Housekeeping

- Duration: 9am - 5pm
- Breaks: Morning tea, lunch, afternoon tea
- OH&S
- Evacuation
- Turn off mobile phones
# Course coverage and agenda

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<th>Topic</th>
<th>Time</th>
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<td>9.30 – 2.00</td>
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<td>Exemptions</td>
<td>2.00 – 2.30</td>
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<td>Assessor Portal</td>
<td>2.30 – 4.30</td>
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<td>5.</td>
<td>Becoming a CBD Accredited Assessor</td>
<td>4.30 – 5.00</td>
</tr>
</tbody>
</table>
Topic 1

Background
In this section, you’ll learn to:

- Explain why we need the Commercial Building Disclosure program
- Describe the scope of the program
- Describe the legal basis for the program
What is the CBD Program?

- Established under the *Building Energy Efficiency Disclosure Act 2010*

- Mandates disclosure of energy efficiency info for office buildings at sale or lease

- Aims to inform buyers, tenants, sub-tenants: empowers them to choose efficient buildings

- Managed by the Commonwealth Department of the Environment & Energy
Legal Requirements

Under the Building Energy Efficiency Disclosure (BEED) Act 2010:

A Building Energy Efficiency Certificate (BEEC) is needed for most offices of 1000m² or more before going to market for sale, lease or sub-lease.

AND

The NABERS Energy rating must be included on all advertising material.
What’s on the BEEC?

- Part 1 - Base/whole building NABERS Energy rating, excluding Greenpower

- Part 2 - Tenancy Lighting Assessment (today’s focus)

- Let’s see an example:

In this section, you learnt to:

- Explain why we need the Commercial Building Disclosure program
- Describe the scope of the program
- Describe the legal basis for the program
Topic 2

Tenancy Lighting Assessments (TLAs)
In this section, you’ll learn to:

1. Describe what’s in the TLA

2. Identify the types of spaces and lighting systems covered by the TLA

3. Do a TLA:
   - Define and name the Functional spaces
   - List the luminaires
   - Assess the Nominal Lighting Power Density
   - Assess the lighting controls
What is a CBD Tenancy Lighting Assessment (TLA)?

- CBD Assessor surveys the office tenancies
- Survey covers:
  - Nominal Lighting Power Density (NLPD)
  - Lighting control arrangements
- Each functional space is assessed separately
- Only CBD Accredited Assessors can do TLAs
General Lighting System (GLS)

Refer s6.2

- Basis for assessing the NLPD
- Lights the workstation areas
- May include “base building” and “fit-out” fittings
- **Not** desktop task lights, display lights, exit lights
- However, *sometimes* feature lights, cell offices, meeting room lights etc are assessed (more on that later).
Group Activity – General Lighting System

Identify the general lighting system from the photos and plans in your work book
Nominal Lighting Power Density (NLPD)

- The NLPD is calculated for each Functional Space.
- NLPD relates to the General Lighting System.
- Expressed in Watts per square metre (W/m²)

\[
NLPD = \frac{\text{Total installed luminaire power (Watts)}}{\text{Area served (m}^2)}
\]

<table>
<thead>
<tr>
<th>NLPD</th>
<th>NLPD Grade</th>
<th>Appearance on BEEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0 W/m² or less</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td>7.1 to 10.0 W/m²</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>10.1 W/m² to 15.0 W/m²</td>
<td>Median</td>
<td>Median</td>
</tr>
<tr>
<td>15.1 W/m² to 18.0 W/m²</td>
<td>Poor</td>
<td>Poor</td>
</tr>
<tr>
<td>18.1 W/m² or more</td>
<td>Very Poor</td>
<td>Very Poor</td>
</tr>
</tbody>
</table>
Lighting Control Systems

- Energy use = Installed power x **Running hours**
- Effective controls match running hours to need
- Assessed based on capacity not implementation or outcome.

**Appearance on BEEC**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>e.g. occupancy controls</td>
</tr>
<tr>
<td>Moderate</td>
<td>e.g. timers or small manual switch zones</td>
</tr>
<tr>
<td>Poor</td>
<td>e.g. larger manual switch zones</td>
</tr>
</tbody>
</table>
In-scope and out-of-scope items

- **Do not** assess the quality of luminaires
  - Poor optics
  - Dirty / old
  - Failed lamps

- **Do not** assess the quantity of light

- **Do** assess the potential energy performance of the lamps (NLPD and controls)
TLA Assessment Area

- The Assessment Area is the office NLA. Vacant tenancies are included.

- TLA Assessment Area ≠ NABERS Rated Area

- Vacancies are treated differently.

- Non-tenant areas (car parks, toilets) are not part of the rated area or the TLA.
In this section, you’ve learnt to:

1. Describe what’s in the TLA ✔

2. Identify the types of spaces and lighting systems covered by the TLA ✔

3. Do a TLA: We’ll learn this next…
   - Define and name the Functional spaces
   - List the luminaires
   - Assess the Nominal Lighting Power Density
   - Assess the lighting controls
Do a TLA: Define and name the Functional Spaces
Defining Functional Spaces

Each FS is assessed separately, including vacant FSs.

Maximum FS is the smaller of each:
- whole floor; or
- whole suite

Define the FS area: Only +/- 10% accuracy is required.
Non-office areas in Functional Spaces

- Meeting room areas
- Data centres or server rooms
- These can be part of a FS, and don’t need to be split out as a separate FSs in the TLA
- They should not be removed from FS area
- CBD Team checks total TLA vs building area
Naming Functional Spaces

- Must be unique
- Must identify:
  - The level of the building
  - Whole floor or part floor
  - Location or suite number (part floor spaces)

No tenant name here
### Which names are acceptable?

<table>
<thead>
<tr>
<th>Name</th>
<th>OK / Not OK?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Level 1 – West Tenancy</td>
<td>✓</td>
</tr>
<tr>
<td>Part Level 4 – Suite 4.02</td>
<td>✓</td>
</tr>
<tr>
<td>Whole 5\textsuperscript{th} floor</td>
<td>✓</td>
</tr>
<tr>
<td>Whole Level 10 – Tower A</td>
<td>✓</td>
</tr>
<tr>
<td>12.03</td>
<td>❌</td>
</tr>
<tr>
<td>Open office</td>
<td>❌</td>
</tr>
<tr>
<td>Suite 103</td>
<td>❌</td>
</tr>
</tbody>
</table>
Group Activity – Naming Functional Spaces

- Identify the potential names from the plans in your work book
Group Activity – Define functional spaces

- Identify the correct way to setup functional spaces in your TLA
In this section, you’ve learnt to:

1. Describe what’s in the TLA ✓

2. Identify the types of spaces and lighting systems covered by the TLA ✓

3. Do a TLA:
   - Define and name the Functional spaces ✓
   - List the luminaires We’ll learn this next
   - Assess the Nominal Lighting Power Density
   - Assess the lighting controls
Do a TLA: List the luminaires
Luminaire Details

- Definitions of terms
- Used for NLPD calculations
- Need to identify all luminaires in the GLS and determine the nominal power consumption of each
Collecting Luminaire Information

- For each GLS luminaire, record:
  - Name
  - Description
  - Lamp and control gear type
  - Number of lamps
  - Nominal lamp power (W)
Luminaire Name and Descriptions

- **Suggested** option (not mandatory)
  - **XXabb**
    - **XX** is a luminaire body code (2 or more letters)
    - **a** is the number of lamps (single digit number)
    - **bb** is the nominal power of each lamp

  If you need more information, precede with a plus sign

- RT236 is a 2x36W recessed troffer
- RT236 + LVR for louvred diffuser
- LEDPanel54 is a 54W LED panel luminaire
Type and Quantity of Lamps

- How many lamps in this fitting?
- Physically sight the lamps!!
- Diffusers and reflectors can mislead
- LEDs can mimic fluoros: don’t assume based on size
Type and Quantity of Lamps

- Recording lamp types:
  - Most common lamp and control gear combos are listed in Assessor Portal
  - ‘Other’ options available in TLA Rules version 3

- Include failed lamps (except deliberate delamping)
Nominal Lamp Power

- Preferred method of identification is visual inspection in-situ
- Otherwise, use replacement stocks or as-installed lists
- Where unsafe to inspect luminaires, use default lamp options
- Assessors must validate lamp power using methods listed in order of precedence in the Rules
Common Lamp Power Ratings

- 1200mm (~4 feet) T8 lamp – 36W
- 1150 mm (~4 feet) T5 HE lamp – 28W
  - HE = high efficiency
- 1150 mm (~4 feet) T5 HO lamp – 54W
  - HO = high output
- LED strip lights – use W/m² and total length for total W
- NLPD uses total luminaire power, including (ballasts or transformers). Portal calculates this automatically for common equipment.
Luminaire Power

- NLPD uses total luminaire power.
- Luminaire power = Lamp + Control gear power
- Control gear: ballasts or transformers
- Portal calculates luminaire power automatically for common equipment, but you need to identify the control gear type.
Control Gear – Identifying Ballast Types

- Ballast controls the current in fluoro and HID lights
- Use a ballast discriminator
- Look up lamp model
- Inspect and photograph lamp connection (e.g. starter)
- T5 – electronic only
Control Gear – Identifying Transformer Types

- ELV halogen lamps
- Visual inspection
- Magnetic – larger, heavier
- Electronic – smaller, details written on transformer
- Ballast discriminator not permitted – too unreliable
## Total Luminaire Power

**CBD TLA Rules: Appendix C**

- Standardised figures only – NLP may differ from actual power

<table>
<thead>
<tr>
<th>Lamp Type</th>
<th>Electronic Ballast</th>
<th>Magnetic Ballast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear fluorescent T12</td>
<td>N/A</td>
<td>1.2 x NLP + 2.6</td>
</tr>
<tr>
<td>Linear fluorescent T8</td>
<td>0.9 x NLP + 2.6</td>
<td>1.16 x NLP + 2.6</td>
</tr>
<tr>
<td>Linear fluorescent T5 HE</td>
<td>1.08 x NLP + 0.7</td>
<td>N/A</td>
</tr>
<tr>
<td>Linear fluorescent T5 HE Eco</td>
<td>1.11 x NLP - 0.6</td>
<td>N/A</td>
</tr>
<tr>
<td>Linear fluorescent T5 HO</td>
<td>1.09 x NLP - 0.6</td>
<td>N/A</td>
</tr>
<tr>
<td>Linear fluorescent T5 HO Eco</td>
<td>1.04 x NLP + 2.5</td>
<td>N/A</td>
</tr>
<tr>
<td>CFL-n</td>
<td>1.06 x NLP</td>
<td>1.19 x NLP+2.3</td>
</tr>
<tr>
<td>CFL-i</td>
<td>NLP</td>
<td></td>
</tr>
</tbody>
</table>

NLP = nominal lamp power
Special Cases

- **Voltage reduction devices or dimmers:**
  - Assess as if no voltage reduction device or dimmer were present

- **T5 adapters**
  - Assess as per T5 lamp of same type
  - Add performance comment ‘T5 Adapters used’
Special Cases, continued

• “Other” lamp types
  - Directly measure luminaire power e.g. via plug in meter
  - Or take from catalogue / nameplate
  - Engage specialist trades person if required
Safe Work Methods

Assessors are responsible for working safely (think about yourself and others)

Avoid:

- Handling energised lamps or luminaires
- Standing on chairs or desks to reach luminaires
- Using a stick or pole to lift up diffusers in luminaires
- Opening live switchboards or lighting control systems

Where inspection is not safe, defaults may be used

- Conservative Figures. (see page CBD TLA Rules page 31 - Table 2: Default Lamp Values)
Luminaires – Documentation Requirements

CBD TLA Rules: s5.6 page 36 - 37

- Photos of each luminaire depicting lamp type, lamp power, number of lamps and control gear

AND/OR

- As installed equipment lists or replacement lamp photos

AND/OR

- Results of individual luminaire power tests
Group Activity - Luminaires

- Identify and name the luminaires shown in each of the photographs provided

- Try to identify
  - Luminaire type
  - Lamp power
  - Control gear type
  - Any additional information needed to work out total luminaire power

- See Appendix B: Common Lamp Types (pg. 65)

- See Appendix G: Examples of photographic evidence (pg. 96)
In this section, you’ve learnt to:

1. Describe what’s in the TLA ✓

2. Identify the types of spaces and lighting systems covered by the TLA ✓

3. Do a TLA:
   - Define and name the Functional spaces ✓
   - List the luminaires ✓
   - Assess the Nominal Lighting Power Density We’ll learn this next
   - Assess the lighting controls
Do a TLA: Find the NLPD
Assessing NLPD

- Step 1: Is the Functional Space Assessable?
- Step 2: Choose one of the four assessment methods:
  - Grid Method – for open office spaces with a regular repeating grid
  - Aggregate Methods 1, 2 or 3 – increasingly flexible methods for more complex installations
Step 1: Is the Functional Space Assessable?

Figure 1: Confirm if Functional Space is Assessable flow chart.

- Is there at least 50m² of open office area?
  - Yes
  - Does open office area constitute at least 15% of total functional space area?
    - Yes
      - Does the space have an existing or proposed lighting system?
        - Yes
          - Space is Assessable, select appropriate NLPD assessment method
        - No
          - Evidence: Take photographs demonstrating no existing installed lighting system, make site notes confirming no contractual agreement for proposed system
    - No
      - Space is Non-assessable
     - Evidence: Draw up new plan or mark up existing floor plan clearly showing open office areas and area calculations

Australian Government

COMMERCIAL BUILDING DISCLOSURE
Step 1: Is the Functional Space Assessable?

- Non-Assessable spaces
  - Strict Criteria have to be met and are subject to the discretion of the CBD Administrator

- A space may be deemed Non-Assessable if it is:
  - Use by Police or Security Agencies, OR
  - The space cannot be assessed for technical reasons, justified by the Assessor

  ➢ Technical reasons may include: The FS does not contain at least 50m2 of open office space, the open office space doesn’t comprise at least 15% of the FS or no lighting is installed in the FS.
Step 2: Choosing an NLPD Assessment Method

Is it convenient to use Ag method 3?

No

Is it convenient to use Ag method 3?

Yes

Select appropriate Aggregate Method

Figure 6: NLPD assessment method selection flow chart
Grid Method  CBD TLA Rules: s6.3.3 p42

Permitted when:

- GLS contains a repeating block of up to **two** luminaires (the same or different types); AND

- The repeating block covers at least 50% of the FS area or 250 m² (whichever is smaller); AND

- There is less than 5% (by wattage) deviation from the repeating block in the open plan office; AND

- Documentation requirements for grid method can be met
Grid Method - Process

- Verify grid method applies
- Identify luminaire types in the grid
- Measure the grid spacing
  - Need actual measurements of tile size – don’t assume
Grid Spacing

1350 450 400

1200
Grid Method

- Grid spacing therefore 2.4 x 2.4 per fitting
- (Or 4.8 x 2.4 per 2 fittings)
Grid Method Documentation Requirements

- Minimum grid coverage:
  - Reflected Ceiling Plan OR Assessor’s sketch showing how much area is covered by grid (plan/mock up/photo); AND

- Regular repeating block:
  - Reflected Ceiling Plan OR Assessor’s sketch showing grid; AND

- Size of repeating block:
  - Evidence of ceiling tile size and site photographs confirming number of tiles per block OR Reflected Ceiling Plan; AND

- Photos/notes/drawings showing non-standard fittings < 5% watts across open office; AND

- Photos/site notes of all open office luminaires
Can we use the grid method?

- Repeating block covers >50% functional space area
- <5% of luminaires differ from block luminaire
- Grid Method can be used
Can we use the grid method?

- Repeating block covers >50% functional space
- >5% deviation from the repeating block by wattage
- Grid Method can’t be used
Step 2: Choosing an NLPD Assessment Method: Agg 1

Figure 6: NLPD assessment method selection flow chart

- Functional space area equal to or greater than 250m²
  - Yes
  - Repeating block of up to two luminaires in the GLS
    - Yes
    - Repeating block covers more than 50% of FS area
      - Yes
      - Luminares vary by less than 5% (by wattage)
        - No
        - Grid Method
      - No
      - Aggregate Method 1
    - No
    - Open office space is at least 50% of FS area
      - OIR
      - Open office space is at least 250m²
        - OIR
        - Open office plus cell office space in FS at least 250m²
          - OIR
          - Open office space plus cell office space is at least 50% of FS area
            - Select appropriate Aggregate Method
          - Default option (no requirements)
      - Open office plus cell office space in FS at least 250m²
        - Select appropriate Aggregate Method
      - Aggregate Method 2
    - Aggregate Method 3
  - No
  - Select appropriate Aggregate Method
Aggregate Method 1: Suitability

- Permitted when:
  - Grid Method does not apply, AND
  - There is **open office space** of at least 50% of the FS area or at least 250m², whichever is smaller; AND
  - Documentation requirements for Aggregate Method 1 can be met

- Use for most irregular or multi-luminaire set ups where there is enough open office space
Aggregate Method 1: Find a sample space

Find an area of open office space that:

- Is at least 50% of the whole FS area or at least 250m², whichever is smaller

- Contains all the luminaire types used in the open office space in a similar proportion to the open office space as a whole (eg. a representative sample)
Aggregate Method 1: Process

- Prepare drawing of sample space
- Calculate sample space area within +/-5% accuracy
- Count all GLS luminaires in sample space (not task or display lighting)
- Assessor Portal will do NLPD calculations
Aggregate Method 1: Summary

- Open office space
- No regular/grid spacing
- Use Aggregate Method 1 if documentation requirements can be met
Agg 1: Can you find a sample space?

- Sample space:
  - Open office space
  - >250m² (316m²)
  - Includes representative mix of luminaires
  - Don’t include shaded area as it’s not open office
Step 2: Choosing an NLPD Assessment Method

- Agg 2

Figure 6: NLPD assessment method selection flow chart

1. Functional space area equal to or greater than 250m²
   - Yes
   - No

2. Repeating block of up to two luminaires in the GLS
   - Yes
   - No

3. Repeating block covers more than 50% of FS area
   - Yes
   - No

4. Luminaires vary by less than 5% (by wattage)
   - Yes
   - No

Grid Method
Aggregate Method 1
Aggregate Method 2
Aggregate Method 3

Select appropriate Aggregate Method

Open office space in FS of at least 250m²
Open office plus cell office space in FS at least 250m²
Open office space plus cell office space is at least 50% of FS area

Default option (no requirements)
Aggregate Method 2

- Permitted when
  - Grid Method is does not apply, AND
  - There **open office + cell office space** of at least 50% of the functional space area or at least 250m², whichever is smaller; AND
  - Documentation requirements for Aggregate Method 2 can be met

- Use for irregular or multi-luminaire set ups where there is enough **open and cell** office space
Aggregate Method 2: Find a sample space

Find a sample space made up of open office space and cell offices that:

- Is at least 50% of the functional space area or \( >250\text{m}^2 \), whichever is smaller
- Contains all the luminaire types used in the open office and cell office area in a similar proportion to the functional space area as a whole
Aggregate Method 2: Process

- Prepare drawing of sample space
- Calculate sample space area better than 5% accuracy
- Count all GLS luminaires in sample space (not task or display lighting)
- Assessor Portal will do NLPD calculations
Step 2: Choosing an NLPD Assessment Method – Agg 3

Figure 6: NLPD assessment method selection flow chart

- **Functional space area equal to or greater than 250m²**
  - Yes
  - Repeating block of up to two luminaires in the GLS
  - Yes
  - Repeating block covers more than 50% of FS area
    - Yes
    - Luminaires vary by less than 5% (by wattage)
    - Yes: Grid Method
    - No: Aggregate Method 1
  - No: Select appropriate Aggregate Method

- **Open office space in FS of at least 250m²**
  - Yes
  - OR
  - Open office space in FS of at least 50% of FS area
    - Yes: Aggregate Method 2
    - No: Aggregate Method 3
  - No: Default option (no requirements)
Aggregate Method 2

- Space assessable ✓
- Grid method ✗
- Agg method 1 ✗

Open plan office: 115 m², >15% of FS NLA (750 m²)
Aggregate Method 2

Open office + cell office area >250m²

179 m²

115 m²

Australian Government
Aggregate Method 3: Suitability

- Permitted when
  - Functional space is under 250 m² (if you like), OR
  - Grid Method is not applicable, AND
  - Documentation requirements for Aggregate Method 3 can be met

- Use for small functional spaces or where the documentation is too poor to meet requirements for the other methods.
Aggregate Method 3: Sample Area (FS)

- Identify Functional Space area to 5% accuracy
- Count all luminaires in sample space
- Enter data into Assessor Portal
- Assessor Portal will do NLPD calculations
Aggregate Methods Documentation

Requirements

CBD TLA Rules: s6.4 page 46 - 47

- RCP/site notes/photos demonstrating irregularity of layout; AND

- Plan/mock up showing sample space area to ±5%; AND

- Photos/site notes identifying all qualifying luminaire types in sample space; AND

- Site notes: count all luminaires within aggregate method sample space (locations not required)
Group Activity – NLPD Assessment Method

- Identify the potential assessment methods

- NLPD Assessment Method Selection Flow Chart – Page 41 of the TLA Rules
In this section, you’ve learnt to:

1. Describe what’s in the TLA ✓

2. Identify the types of spaces and lighting systems covered by the TLA ✓

3. Do a TLA:
   - Define and name the Functional spaces ✓
   - List the luminaires
   - Assess the Nominal Lighting Power Density ✓
   - Assess the lighting controls We’ll learn this next
Do a TLA: Assess the lighting controls
Lighting Control Assessment

- Three possible control grades
- Assessed over WHOLE Functional Space
- Only assess the control system’s potential – not how well it actually works
Lighting Control Assessment

- Look at the main control system for each Functional Space

- Two factors to consider:
  - Control type (occupancy, timer, manual)
  - Switching zone size (smaller control zones: more effective)
Identifying the Control Type

- Three basic control types to assess:
  - Occupancy control
  - Timer control
  - Manual
Control Type Flow Chart

Step 1: Identify control type
- More than 50% of the space on occupancy controls?
  - Yes → Occupancy control
  - No → More than 50% of the space on timer and/or supervisory controls?
    - Yes → Timer control
    - No → Manual control

Step 2a: Identify control zone size
- Are ALL lighting control zone sizes less than 100m²?
  - Yes → Good
  - No
    - Is the functional space area less than 250m²?
      - Yes → Moderate
      - No → Poor

Step 2b: Functional space area
Occupancy Sensors

✓ Luminaires on supervisory control with occupancy sensors included
✓ Luminaires hardwired to occupancy sensors
✓ Luminaires with occupancy sensor and timer control

360° PIR  90° PIR  Ultrasonic
Timer Control

- A luminaire is under timer control if the highest level of control for its operation is via the use of a timer:
  - Luminaire connected to a supervisory control system
  - Luminaire controlled by time switch
  - Luminaire interlinked to turn off when security alarm set
Manual Control

- Manual control is any form of control that does not meet the requirements for occupancy or timer control.

Bell press switch is not sufficient evidence of a timer control system.
Daylight Sensors

- Not included in control grading
- May be integrated into occupancy sensors
Switching Zone Size

- Only assessed for Functional Spaces that are under occupancy control

- Threshold: **ALL** switching zones < 100 m²

- Check the **largest** switching zone in the Functional Space
Control Capacity

Step 1: Identify control type

More than 50% of the space on occupancy controls?
  Yes → Occupancy control
  No
    More than 50% of the space on timer and/or supervisory controls?
      Yes → Timer control
      No → Manual control

Control type

Step 2a: Identify control zone size

Are ALL lighting control zone sizes less than 100m²?
  Yes
  No

Step 2b: Functional space area

Is the functional space area less than 250m²?
  Yes → Good
  No → Moderate

Control capacity
Effect of Switching Zone Size

Small switching zone (50m²)

Large switching zone (2000m²)
Lighting Controls Documentation Requirements

CBD TLA Rules: s7.3 page 52-53

- Sketch/notes showing controls cover >50% of the FS
- Presence of occupancy control
  - Sensor photos/docs AND
  - Drawing/sketch of sensor locations OR count of sensors
  - Presence of integrated sensors
- Presence of supervisory/timer control
  - Manuals, drawings, photos, controllers, switch type (for supervisory systems)
Group Activity – Switching Zone

- Identify the control capacity for each image
- Lighting control assessment methodology flow charge – page 49 of the TLA Rules
Proposed Systems

- Where building owners expect that the existing lighting system will change soon after the assessment

- Done in addition to the assessment of the existing system

- Strict eligibility criteria:
  - Signed contract to do the upgrade
  - Completion date within 3 months
  - All documentation required to assess the proposal
Proposed Systems

- May arise from contractual commitment to upgrade lighting system
  - Owner proposed lighting upgrade
  - Make good provision
- Assessments cover both NLPD and control capacity
- Proposed system assessments are optional
- Must be fully documented
  - Luminaire selections complete
  - Control strategy clearly set out
  - Control equipment selected
Proposed Systems Documentation

Requirements

- Detailed design documentation
  - Luminaire selections complete
  - Control strategy clearly set out
  - Control equipment selected

- Copy of signed contract showing completion date within 3 months OR

- Copy of lease agreement for make good provisions
Typical Assessment Workflow

- Site information
  - Owner details
  - Assessor details

- Areas to be assessed
  - NLA
  - All functional spaces
  - Space sizes

- Luminaires used
  - Lamp types
  - Lamp power
  - Number of lamps

- Functional space assessments
  - NLPD
  - Controls
  - Proposed systems
In this section, you’ve learnt to:

1. Describe what’s in the TLA ✓

2. Identify the types of spaces and lighting systems covered by the TLA ✓

3. Do a TLA:
   - Define and name the Functional spaces ✓
   - List the luminaires ✓
   - Assess the Nominal Lighting Power Density ✓
   - Assess the lighting controls ✓
Topic 3

Exemptions
Exemptions

- Most commonly at the building level

- A building may be exempted from disclosure obligations if:
  - It is used for police or security
  - The building is non-assessable (a NABERS rating can’t be calculated)
  - A major refurbishment of the building is underway

- No marketing or negotiation until the exemption is granted.
Exemptions: Police and Security

- Gather written evidence on the nature of operations within the building
  - Note: Security means “national security” not corporate or commercial security
- Apply through Assessor Portal or via the website
- Exemptions are provided at the discretion of the Department
Exemptions: Building or area is not assessable

- Site is non-assessable when a NABERS rating or a TLA can’t be done
  - Site inspection by Assessor
  - Detailed supporting statement from Assessor
  - Statement from NABERS confirming no rating
  - Record how the owner will address the issues stopping a rating

- Apply through Assessor Portal or via the website
- Exemptions are provided at the discretion of the Department
Exemptions: Major refurb

- Must improve the NABERS Rating by half a star
  - Review scope of works to verify projected NABERS improvement
  - Detailed supporting statement from Assessor
  - Record how and when building owner will complete the major refurbishment works

- Underway ≠ planned
Topic 4
Assessor Portal
Assessor Portal

- Online
- Contains all information used in assessments
- Submit applications through Portal
- Can pre-fill and save parts before going to site
- Downloadable PDF Summaries
Typical assessment workflow: in the Portal

- Site information
  - Owner details
  - Assessor details

- Areas to be assessed
  - NLA
  - All functional spaces
  - Space sizes

- Luminaires used
  - Lamp types
  - Lamp power
  - Number of lamps

- Functional space assessments
  - NLPD
  - Controls
  - Proposed systems
Lighting Assessment Process

- Site inspection and documentation collected by Accredited Assessor
- Complete the TLA or BEEC application on the CBD Assessor Portal
- Submit TLA or BEEC application
- CBD team conducts a desktop audit of the TLA application
- CBD Administrator issues certified TLA or BEEC and an email is sent to the Assessor and contacts listed in application
Assessor Portal - BEEC Application

New BEEC Application

Has this building previously had a BEEC Assessment? Yes/No

Building previously had TLA or BEEC Number to auto fill the BEEC Number. Enter an approved BEEC Number if applicable.

BEEC Number

Or enter the name and address of the building.

Building Name

Building Address

City/Suburb

State

Postcode

Clear Address Validate Address Next
BEEC Application

- Via BEEC Number, TLA Number or manually

- Validate the address before progressing
BEEC Application

Building Owner

Please enter either the Australian Business Number (ABN), Australian Company Number (ACN) or the Australian Registered Body Number (ARBN) of the building owner(s).

ABN, ACN or ARBN

You have not added any building owners yet.

Contact details for the building owner.

Contact Name

Phone

Mobile

Email

Contact details for the building owner’s representative.

- Copy building owner contact details

Contact Name

Phone

Mobile

Email

Building Scope

Purpose of this BEEC Application

- Sale
- Lease
- Sublease
- Other

Number of Levels

Building NLA

Building NLA Source

Building Name

75 Castlereagh Street Sydney

The building name entered in the field above will be listed on the BEEC. If this is incorrect or the building name has changed, please email the CBD team at info@cbd.gov.au requesting this to be edited.

Australian Government
BEEC Application

NABERS Energy for Offices Rating

A BEEC Requires a NABERS Energy for Offices Rating. Please input this in the field below. If the NABERS rating is under assessment you can still continue with the BEEC application. Please ensure this number is for the correct building as incorrect data will result in the application being returned and may cause unnecessary delays for the Building Owner.

☐ This is a TLA only submission

Input NABERS rating

Number

Search

Save Draft

Save Draft and View Summary
TLA Application

- The process is the same if you do a TLA only submission
TLA Application

Tenancy Lighting Assessment

Overview  Luminaires  Functional Spaces

Overview

Assessment Date
22/06/2017

Assessment Scope
All Office Space

General Assessment Comments / Assumptions Made

All Office Comment

Save Draft  Save Draft and View Summary
TLA Application – Create a Luminaire

- Enter all luminaires used in the assessment
- Can’t modify luminaire names
  - Delete and recreate if necessary
Create a Luminaire - LED fittings
Enter all functional spaces used in the assessment
TLA Application – Create a Functional Space

- Choose Calculation Method:
  - Grid
  - Aggregate 1
  - Aggregate 2
  - Aggregate 3

- Choose to add a proposed system
TLA Application – Grid Method

Functional Space 2 - Incomplete Space Details

- Add Proposed System
- Overview: Current System

Current System
Is the functional space currently assessable?
- Yes
- No

Calculation Method
- Grid Method

Assessed NLPD: Error
Grade: Error
Control Capacity: Incomplete

NLPD Calculation
At least one luminaire is required to calculate NLPD. You have created luminaires for this tenancy lighting assessment but you have not added any to this functional space yet. Please click the Add a Luminaire button below.

Add a Luminaire

Grid X Spacing (m)
Grid Y Spacing (m)
Area Used (m²)
Total Power (W)
Non-Standard Luminaires

Lighting Control System
System Type

Performance Comments

Australian Government
COMMERCIAL BUILDING DISCLOSURE
TLA Application – Aggregate 1, 2 and 3

Functional Space 2 - Incomplete Space Details

- Add Proposed System
  - Overview
  - Current System

Current System
Is the functional space currently assessable?
- Yes
- No

Calculation Method
- Aggregate Method 1

Assessed NLPD
- Grade: Error
- Control Capacity: Incomplete

NLPD Calculation

At least one luminaire is required to calculate NLPD. You have created luminaires for this tenancy lighting assessment but you have not added any to this functional space yet. Please click the Add a Luminaire button below.

Add a Luminaire

Aggregate Area Used (m²)

Area Used (m²)

Total Power (kW)

0

NLPD (W/m²)

Performance Comments

System Control System
- System Type

Performance Comments
TLA Application – Evidence

Grid Method

Aggregate 1 and 2

Aggregate 3
Save Draft and View Summary

- Review the information
- Automated data completion check
- Automatic submission to CBD administrator
- Two downloadable summaries, one with all the data entered and a second to check that the main details are correct which will appear on the final BEEC.
Topic 5

Becoming a CBD Accredited Assessor
Processes and Procedures

Customer
- Agree on fee for services including possible initial site investigation
- Obtain required information
- If it’s unclear whether the a BEEC is required, ask the customer to seek legal advice.

Tenants
- Negotiate access, ensure all parties are aware that someone will be entering their offices to assess lighting, sometimes you may need to do it after hours

Security and OH&S
- Follow all site and tenant induction and OH&S requirements
- Have general and site specific safe work methods statements
  - See TLA Rules section 5.2 for more information
Access Denial - Process

If an owner/tenant refuses access or information

- Assessors should try a more senior representative and document any attempts to collect information
- Contact CBD team for assistance via written notice
- CBD administrator may issue written notices
- Enforcement from the Department

➢ The Department will then determine whether to enforce the provisions through the Court. Penalties may apply.
Assessment Timing

- Lodge assessment within 4 months of assessment date (the first site visit date)

- CBD Service Charter is to process 90% of all applications within 10 working days but allow a max. of 15 days to process a TLA application or a max. of 28 days to process a BEEC application

- Inform clients of processing timeframes as there is no prioritisation
Record Keeping Processes

- Assessors responsible for keeping documentation
- Retain records for seven years
- Retain primary data from assessment
  - Site photos, notes, and marked up drawings
  - Leases or contractual agreements used in assessments
- Summary data only is not acceptable
  - Must be sufficient for an assessor/auditor to accurately repeat the assessment from documentation only
- All evidence needs to be provided to the CBD administrator upon request
Record Keeping Processes

- Logical filing of evidence is essential
- Poor documentation is the primary cause for failing audits
- Assessor portal and TLA Rules provide guidance on documentation requirements
- Lighting assessments can be audited up to seven years after the BEEC has been issued
- Example storage and labelling methodology found in the TLA Rules – Appendix F
Administrative Processes

- Submission requirement
  - 4 months from date of first inspection to submission (hard deadline)

- TLA validity
  - 5 years from certification date
  - Assessors can modify existing TLAs with owners permission (TLA expiry date remains the same i.e. do not receive another 5 years validity)

- Interpretation of rules – CBD administrator

- Dispute resolution
  - With client
  - With CBD administrator
Next Steps

- Must be a fully accredited NABERS Assessor
- Attend this session and pass the accreditation exam
  - Exam sent to your email within two weeks
  - 75% pass mark
- Pass the online CBD Program module (≈1 hour)
- Register for the CBD Assessor Portal
  - Update insurances and NABERS number
- Apply and pay for accreditation within 6 months
  - $415 fee
This presentation is intended to provide a summary about the Commercial Building Disclosure Program. The Program may be subject to change without notice. Readers should not act on the basis of the information provided in this presentation but should instead obtain legal advice.

Readers wanting further information may refer to the Program’s website.

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