Rules document.

The following formatting conventions may appear in this text:



Note: Text appearing with a grey background is explanatory text only and is not to be read as part of the Rules.

**Example:** Text appearing with a green background is intended to demonstrate a worked example of the respective Rules section or Ruling section.



This is a documentation requirement callout box.

#### 1.5 What is new in this version

A detailed list of the main changes made between this version and the previous version, is given in Appendix D.

These Rules will supersede NABERS The Rules – Energy and Water for Offices, v4.1, 2020.

#### 1.6 Related documents

The following documents have been referenced within these Rules:

NABERS Energy for Data Centres – Rules for collecting and using data, v1.1, July 2014

NABERS Ruling – Shared Services and Facilities, v1.0, March 2022

NABERS The Rules – Metering and Consumption, v2.0, January 2023

NABERS The Rules – Thermal Energy Systems, v1.0, August 2021

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NABERS Ruling – Treatment of Cogeneration and Trigeneration Systems, v1.2 – May 2022 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	The values derived from an estimation method permitted by these Rules in place of incomplete or uncertain data.  Estimates that do not satisfy the above specifications are deemed unacceptable and cannot be used in the rating.	
Assessor(s)	An accredited person authorised by the National Administrator to conduct NABERS ratings.	
Auditor(s)	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	The NLA occupied by a single tenant. This includes all office spaces and office support facilities in the building that are used together as an interrelated group of facilities to accommodate the tenant's business, no matter if they are on one or more floors and regardless of whether—	
	<ul> <li>a) the spaces are occupied on the basis of one or more leases or other agreements; and</li> </ul>	
	<ul> <li>b) those leases or agreements are nominally held by one or more associated entities on behalf of the tenant.</li> </ul>	
	Facilities are not included in such an interrelated group if they are—	
	<ul><li>a) physically distinct;</li><li>b) managed independently;</li></ul>	
	c) presented or branded distinctly; and	
	d) independent of one another for services.	
	, , , , , , , , , , , , , , , , , , , ,	



Term	Definition
	For leases with one or more sub-leases, it is acceptable to either:  a) consider the entire NLA under the head lease with the main tenant as a complete Tenancy; or  b) for the sub-lease(s), separate and consider the NLA of the sub-lease(s) as individual complete tenancies, if sub-metering allows.
	<b>Note:</b> For information on treatment of government tenancies, see Section 4.3.1.3.
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	<ul> <li>A computer server room that comprises:</li> <li>a) at least 5 % of the total office NLA of the rated building; or</li> <li>b) at least 25 % of the NLA of the floor on which it is located; or</li> <li>c) a room where at least 75 % of its capacity is dedicated to external users.</li> <li>The combination of multiple computer server rooms is not considered a data centre.</li> </ul>
Direct HVAC energy	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.
	<b>Note:</b> A 'tenant condenser water loop' is sometimes referred to as a 'supplementary condenser water loop'.
Educational office facility	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.
	Note: For more information, see Section 4.6.
Embedded network	A private electricity network that is connected to the parent electricity network or 'grid'.
	<b>Note:</b> Most office buildings in Western Australia, South Australia and Queensland use embedded networks for supplying office tenants and the Base Building systems.
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	Public access is not generally allowed by the office owner or leaseholder, except for receiving visitors to the office.



Term	Definition		
External user	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.		
	<b>Note:</b> 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.		
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.		
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.		
Gross Lettable Area Retail (GLAR)	The floor area, determined in accordance with the Measurement Standard for Shopping Centre Area, of spaces that can be used as retail tenancies within the premises to be rated.		
	<b>Note:</b> This is essentially the space within the permanent walls of the building that is designed for retail uses, excluding spaces for the following:		
	<ul> <li>a) Public access and use (including stairs, escalators, lift lobbies and passageways).</li> </ul>		
	b) Building, mechanical, air conditioning, electrical and other utility services.		
	<ul> <li>Staff and cleaning facilities (including toilets, tea rooms and cleaners' cupboards) which are not part of a tenant's fitout.</li> </ul>		
	Tenant storage areas not adjacent to the Tenancy are also excluded.		
Measurement standard for rated area	The standard used for determining the Net Lettable Area (NLA) of a rated premises, as set out in—		
	<ul> <li>a) The Property Council of Australia (PCA), Method of Measurement: Commercial, 2008 (1997 reprint); or</li> </ul>		
	<ul> <li>b) Building Owners and Managers Association (BOMA), Method of Measurement, 1989 or 2017; or</li> </ul>		
	<ul> <li>c) Building Owners and Managers Association (BOMA), Method of Measurement (Net Rentable Area), 1985 or 2017.</li> </ul>		



Term	Definition		
Meeting room	A room designed to accommodate meetings for short periods of time on a temporary basis, as opposed to a permanent working area.		
	A meeting room is separated from adjacent spaces by full-height walls and a door.		
Medical office facility	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.		
	Note: For more information, see Section 4.6.		
Metering system	A system of one or more devices providing an individual measurement.		
	<b>Note:</b> For further information, refer to <i>NABERS The Rules – Metering and Consumption</i> .		
NABERS rating input form	The rating input form provided by NABERS for use by Assessors in the calculation of accredited ratings.		
	For NABERS ratings for Offices, this is the online platform, NABERS Perform.		
	For NABERS co-assess ratings, this is the NABERS Co-Assess Office Rating Calculator.		
National Administrator	The body responsible for administering NABERS, in particular, the following areas:		
	<ul> <li>Establishing and maintaining the standards and procedures to be followed in all aspects of the operation of the system.</li> </ul>		
	<ul> <li>Determining issues that arise during the operation of the system and the making of ratings.</li> </ul>		
	c) Accrediting Assessors and awarding accredited ratings in accordance with NABERS standards and procedures.		
	The functions of the National Administrator are undertaken by the NSW Government.		
Net Lettable Area (NLA)	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.		
	Note: This is essentially the space within the permanent walls of the building, but excluding spaces for:  a) Public access and use (including stairs, escalators, lift lobbies and passageways).		



Term	Definition			
	b) Building mechanical, air conditioning, electrical and other utility services.			
	<ul> <li>c) Staff and cleaning facilities (including toilets, tea rooms, and cleaners' cupboards).</li> </ul>			
	The Assessor should refer to the relevant measurement standard for rated area documents for a definitive list of inclusions and exclusions.			
Occupied	A space within the NLA of a building that—			
	<ul> <li>a) for Base Building ratings – is ready for occupation;</li> </ul>			
	<ul> <li>b) for Tenancy ratings – is ready for occupation and being actively used as an office, including use as an office support facility;</li> </ul>			
	<ul> <li>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.</li> </ul>			
Office	A workplace primarily used for administrative, clerical and similar information-based activities, including the associated office support facilities.			
	<b>Note:</b> For reasons of readability, this term is not highlighted throughout this document.			
Office support facility	A facility which—			
	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 the office tenant; and			
	c) occupies a space which is fit for office use.			
	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 childcare, refreshment, recreation, and exercise facilities, as long as they are only available for use by office tenants in the rated premises.			
Owner/Tenant	An OTA refers to a document that—			
Agreement (OTA)	<ul> <li>a) is a mutual agreement between the user of a functional space and the provider of the servicing to the space.</li> <li>Examples of this include:</li> </ul>			
	<ol> <li>The landlord and a tenant representative with adequate authority.</li> </ol>			
	2) An owner-occupier and a facility manager.			
	<ol><li>Government property manager and government tenant.</li></ol>			



Term	Definition	
	b) clearly defines the space and the period of time for which the agreement is made; and	
	<ul><li>c) defines hours of use for the space considered (OTA Hours).</li></ul>	
	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.	
	<b>Note:</b> Where an Assessor is unsure if a document meets the requirements of the definition of an OTA, advice from the National Administrator should be sought.	
Potential error	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.	
Public access space	A space that members of the public have access to.	
	<b>Note:</b> For example, lobbies, foyers, waiting rooms or reception areas.	
	This does not include areas where members of the public need authorised access, e.g. by appointment, with accompaniment or via secure access measures.	
Rated area (for an entire rating)	The final area determined by following the process described in these Rules.	
Rated hours (for a functional space)	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.	
Rated hours (for an entire rating)	For an entire rating, the area-weighted average of the rated hours for all functional spaces included in the rating.	
rated premises	The building or building section to be rated.	
rating period	The 12-month base period for the rating, requiring at least 12 continuous months of acceptable data upon which the rating is based.	
Rating scope	The scope of the rating – either Base Building, Whole Building or Tenancy (see Table 1.1.3).	
Rating type	Type of rating – such as energy or water.	
Ready for occupation	A space within the NLA of a building when a person or organisation—  a) is entitled to exclusive use of the space (e.g. through	
	ownership or a lease or other agreement); and	



Term Definition		
	b) requires normal Base Building services, such as access, air conditioning, lighting and power to be provided to the space.	
Rules	Authoritative document produced by the National Administrator that specifies what must be covered by an Assessor in order to produce a rating.	
Ruling(s)	An authoritative decision by the National Administrator which acts as an addition or amendment to the Rules.	
Special tenant requirement	Equipment that supplements the typical capacity provided by the Base Building air conditioning system.	
Supplementary air conditioning equipment	Equipment that supplements the typical capacity provided by the Base Building air conditioning system.	
Tenant Occupancy Survey (TOS)	A survey of employees with knowledge of the functional spaces in the rated premises, conducted in accordance with these Rules.	
	Note: For more information, see Section 5.3.4.	
utility	An organisation or company that holds a licence to retail electricity, gas or water, and that sells energy or water as its primary business. This definition excludes the following:	
	<ul> <li>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.</li> </ul>	
	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 General

As part of a NABERS rating system, **Rules** provide requirements within the specific rating tools. These **Rules** apply to any building type eligible for a NABERS rating using the NABERS energy rating tools.

#### 3.2 Eligibility criteria

#### 3.2.1 Base Building and Whole Building ratings

A building is considered eligible for a NABERS rating if all of the following eligibility criteria are met:

a) <u>Building type</u>: During the **rating period**, the building or part of the building was used as an office, or is **fit for office use**.

**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.

**Note 2:** Office buildings that are not categorised as Class 5 buildings under the National Construction Code may still be eligible for a NABERS rating. Where Assessors are unsure if buildings are eligible for a NABERS rating, they should contact the **National Administrator**.

- b) <u>Building consumption data</u>: 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) <u>Building energy or water coverage</u>: The minimum energy or water coverage for the rating scope and spaces included is met, as described in <u>Chapter 7</u>.
- 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 3:** For ratings conducted for Building Energy Efficiency Certificate purposes, a 'major refurbishment' is defined in the Building Energy Efficiency Disclosure Regulations 2010. In this case **Assessors** should confirm with the **Commercial Building Disclosure Program team** that the works undertaken by the building can be classified as a major refurbishment and what disclosure obligations apply. This confirmation should be sought prior to the **Assessor** contacting the **National Administrator** regarding the rating and be provided whenever discussing the case. A **rating** may still be required depending on disclosure obligations, possible **rating periods**, and available data.

- e) <u>Building Occupancy</u>: A premises is eligible for a rating when it is occupied for at least one day during the rating period. Where a premises is fully vacant for the entirety of a rating period it is not eligible for a NABERS Rating for that period.
  - **Note 4**: Buildings with high levels of vacancy are eligible for a NABERS rating to be conducted.
  - **Note 5:** Where the premises is BEEC-affected, the **Assessor** may be required to consider other eligible rating periods, and advice should be sought from the **Commercial Building Disclosure team**.
  - **Note 6:** Where a building is potentially subject to CBD Program obligations and cannot complete a NABERS rating due to these eligibility criteria, advice should be sought from the CBD Program for a potential exemption application.
  - **Note 7:** Where a tenant requires full base building services to be provided and the minimum energy coverage is met, the affected functional spaces are considered occupied, and a base building rating can be completed. This is so, even if a space is not actively used by staff.

#### 3.2.2 Tenancy rating

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

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

#### 3.2.3 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 are 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.

#### 3.3 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.

**Assessors** may submit a NABERS energy rating and NABERS water rating for the same premises as a combined rating application. When submitting a combined rating application, both ratings must have the same **rating period**.

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

#### 3.4 Standards for acceptable data and estimates

#### 3.4.1 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 3.4.2 and 3.4.3 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 3.4.2 and 3.4.3. Where specific procedures are followed, the requirement for compliance with Sections 3.4.2 and 3.4.3 is deemed to be satisfied.

#### 3.4.2 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 one of the following:
  - 1) Documents or other records provided by a third party which can be verified by the source, e.g. **utility** bills.
  - 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.
  - 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.



- 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 one of the following:
  - 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.
  - 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.
  - 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.

#### 3.4.3 Acceptable estimates

If acceptable data is not available, estimates (including assumptions, approximations and unvalidated 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.

#### 3.5 Site visits

#### 3.5.1 General

An integral part of all NABERS Ratings is the site visit to inspect the **rated premises**. The purpose of the site visit is as follows:

- 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, energy and water coverage (as appropriate).
- e) Check floor configuration.
- f) Assess Rated Hours and Occupancy for functional spaces.
- g) Count computers for Tenancy and Whole Building ratings.

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

An **Assessor's** inspection of the **rated premises** is expected to include a check of the servicing arrangements provided to all **functional spaces**.

Site visits must occur during the **rating period** or during the 120 days period following the **rating period**.

A new site visit must be conducted as part of every NABERS rating application. In most scenarios a physical site visit must be undertaken (see Section 3.5.2), though a virtual site visit may be appropriate in some circumstances (see Section 3.5.3).

#### 3.5.2 Physical site visits

Assessors must conduct a physical site visit of the premises in the following circumstances:

- a) If the premises is subject to conditions requiring on-site checks including from Level 2 audits.
- b) It is the first time the premises is being rated by that **Assessor**.
- c) The **Assessor** is undertaking a supervised rating.
- d) A physical site visit was not conducted as part of the previous rating.
- e) The last site visit was conducted more than 12 months before the start of the rating period.
- f) If significant changes to servicing arrangements have been made.
- g) More than 20% of the premises' total NLA has gone through either fit out works or strip out works during the rating period.

**Note:** Assessors must contact the **National Administrator** to determine whether a virtual site visit might be appropriate in cases where a physical site visit is not possible for legitimate reasons (e.g. if travel can't be undertaken because of a declared natural disaster event).

#### 3.5.3 Virtual site visits

An **Assessor** may elect to do a virtual site visit in lieu of a physical site visit only in scenarios where none of the conditions in Section 3.5.2 apply. A virtual site visit must include each of the following:

a) A site inspection carried out by another Assessor accredited in a different tool, or a building or facility manager who is familiar with the site. The person conducting the site inspection must record photos and videos as they proceed, and this evidence may only be used for a single rating (that is, it must not be re-used for subsequent ratings).

**Note:** The **Assessor** is ultimately responsible for ensuring the person conducting the site inspection has sufficient competency and is clear about their objectives, and that they obtain the necessary evidence for the rating. The **Assessor** for a rating application remains responsible for the accuracy of the data collected by others when conducting a virtual site visit.



- b) Use of knowledge and notes from previous physical site visits. This must not include the re-use of actual data (e.g. area and hours).
- c) As relevant, confirmation of site plans, servicing arrangements and as-built drawings of fit outs (e.g. mechanical, electrical and/or desk layout drawings) received from building managers or facility managers.

A virtual site visit should be supported by other evidence as relevant, such as:

a) Screenshots from a remotely accessed BMS system.

When conducting a virtual site visit, assessors must retain evidence of all communications used as part of confirming various aspects of the site, including from the Assessor to the person conducting the 'walk through'.

#### 3.5.4 Delegating site visit to another Assessor

Where a physical site visit must be undertaken and the **Assessor** cannot undertake the physical site visit to inspect the rated premises, the **Assessor** may delegate this task to another **Assessor** specifically accredited in Energy and Water for Offices ratings.

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, in accordance with the documentation requirements listed in Chapter 8.

**Note:** Delegating a site visit to another **Assessor** specifically accredited in Energy and Water for Offices ratings is not the same as a virtual site visit. Additional restrictions and standards of evidence apply to virtual site visits to offset the lower bar of accreditation required.

#### 3.5.5 Situations where part or all of a site visit cannot be conducted or delegated

There may be circumstances where access to part of the premises 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** has been used in the absence of verified data.

Where there are significant difficulties visiting the site and the **Assessor** cannot conduct a site visit or cannot delegate this task to another **Assessor**, guidance must be sought from the **National Administrator** prior to submission of the rating application.

#### 3.6 CBD requirements and occupant or owner obligations

Building owners and tenants can have a legal obligation to provide data, where it is required to satisfy mandatory disclosure requirements for CBD Program purposes.

If an Assessor is having difficulty acquiring rating data from an owner or tenant, the CBD team can provide more information and support. This can include advising the owners and tenants of their legal obligations and working with Assessors to help acquire the missing data.

Where a rating will be used to satisfy mandatory disclosure requirements, Assessors must obtain confirmation from the CBD team if necessary data cannot be obtained from owners or

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tenants, prior to taking further action (such as excluding a functional space due to lack of data in line with Section 4.5.6 or accepting that a TOS is not possible under Section 5.3.4.2).

#### 3.7 Documentation and record-keeping

#### 3.7.1 Required documentation

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 preferred if they are available. Partial copies of original documents must be sufficient to identify the original document including date, title and file name.

#### 3.7.2 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.

**Note:** 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.

#### 3.8 Alternative methodologies

**Assessors** may be required to use alternative methodologies for obtaining or interpreting data for an assessment where standard methods outlined in the *NABERS Rules* cannot be applied. At a minimum, the alternative methodology must be one of the following:

- a) Equivalent to the preferred method in terms of its results, accuracy and validity.
- b) Acceptable in place of the preferred method, subject to the data resulting from the alternative method being treated as an estimate in accordance with Section 3.4, or other specified conditions on the use of the data.
- c) All alternative methodologies must be approved by the **National Administrator** prior to use. For further information, please contact the **National Administrator**.



## 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 second of these factors is *hours*. The **rated area** must be correctly determined to allow for fair comparison.

For documentation requirements, see Section 8.3.

#### 4.2 Process overview

**Table 4.2** below outlines the process for calculating **rated area** for:

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

**Table 4.2: Determining rated area** 

	Step	Reference
1	Determine the total office <b>NLA</b> for the <b>rated premises</b> .	4.3
2	Divide the total office <b>NLA</b> into easily workable <b>functional spaces</b> with separate spaces, vacancies and hours of operation.	4.4
3	For each <b>functional space</b> , determine if the space must be excluded.	4.5
4	Add up only the resulting included <b>functional space</b> areas to obtain the net office <b>NLA</b> .	N/A
5	Cap the inclusion of <b>public access space</b> to a maximum of 10 % of the net office <b>NLA</b> .	4.6.2
6	For Base Building ratings only, determine spaces qualifying as <b>medical</b> or <b>educational office facilities</b> and cap their inclusion to a maximum of 25 % of the net office <b>NLA</b> .	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

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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,



 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:

a) 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



- b) 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:
  - Spaces in which significant construction activity has taken place for fit-out works during the rating period; and
  - 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:

- 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 <u>Chapter 7</u>.

**Note 3:** For consistency and ease of auditing, the area of a space that has been excluded should be entered into the **NABERS rating input form** and indicated as such. This area can be approximated by the **Assessor** as it is not used in the calculation of the NABERS rating. Occupied days, hours and computer counts for excluded spaces do not need to be provided in the **NABERS rating input form**.

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.

In most situations, these types of spaces must be excluded from the **rated area** as they are not considered normal office space. It may be permissible to include these spaces in the rated area if 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 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 allows 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 is 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 m<sup>2</sup> 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 4.5.3 and Figure 4.5.3 below for examples.

For documentation requirements, see Section 8.2.3.

Table 4.5.3: Examples of area exclusions

Example	Interpretation	
A space originally designed for office accommodation but not used as an <b>office</b> – such as a suite of training rooms for hire, a commercial art gallery, a showroom, an information centre	<b>Excluded</b> . 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	<b>Excluded.</b> The space is not considered as office NLA	
<b>Example:</b> A Tenancy in a shopping centre used as an accountant's office.		
Spaces used primarily for providing services to the public		
Retail spaces selling goods and products (shops)	<b>Excluded</b> . They are not used as offices or office support facilities. They are retail outlets	



Example	Interpretation	
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	Excluded. These are retail outlets	
<b>Example:</b> Bank branch open to the public, post office, real estate agency, travel agency, information centre, print shop.		
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, <b>meeting rooms</b> , 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 <sup>2</sup>	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 <sup>2</sup>	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	



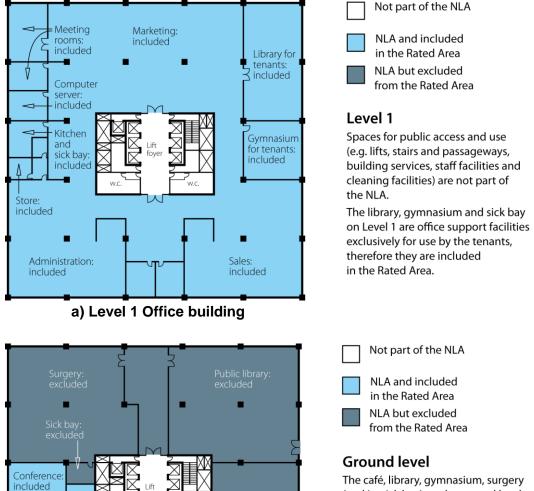
Example	Interpretation	
Change rooms (with	nin the NLA)	
Integral to the toilet and shower facility, with only exhaust air systems and low-level lighting	Excluded. Although they are office support facilities, they are not fit for office use	
Partitioned-off office space with air conditioning and lighting as for the rest of the <b>office</b>	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.	
A compactus file storage facility within the fitted- out Tenancy floor with air conditioning and lighting as for the rest of the <b>office</b>	Included. This is an office support facility and is fit for office use	
Other space	es	
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	<b>Excluded.</b> This is a facility for the general public and is not an <b>office</b>	
A large vault designed as a secure store (such as for paper or gold) and not for continual occupation by people	<b>Excluded.</b> Even if empty, this store is not <b>fit for office use</b>	
The same vault that is part of the <b>NLA</b> , 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 <b>NLA</b> and converted to office space and <b>fit for office use</b>	Included. This is an office space and is fit for office use	



Example	Interpretation
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 4.5.3 a), b) and c) represent an office building over three levels and show how the areas are to be treated:

Figure 4.5.3: Examples of Net Lettable Area, rateable area inclusions and exclusions



#### b) Ground level Office building

Building foyer: not

part of

the NLA

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.

Store:

included /

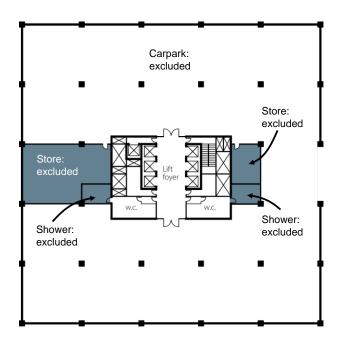
Management: included

Reception (public

access): included



**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

#### 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.

 $\triangle$  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:



- 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 **counter 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:
  - 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 m<sup>2</sup> and there are 100 **internal users** and 400 **external users**, the area to be excluded from the **rated area** is calculated as:

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



The Assessor must obtain either—

- i) written documentation from the tenant that confirms the number of external users of the computer server room, or
- 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 <u>Chapter 2</u>.

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
- 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:
  - 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.*

**Note:** Written confirmation must be obtained from the CBD Program that the tenants cannot be obligated to provide billing data under the *Building Energy Efficiency Disclosure Act 2010.* For more information, visit <a href="https://www.cbd.gov.au">www.cbd.gov.au</a>.

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 spaces 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:

Net Office NLA = Total Office NLA - 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:

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$$\left(\frac{\text{Net Office NLA}}{0.9}\right)$$
 — Net Office NLA = 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 m<sup>2</sup>. A large reception space that measures 5 m x 12 m (60 m<sup>2</sup>) is located within the total **NLA**.

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

$$500 m^2 - 60 m^2 = 440 m^2$$

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

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

As the reception space is greater than the maximum allowable, only 48.9 m<sup>2</sup> of the reception space can be included.

**Example 2:** An office with a total **NLA** of 1,000 m<sup>2</sup> has two tenancies.

Tenancy #1 has a total NLA of 600 m<sup>2</sup>, including a large reception space that measures 72 m<sup>2</sup>.

Tenancy #2 has a total NLA of 400 m<sup>2</sup> 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:

$$1.000 m^2 - 72 m^2 = 928 m^2$$

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:

$$600 m^2 - 72 m^2 = 528 m^2$$

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

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

As the reception space is greater than the maximum allowable, only 58.7 m<sup>2</sup> 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, and
- 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

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- 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 <u>NABERS Energy for Offices – Validation Protocol for Thermal Energy Exclusions</u> (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:

$$\left(\frac{\text{Net Office NLA}}{0.75}\right)$$
 - Net Office NLA = 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 submetered, 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 m<sup>2</sup>. Within this **NLA**, 1,500 m<sup>2</sup> is **occupied** by a tenant that is an English college.

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

$$2,500 m^2 - 1,500 m^2 = 1,000 m^2$$

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

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

As the English college **occupies** a space greater than the maximum allowable, only 333.3 m<sup>2</sup> can be included.

**Example 2:** A building has a total NLA of 8,000 m<sup>2</sup>. Within this **NLA**:

- 1,500 m<sup>2</sup> is **occupied** by a tenant that is an English college.
- 400 m<sup>2</sup> is **occupied** by a tenant that is a doctor's surgery.

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

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

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

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

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.

A building has an office **NLA** of 9,000 m<sup>2</sup>. Within this **NLA**, 1,000 m<sup>2</sup> qualify as a **medical office facility**. The maximum amount of medical space that can be included is:

$$9,000 \text{ m}^2/0.75 = 12,000 \text{ m}^2$$

$$12,000 \text{ m}^2 - 9,000 \text{ m}^2 = 3,000 \text{ m}^2$$

A maximum of 3,000 m<sup>2</sup> can be included in the rating. As only 1,000 m<sup>2</sup> is medical space, no adjustment is required.



#### 4.6.3.3 Whole Building and Tenancy ratings

**Medical** or **educational office facility** spaces must never be included in the calculation of **rated area** for the purpose of Whole Building and Tenancy. The benchmarks using for ratings were not developed with these types of facilities in mind.

#### 4.6.3.4 Co-assess ratings

For Co-assess ratings, medical or educational office facility spaces must—

- a) be included for the Base Building component (subject to caps on inclusions as per Section 4.6.3.2), and
- b) be excluded for the Whole Building and/or Tenancy components.

# 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 5.2** below outlines the process for calculating **rated hours** for base building, whole building and tenancy ratings.

Table 5.2: Process for calculating rated hours for all rating scopes

	Step	Reference
1	Use the breakdown of functional spaces within the rated premises	4.4
2	For each type of <b>functional space</b> , with the exception of <b>computer server rooms</b> and <b>office support facilities</b> , use one of the following methods in priority order below:	
	<ol> <li>OTA Core Hours and AHAC</li> <li>Tenancy Occupancy Survey</li> <li>Default Core Hours</li> <li>Average Core Hours</li> </ol>	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 office support facility spaces, including meeting rooms	5.3.8
5	Verify long hours if the <b>rated hours</b> for any <b>functional space</b> 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 5.2 above, dependent on the rating type.



#### 5.3.2 Core Hours

#### 5.3.2.1 Owner/Tenant Agreement (OTA) Hours Method

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.

⚠ With the migration of Office ratings to NABERS Perform in April 2023, the previous requirements for **Assessors** to adjust OTA hours (Steps 3 and 4 in version 4.1 of *The Rules – Energy and Water for Offices*) will now carried out automatically as necessary. **Assessors** no longer need to modify OTA hours data before entering it into the **NABERS rating input form**. Refer to **Appendix B Calculations** for more detail.

#### 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—

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- 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 6 pm. It is unclear if this refers to comfort conditions or plant run times. The BMS shows that the plant starts at 7 am every weekday. 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.

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

The NABERS Perform rating input form will calculate Step 3 automatically based on the Assessor's selected evidence for core hours. Assessors should not perform this calculation prior to data entry.



The NABERS Co-Assess Office Rating Calculator spreadsheet will *not* apply this correction automatically. Assessors must perform this calculation prior to data entry.

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

#### 5.3.2.2 OTA Hours correction for Tenancy and Whole building ratings

The NABERS Perform rating input form and the NABERS Co-Assess Office Rating Calculator will apply this correction automatically for all ratings. Assessors should not perform this calculation prior to data entry.

Data collected by the National Administrator indicate that rated hours determined by **OTA** are, on average, five hours longer than when determined through a **TOS**. To normalise **OTA Hours** and ensure all ratings are comparable, five (5) hours per week will be automatically deducted from the **OTA Hours** entered. This is in addition to the two (2) hour deduction outlined in Step 3 of 5.3.2.1, if relevant.

#### 5.3.2.3 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 is applied; and



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 5.3.3.4 below:



Table 5.3.3.4: 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 <b>functional space</b>	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 5.3.3.5 below:

Table 5.3.3.5: Example of requests serving different zones

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

- a) Computer server rooms not part of a larger functional space (refer to Section 5.3.7).
- b) Meeting rooms not part of a larger functional space (refer to Section 5.3.8).



c) 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 a person working in the **functional space** who has knowledge of when the space is typically at least 20 % **occupied**.

**Note 1:** Where a tenant has moved out during the rating period and the **Assessor** cannot obtain a **TOS** from the tenant, Assessor should use another method to determine core hours. If unsure, **Assessors** should contact the **National Administrator** for further guidance.

**Note 2:** Where available, a lease or **OTA** should be prioritised for determining occupancy days of a functional space. Where a **TOS** is used for this purpose, **Assessors** should independently verify occupancy days.

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 person 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 person 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 person 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 person. Examples of what is considered reasonable are:

- a) Multiple small functional spaces on a single floor.
- b) 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:

- 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 staffing in a functional space changed during the rating period. For example, where an individual 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 individual(s) working in the functional space for the remaining parts of the rating period.

A TOS is considered unusable if—

 the TOS does not verify that the respondent has adequate knowledge of the occupancy hours of the functional space for the specific dates entered in the TOS (Appendix A). 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 person who provided the information, dates of validity of the survey or identification of the functional space clearly detailed.

The **Assessor** must ensure that the **TOS** respondent is an employee of the tenant. The respondent must also have detailed, direct knowledge of staff movements relating to when the occupancy of the functional space reaches 20 % occupancy levels, and not just the opening/closing hours or service hours of the functional space. The **Assessor** must also clearly document how and why they have this information.

Where there is uncertainty around whether a respondent is acceptable, please contact the **National Administrator**.

Preference is given to a **TOS** directly completed and signed by the respondent during the **Assessor's** site visit. However, a **TOS** completed by the Assessor through a phone interview or via email, or by the site representative during a virtual site visit is also acceptable.

**Note:** Where a tenant claims a **TOS** cannot be produced due to security or safety concerns, a full explanation should be sought by the **Assessor** and confirmed as acceptable, including through engagement with the **Commercial Building Disclosure team** where applicable. Mandatory disclosure obligations may still apply.

#### 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 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.

AHAC or unusual hours must not be allocated to a **functional space** that uses default business hours.

**Note:** Using default hours does not add to the potential error of a rating.

For documentation requirements, see Section 8.3.5.

#### 5.3.6 Average Core Hours

#### 5.3.6.1 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.

#### 5.3.6.2 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.

**Note 1:** Where a space was not being used as an **office** while **fitout works** were taking place, the hours of occupation should be calculated using Method a) above. Additional evidence is not required for the calculation of these hours, and these hours should not be added to the **potential error**.

#### 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 Default Core Hours.
- c) Section 5.3.6 Average 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:

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

The corresponding hours for the server room would be:

- 1) For a Base Building rating: 7 am to 6 pm, five days a week.
- 2) 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 and Section 5.3.3 AHAC: after-hours air conditioning requests. This is **acceptable data**.
- b) Section 5.3.5 Default Core Hours. This is acceptable data.
- c) Section 5.3.6 Average 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 Default Core Hours. This is acceptable data.
- d) Section 5.3.6 Average Core Hours. With the exception of Tenancy ratings within a co-assess application where this is acceptable data, Average Core 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 person 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 longstanding 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 6.2** below outlines the process for conducting a computer count.

**Table 6.2: Process overview** 

	Step	Reference
1	Use the breakdown of the <b>rated premises</b> into <b>functional spaces</b>	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 <b>functional spaces</b>	6.3.4
5	Decide which <b>functional spaces</b> 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 <b>functional space</b> where a count is required, then use the default count, or estimate the count for the space if an <b>estimate</b> is an acceptable value	6.3.4, 6.3.5

**Note:** The option for **Assessors** to use a random site survey for ratings with more than 10 functional spaces has been removed for simplicity (previously steps 7 and 8 in the NABERS Energy and Water for Offices Rules v4.1). In practice, this option was not utilised by **Assessors** because it added to the potential error of a rating. If this change is a cause for concern, please contact the **National Administrator**.



# 6.3 Counting computers

#### 6.3.1 Computer count requirements

See Table 6.3.1 to determine for which types of office ratings a computer count is required.

**Table 6.3.1: 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 6.3.2.2 below.

Table 6.3.2.2: Types of personal computer systems

Type of system	Description
----------------	-------------

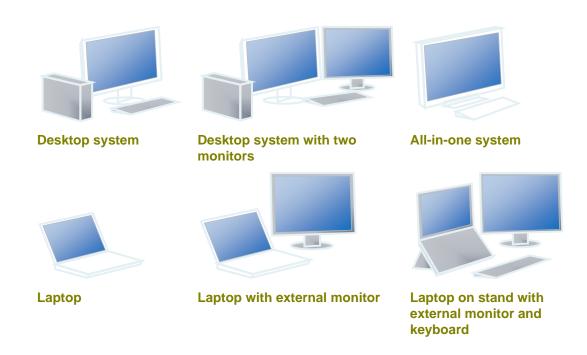


Desktop system	A distinct system unit with an external monitor and external keyboard attached
Laptop (or notebook)	System unit, screen and keyboard in the one unit
All-in-one system	System unit and screen in one unit, but with an external keyboard attached

All of the configurations in Table 6.3.2.2 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 6.3.2.2).

Figure 6.3.2.2: Personal computer system configurations



Each of these configurations in Figure 6.3.2.2 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
- 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 6.3.2.5 below specifies various computer system configurations and whether these can be counted.

Table 6.3.2.5: 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 <b>occupied</b>	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)



Example	Count	Notes
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
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.

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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 workday 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 m<sup>2</sup> of **rated area**. This does not add to the **potential error** of the rating.

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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 calculate the number of computers. If no Tenancy rating is associated with the **functional space**, the Whole Building **rated area** for **functional space** will be used.

For documentation requirements, see Section 8.4.4.



# 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 rating mixed use buildings, **Assessors** should also consult *the Ruling – Shared Services* & *Facilities* for details on methods for apportioning shared services and common facilities between the building uses.

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, including for fire suppression systems.
- 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 coverages 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.

Chapter 7 | Minimum energy and water coverage



#### 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 ratings<sup>1</sup> 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 services<sup>2</sup> 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 submetered, 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:

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

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.

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<sup>&</sup>lt;sup>1</sup> If the consumption of IT equipment and/or facility services to the space are separately metered.

<sup>&</sup>lt;sup>2</sup> Facility services include lighting, power, UPS, air conditioning and dehumidification.



#### 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.

#### 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 7.3.2.2 may be used to determine the allocation of supplementary air conditioning in open plan and cell office spaces:

Table 7.3.2.2: Procedure for allocating supplementary air conditioning

Step	Procedure
1	Check whether the <b>supplementary air conditioning equipment</b> is operated intermittently in response to a tenant-specific requirement, rather than continuously while the space is <b>occupied</b> .
	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.
	<b>Note 1:</b> A <b>special tenant requirement</b> may result from overloading due to unusually dense occupation or intense energy use in the space.
2	Check whether the need for supplementary air conditioning equipment is localised to the Tenancy.
	If <b>supplementary air conditioning equipment</b> is common in spaces elsewhere in the building without a <b>special tenant requirement</b> , the energy used for the equipment in question is allocated to the Base Building.
	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.
	<b>Note 2:</b> A <b>special tenant requirement</b> will be limited to spaces where the tenant's unusual usage has resulted in an increased intensity of service required.



Step	Procedure
3	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.)
	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.
	<b>Note 3:</b> 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	The energy used by the <b>supplementary air conditioning equipment</b> must be allocated to the Base Building.
	Where it is not possible to include all the energy used by the <b>supplementary air conditioning equipment</b> 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.
	<b>Note 4:</b> The energy used for Base Building services (such as central chilled water) to spaces serviced by <b>supplementary air conditioning equipment</b> 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 7.3.2.3A and Table 7.3.2.3B. The energy requirements apply in the order they are listed. Examples of energy use allocations are given in Table 7.3.2.3C.

**Table 7.3.2.3A: Requirements for Tenant allocations** 

Requirement	Tenant allocations	
	[Note: 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.	



Requirement	Tenant allocations		
	[Note: Energy used for the following is always allocated to tenants and must be excluded from an assessment for a Base Building rating.]		
T2	Tenant cooling tower(s) and associated pumps that do not service the Base Building and are separately metered.		
Т3	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 <b>NLA</b> .		
Т4	Any other system which serves the <b>rated premises</b> and is not specifically allocated to the Base Building through the requirements listed under <i>Base Building allocations</i> in Table 7.3.2.3B below.		

Table 7.3.2.3B: Requirements for Base Building allocations

Poquiroment	Page Building ellegations			
Requirement	Base Building allocations			
	[Note: Energy used for the following, when associated with offices rath 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> <li>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</li> </ul>			
	<ul> <li>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.</li> </ul>			
	Example			
	<ul> <li>a) Supplementary tenant condenser water, and chilled and heating water.</li> </ul>			
	b) Supplementary outdoor air, tempered or otherwise.			
	c) Domestic hot water.			
В3	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> <li>a) non-NLA spaces such as lifts, lobbies, common area amenities and foyers, and</li> </ul>			
	<ul> <li>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.</li> </ul>			



# Table 7.3.2.3C: 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 <b>meeting rooms</b> , 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:

- 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.

For documentation requirements, see Section 8.5.4.

#### 7.3.4 Car parks

#### 7.3.4.1 General

Car parks (including parking for motorcycles) 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 for the following types of car park spaces within the **rated premises** must be included:

- a) Parking spaces provided exclusively to office tenants and their visitors as a benefit of their Tenancy (e.g. as part of an agreement associated with a lease).
- b) Parking spaces allocated for base building operations (e.g. contractors).

These apply 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.
- 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 General

The **Assessor** must keep all records on which an assessment is based, including any specific guidance or approvals given by the **National Administrator**. Data retained for audit must be in a form which facilitates reviews and makes anomalies easily apparent.

Access to original documents is preferred if they are available. 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.

Information may be contained in many different formats. The purpose of the documentation is to provide an acceptable, credible source of the required information. In some instances, specific document types may be unnecessary for an individual rating. However, under different rating circumstances, the specific document types may carry multiple items of information required for the rating. The qualifying factor is not the type of document but that the documentation contains the required information in an acceptable format.

The information in Sections 8.2 to 8.5 is required for a rating. It is organised based on the divisions of previous chapters – see Chapter 4 to Chapter 7. All the required information should be obtained from the owner/manager of the premises before a site visit, and then confirmed during the site visit and subsequent assessment. An on-site inspection helps to verify that the information provided is accurate, current and complete.

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

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# 8.2 Documentation required for Chapter 4: Rated area



Topic	Requirements	Documentation
8.2.1 Office NLA	Section 4.3	To confirm and validate the office <b>NLA</b> , the following is required, in order of preference:  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 <b>Assessor</b> identifying the <b>rated premises</b> .
		All of the documentation listed above must be made to/based on the <b>measurement standard for rated area</b> .
8.2.2 Functional	Section 4.4	To confirm the division of office NLA into functional spaces, the following is required:
space		a) A complete list of functional spaces identified by the Assessor, including details of—
· ·		each individual and distinct Tenancy, and
		2) all spaces with different AHAC zones or operating hours, and
		3) office support facilities.
		<ul> <li>b) Measurements and calculations for the functional spaces and the method of measurement employed in these determinations. For example, measurement standard for rated area.</li> <li>c) Any documentation relating to significant construction activity during the rating period.</li> <li>d) Evidence of any smaller divisions of spaces made by the Assessor in order to improve the</li> </ul>
		<ul> <li>d) Evidence of any smaller divisions of spaces made by the Assessor in order to improve the rating accuracy.</li> </ul>



Topic	Requirements	Documentation
8.2.3 Exclusions	Section 4.5.1	For an excluded functional space, the following is required:
0.2.0 Exolations		a) Written information and/or <b>Assessor's</b> notes relating to the usage of spaces and the services provided to them; and
		b) The grounds for their exclusion from the <b>rated area</b> calculation.
		c) Documentation regarding the area to be excluded from rated area calculation.
	Section 4.5.2	The following documentation must be provided for any office areas that have been subject to commercial negotiation:
		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:
		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.



	Topic	Requirements	Documentation
8.2.4	Computer server rooms	Section 4.5.4.2	For the exclusion of <b>computer server rooms</b> from Base Building ratings, the following must be retained:
	SCIVCI TOOTIIS		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).
		Section 4.5.4.3	For the exclusion of <b>computer server rooms</b> from Tenancy and Whole Building ratings, the following must be retained:
			<ul> <li>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</li> </ul>
			<ul> <li>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</li> </ul>
			c) Credible written documentation provided by the tenant, completed and signed by an appropriate person, that either:
			1) states the number of external users of the computer server room; or
			<ol><li>contains records which allow the Assessor to accurately calculate (not estimate) the number of external users.</li></ol>



	Topic	Requirements	Documentation
825	Data centres	Section 4.5.4.4	For data centres, the following documentation is required:
0.2.3	Data Certifes		<ul> <li>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</li> </ul>
			<ul> <li>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.</li> </ul>
			<b>Assessors</b> are required to sight and obtain copies of the kinds of documentation listed above to demonstrate the <b>data centre</b> meets the criteria to qualify as a <b>data centre</b> .
8.2.6	Other	Section 4.5.5	The documentation required for the exclusion of other <b>office support facilities</b> (not classified as <b>computer server rooms</b> or <b>data centres</b> ) is as follows:
	exclusions		a) For Base Building ratings:
			1) Location of the meeting room.
			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.
			Where a functional space may be subject to BEEC obligations, additional written evidence and confirmation from the CBD will be required.
		Section 4.5.6	Where either a whole or a part of a <b>functional space</b> is excluded, full documentation in relation to the space <b>must be retained</b> . Detailed reason(s) why acceptable consumption data or estimates were not available for the <b>rating period must also be given</b> .



	Topic	Requirements	Documentation
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 <b>public access spaces</b> .  The <b>Assessor</b> must report if such spaces comprise more than 10 % of the office <b>NLA</b> 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.
8.2.9	Adjustments for unoccupied spaces	Section 4.7	<ul> <li>The documentation required for adjusting for unoccupied spaces includes:</li> <li>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.</li> <li>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. A TOS should not be relied upon to calculate the occupation days. A lease should be used to confirm the occupied days and a TOS to confirm active use.</li> </ul>



Topic	Requirements	Documentation
		For Base Building and Whole Building ratings, the <b>Assessor</b> must obtain documentation that shows for how much of the <b>rating period</b> the occupiers—
		<ol> <li>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</li> </ol>
		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). This should include confirmation from both tenant and building owner or facility manager as the first priority. If confirmation from the tenant cannot be obtained, then a statement from the building owner or facility manager is sufficient as the second priority.
		For Whole Building and Tenancy ratings, the <b>Assessor</b> must obtain additional documentation that shows for how much of the <b>rating period</b> the occupiers were actively using the space as an <b>office</b> (e.g. <b>Tenant Occupancy Survey</b> or confirmation from the building manager that the space has been used by the tenants).

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# 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	For the confirmation of the <b>rated hours</b> under this method, the following documentation is required:  a) Written documentation stating the <b>hours of service</b> 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).
		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.
		The <b>Assessor</b> must obtain additional evidence to determine the <b>OTA</b> hours can be interpreted as 'hours of comfort' when—
		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.
		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.
		The National Administrator may allow alternative documentation on a case-by-case basis for the use of <b>OTA Hours</b> and BMS data. If an Assessor is unable to provide documentation matching the above, they should contact the National Administrator.



Topic	Requirements	Documentation
8.3.2 AHAC	Section 5.3.3	For the confirmation of the <b>rated hours</b> under this method, the following documentation is required:  a) Copies of AHAC request data showing the date and time of each request and the space to which it applied.
		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.
		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.
		<ul> <li>d) Drawings and measurements showing AHAC zones for requests serving different zones within a single functional space.</li> </ul>
8.3.3 TOS	Section 5.3.4	For the confirmation of the <b>rated hours</b> under this method, a completed and signed <b>TOS</b> for each <b>functional space</b> and shift must be retained.
		Evidence that no method with a higher priority could be used for the <b>functional space</b> must also be retained.
		<b>Note:</b> Where available, a lease or <b>OTA</b> should be used for determining occupancy days of a functional space. Where a <b>TOS</b> is used for this purpose, <b>Assessors</b> should provide additional documentation to independently verify occupancy days.
		Assessors should provide explanatory notes if it is not clear from a respondent's role or response why they are suitable to complete a <b>TOS</b> .



	Topic	Requirements	Documentation
8.3.4	Default Core Hours	Section 5.3.5	For the confirmation of the <b>rated hours</b> under this method, evidence that no method with a higher priority could be used for the <b>functional space</b> must be retained.
			<b>Note:</b> Tenancy ratings and <b>co-assess</b> applications are not required to provide this documentation.
			The <b>Assessor</b> must state his/her reasons if giving an estimate of less than the Default Hours of 45 hours per week.
235	Average Core	Section 5.3.6	For the confirmation of the rated hours under this method, the following evidence must be retained:
0.3.3	Hours		a) Details of how the estimates have been calculated.
			b) A clear list of functional spaces.
			c) Associated Core Hours used to determine Average Core Hours for each space.
			d) Evidence that no method with a higher priority could be used for the functional space.
0.0.6	Carantan	Section 5.3.7	For confirmation of the rated hours for computer server rooms, the following must be retained:
0.3.0	Computer server rooms		<ul> <li>a) Evidence showing if Base Building direct HVAC is serving the space (for Base Building rating only).</li> </ul>
			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.



	Topic	Requirements	Documentation
8.3.7	Other office	Section 5.3.8	Depending on the method used, confirmation of the <b>rated hours</b> for other <b>office support facilities</b> including <b>meeting rooms</b> must be retained in the following formats:
	support facilities		<ul> <li>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.</li> </ul>
			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	Section 5.4.2	Depending on the process used, confirmation of the <b>rated hours</b> must be retained, as follows, for long OTA and AHAC hours:
	OTA and AHAC Hours		<ul> <li>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</li> </ul>
			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.
8.3.9	Verifying long	Section 5.4.3	Depending on the process used, confirmation of the <b>rated hours</b> must be retained as follows for long TOS hours:
	TOS hours		<ul> <li>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</li> </ul>
			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.

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Topic	Requirements	Documentation
8.3.10 Checking expected hours	Section 5.4.4	For confirmation of the <b>rated hours</b> for all <b>functional spaces</b> , a common-sense check of the hours must be performed. This must take the form of <b>Assessor's</b> 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	<ul> <li>As evidence of a site visit to count computers, the following must be retained:</li> <li>a) A record of how many personal computer systems have been identified within each functional space.</li> <li>b) Where necessary, evidence of regular use of computers, such as: <ol> <li>A report by a manager or other authoritative source that a system is in regular use.</li> </ol> </li> <li>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.</li> </ul>
8.4.2	Conducting a count	Section 6.3.3	As evidence a computer count has been conducted, the following must be retained:  a) Marked-up desk layouts for all spaces in the <b>rated premises</b> , if available; or  b) Marked-up desk layouts completed by the <b>Assessor</b> and showing the computer count; or  c) Copies of the <b>Assessor</b> 's site notes taken during the count, if desk layouts are not available.  In addition, the <b>Assessor</b> must identify which spaces (if any) are agile and ABW spaces, and document at which times counts have been conducted.
8.4.3	Estimating numbers of computers	Section 6.3.4	Whenever an estimate of computer numbers has been made, the following must be retained for each functional space:  a) Statements giving reason(s) why the estimate had to be made.  b) Calculations of the figure used (including all assumptions, estimates and interpretations involved).
8.4.4	Default method	Section 6.3.5	The <b>Assessor</b> must list each <b>functional space</b> for which the default method of counting computers has been used.

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Topic	Requirements	Documentation	
8.4.5 Conducting a survey	Section 6.3.6	<ul> <li>Whenever a survey has been conducted, the following must be retained:</li> <li>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.</li> <li>b) For each functional space in which a computer count was conducted:</li> <li>1) Marked-up desk layouts completed by the Assessor and showing the computer count; or</li> <li>2) If desk layouts are not available, copies of the Assessor's site notes taken during the count.</li> </ul>	

# 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:

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	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 NABERS The Rules – Metering and Consumption.
8.5.2	Computer server room energy coverage	Section 7.3.1	The documentation required for energy consumption exclusions for <b>computer server rooms</b> is the same as the documentation required for exclusions from the <b>rated area</b> calculation as specified in Section 8.2.4.



253	Energy use	Section 7.3.2	For the determination of all energy and water use allocations, the following is required:
allocations for services		<ul> <li>a) Existing agreements and other official documentation between the builder, owner and tenants, or between tenants.</li> </ul>	
	oor video		<ul> <li>Descriptions and/or drawings of service arrangements, including exclusions. The preference is a service drawing, however detailed reports and Assessor's sketches are permissible.</li> </ul>
			c) Where possible, list of tenant supplementary units in the building in order to determine any spaces that need to be excluded.
			Any instances of <b>special tenant requirements</b> must also be documented. If such requirements exist, the <b>Assessor</b> 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:
			Documentation that either—
			i) confirms the building has been checked and no such systems exist; or
			<ul> <li>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.</li> </ul>
			<ol> <li>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 7.3.2.2, Step 3).</li> </ol>
			<ol> <li>Additional documentation associated with the relevant procedures of Tables 7.3.2.2 to 7.3.2.3B. Where applicable, this may include:</li> </ol>
			i) Method of control of supplementary systems by Base Building or Tenant control systems (see Table 7.3.2.3B, Rule B3 and Table 7.3.2.2, Step 1).
			ii) Location of similar supplementary systems throughout the building (see Table 7.3.2.2, Step 2).



<ul> <li>iii) Chilled water, heating water, condenser water, air supply and elec schematics for tenant supplementary and Base Building services (s Table 7.3.2.3B, Rule B2).</li> </ul>
<ul> <li>iv) Base Building and tenant fitout mechanical and electrical service drawings (see Table 7.3.2.3B, Rule B1).</li> </ul>
v) Percentage area and tenant calculations for centrally provided service (see Table 7.3.2.3B, Rule B2).
vi) Documents identifying Base Building amenities on each floor which m be serviced from tenant switchboards/meters (see Table 7.3.2.3B, R B4).



8.5.4	Energy consumption in excluded spaces	Section 7.3.3	<ul> <li>For energy consumption in excluded spaces, the following must be retained:</li> <li>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.</li> <li>b) Calculations and information relating to the energy use of other spaces which are not for the exclusive use of office tenants, with reference to the metering and exclusion requirements of other NABERS Rules documents, as appropriate.</li> </ul>	
8.5.5	Car parks	Section 7.3.4	The Assessor must fully document both the method and all data used to proportion car park energy usage.  Dedicated parking space, pass or key allocation data must be sourced from the lease documentation.  Documentation to support the proportioning of energy use, includes either—  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 NABERS The Rules – Metering and Consumption.	



# Appendix A Tenant Occupancy Survey

The following form must be completed by a staff member with knowledge of 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.

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Appendix A | Tenant Occupancy Survey



Functional space:			
Rating period, or period for which the manager or supervisor was responsible for the space:	From	to	
	(to be completed by the Assessor)		
Please answer the following questions with respect to the fun above.	ctional space a	and rating period specified	
Name of respondent:			
Position:			
Location of staff:			
What are the typical days of work within the area you work in?	:		
By what time at the start of the typical day have approximately 20 % (1 in 5) of people arrived within the area you work in?:	1		
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 work in?:			
Describe any periods where more than 20 % of people would be present outside these typical hours	i		
(e.g. '4 hours one Saturday each month' or 'a total of 50 hours at the end of financial year'):	3		
Do all the answers above apply for the whole <b>rating period</b> (shown at top)?:	I		
If not, what dates do the answers apply to? Please give alternative responses for the rest of the rating period (ignoring periods when the space was vacant):			
Please advise how you are aware of the occupancy patterns of the area you work in?:	3		
I confirm that I have had regular, detailed and direct knowledge of the staff movements and occupancy patterns of the specified office space over the specified period. The responses above are correct to the best of my knowledge.  Signature of respondent:	•		
Date:			



# Appendix B Calculations

# B.1 Rated area calculation

Calculate the rated area as follows:

- a) Identify the functional spaces according to Section 4.4.
- b) For each **functional space**, determine the proportion of time the space is **occupied** (not vacant).
- c) 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.
- d) 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 (m<sup>2</sup>)

i = each functional space

 $a_i$  = floor area of each functional space (m<sup>2</sup>)

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

**Example:** A building has two 1,000 m<sup>2</sup> 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 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. This may include corrections as per 5.3.2.1 (Step 3: OTA Hours minus two) and 5.3.2.2.
- 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 ( $m^2$ )

i =each functional space

 $h_i$  = hours allocated to each **functional space** (hours/week), which may include corrections if relevant (see step b above)

 $a_i$  = area of each functional space (m<sup>2</sup>)

 $o_i$  = 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:

- a) 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.
- b) Calculate the sample standard deviation, S, of the individual computer density figures, x, using the formula:

$$S = \sqrt{\frac{\sum_{j} \left[ (x_{j} - X)^{2} a_{j} \right]}{a - 0.05A}}$$

where:

*i* is the number of spaces surveyed to date

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

$$a = \sum_{j} a_{j}$$

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

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

If  $U \ge 0.1X$  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  $U \ge 0.1X$ .

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.

d) 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 areaweighted **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.

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 Rating period

# C.1 Allowance for lodgement

#### C.1.1 General

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.

Sections C.1.2 and C.1.3 provide examples of this principle.

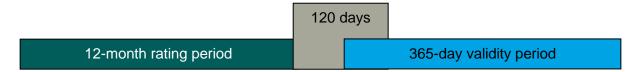
#### C.1.2 Scenario 1

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.1.2.

**Example:** The process for date of certification will be as follows:

- a) The **rating period** is 1 January 2023 to 31 December 2023. The due date is therefore 30 April 2024.
- b) The **Assessor** lodges the rating on 1 February 2024, and the **National Administrator** certifies it on 5 February 2024. This is before the due date.
- c) The rating will therefore be valid for 365 days from the date of certification (5 February 2024).

Figure C.1.2: Rating lodged within 120 days of the end of rating period



#### C.1.3 Scenario 2

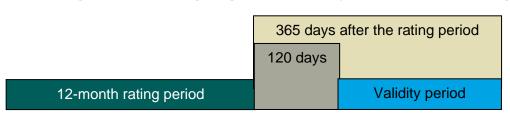
A NABERS rating is lodged with the **National Administrator** more than 120 calendar days after the end of the **rating period**. It will be valid for 365 days from the end of the **rating period**, see Figure C.1.3.



**Example:** The process for date of certification will be as follows:

- a) The **rating period** is 1 January 2023 to 31 December 2023. The due date is therefore 30 April 2024.
- b) The **Assessor** lodges the rating on 1 June 2024, and the **National Administrator** certifies it on 6 June 2024. This is after the due date.
- c) The rating will therefore be valid for 365 days from the end of the **rating period** (31 December 2023).
- d) It will expire on 31 December 2024.

Figure C.1.3: Rating lodged after 120 days from the end of rating period



# C.2 Allowance for responses

#### C.2.1 General

The Assessor is 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**.

Section C.2.2 provides an example of this principle.

#### C.2.2 Scenario

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:** The process for date of certification will be as follows:

- a) The **rating period** is 1 January 2023 to 31 December 2023. The due date is therefore 30 April 2024.
- b) The **Assessor** lodges the rating on 28 April 2024, 119 days after the end of the **rating** period.
- c) The National Administrator responds on 3 May 2024 requesting further clarification. The Assessor must provide adequate clarification by 14 May 2024 (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 2024, the rating will be certified and valid until the 8 May 2025.
- e) If the **Assessor** does not respond with clarification until the 30 May 2024, the rating will only be valid until 365 days from the end of the **rating period** and therefore will expire on the 31 December 2024.

# 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 initial timeframe.

**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

# C.4.1 General

For a building which already has a current rating, there are two options to complete another rating of the same type, that is, 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.

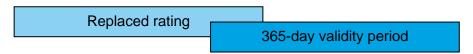
### C.4.2 Option 1: Replace

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 may be chosen if the new rating is better than the existing rating, see Figure C.4.2.

Figure C.4.2: Existing rating replaced by a new rating



# C.4.3 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 (i.e. 365 plus 120 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**.

Section C.4.4 provides an example of this principle.

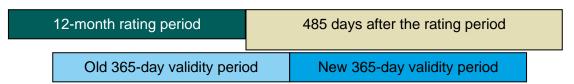
### C.4.4 Scenario 1

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.4.4.

**Example:** The process for date of certification will be as follows:

- a) The current rating's validity period expired 31 December 2023.
- b) The rating period is 1 October 2022 to 30 September 2023 for the renewal rating.
- c) The **Assessor** lodges the renewal 1 November 2023 and it is certified by the **National Administrator** 7 November 2023.
- d) The validity period for the renewal will be 1 January 2024 to 31 December 2024.

Figure C.4.4: 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.

Section C.4.5 provides an example of this principle.

#### C.4.5 Scenario 2

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.4.5.

**Example:** The process for date of certification will be as follows:

- (a) The current rating's validity period expired 31 December 2023.
- (b) The rating period is 1 August 2012 to 31 July 2023 for the renewal rating.
- (c) The **Assessor** lodges the renewal 1 November 2023 and it is certified by the **National Administrator** 7 November 2023.
- (d) The **validity period** for the renewal will be 1 January 2024 to 28 November 2024, 485 days after the end of the **rating period**.

Figure C.4.5: Validity period for the new rating begins once the old rating expires and the new validity period is less than 365 days

12-month rating period	485 days after the ratir	ng period
	Old 365-day validity period	New validity period



# Appendix D List of changes

The following table lists the changes to the content of NABERS The Rules – Energy and Water for Offices, v4.1, 2020 in order to produce this version 5.1.

Overview		
NABERS The Rules  – Energy and Water for Offices, v4.1, 2020.	Version 5.1 (current version)	Content changes
Document location		
Chapter 1		
1 Purpose	1 Introduction	Title changed.
		Chapter 1 now has a new section structure in accordance with NABERS Style Guide, as follows:  - General  - Interpretation of the Rules and Rulings
		- Situations not covered by the Rules
		- How to use this document
		- What is new in this version
		- Related documents.
Chapter 2		
Terms and		- Expanded definition of Public access space.
definitions		<ul> <li>Amended definition of Tenant Occupancy Survey (TOS).</li> </ul>
Chapter 3		
3 Scope	3 Key	Title changed.
	concepts and	Shared facilities now apply to the following:
	procedures	- Car parks
		- Loading docks
		- Swimming pools and gyms
		- Restaurants
		- Exclusive hotel clubs.
		Shared services now apply to the following:
		- Vertical transport
		- Foyers, lobbies and common spaces



		- Exterior lighting and external signage.
	3.2 Eligibility criteria	Additional notes in this section regarding: Category 5 buildings, the Building Energy Efficiency Disclosure Regulations 2010, Commercial Building Disclosure team, buildings subject to CBD Program obligations, guidance note 'What is a building under the CBD program'.
	3.6 CBD requirements and occupant or owner obligations	New section
Chapter 5		
5 Additional important instruction	5 Rated hours	New content.  With the migration of Office ratings to NABERS Perform in April 2023, the previous requirements for Assessors to adjust OTA hours (Steps 3 and 4 in version 4.1 of The Rules – Energy and Water for Offices) will now carried out automatically as necessary. Assessors no longer need to modify OTA hours data before entering it into the NABERS rating input form. Refer to Appendix B Calculations for more detail.
	5.3.4.1	<ul> <li>General update regarding who confirms hours</li> <li>New Note 2 regarding prioritising a lease or OTA for determining occupancy days of a functional space.</li> <li>Update to roles – 'manager or supervisor' replaced with 'person'.</li> </ul>
	5.3.4.2	Update to roles – 'manager or supervisor' replaced with 'person'.
	5.4.3	Update to roles – 'manager or supervisor' replaced with 'person'.
	5.2 Table	Updates to the process for calculating rated hours.
6 Counting computers	6.3.6 Conducting a survey	This section has been removed.
8 Documentation required for accredited ratings	8.2.9(b)	A lease is to be used to confirm occupancy days, not a Tenant Occupancy Survey.

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	8.3.3	New Note regarding a lease being used to confirm occupancy days, not a Tenant Occupancy Survey.
Appendix A		Update to the form and to the roles in introductory paragraph – 'manager or supervisor' replaced with 'staff member'.

