

NABERS Building Demand Savings; Commercial and NABERS Rated Residential Buildings Only	Activity No.
	NB1

1. ACTIVITY SPECIFIC DEFINITIONS

NABERS Building means a building that has obtained a NABERS Rating.

NABERS Rating means a rating issued by the NABERS National Administrator excluding any GreenPower

Historical Baseline NABERS Rating means a previous NABERS Rating for the same NABERS building

Rating Period is the time over which measurements were taken to establish the NABERS Rating or the Historical Baseline NABERS Rating for the NABERS Building

Current Rating Year is the year for which normalised energy savings will be calculated, and is the year that the Rating Period ended for the NABERS Rating

Baseline Rating Year is the year that the Rating Period ended for the Historical Baseline NABERS Rating

NABERS Electricity means the electricity purchased or imported from the electricity network and accounted for in the NABERS Rating, including electricity purchased as GreenPower

NABERS Gas is the total of the gas accounted for in the NABERS Rating.

On-site Unaccounted Electricity is electricity generated on-site from energy sources which have not been accounted for in the NABERS Rating, including electricity generated from photovoltaic cells or gas generators fed from on-site biogas sources, but excluding gas generators where the imported gas has been accounted for in the NABERS Rating

Benchmark Electricity Consumption is the electricity consumption that would be required for the NABERS Building to achieve the Benchmark NABERS Rating over the Rating Period, assuming the same breakdown of energy consumption.

Benchmark Gas Consumption is the gas consumption that would be required for the NABERS Building to achieve the Benchmark NABERS Rating over the Rating Period, assuming the same breakdown of energy consumption.

NABERS Reverse Calculator means the tool provided by the NABERS National Administrator

Counted Energy Savings means the total electricity and/or gas savings that have previously been calculated using this method, and the total annualised electricity and/or gas savings that have previously been calculated using any other REPS method for the NABERS building

Upgrade means the replacement and/or modification of Existing Energy using Equipment with New equivalent Equipment resulting in a reduction in the consumption of electricity compared to what would have otherwise been consumed.

2. ACTIVITY DESCRIPTION (SUMMARY)

The Activity involves an upgrade to the energy efficiency of a NABERS building that results in energy savings as calculated in accordance with this specification.

3. ACTIVITY ELIGIBILITY REQUIREMENTS

- (1) The existing energy using equipment must be in working order at time of the upgrade.
- (2) The NABERS building must have a NABERS rating issued by the NABERS National Administrator.
- (3) The “Benchmark NABERS Rating Index” calculation method:
 - the NABERS Rating must be the first rating for the building
 - the NABERS Rating must exceed by at least 0.5 stars the Benchmark NABERS Rating listed in the version of NSW Energy Savings Scheme Rule that is in force on the date of the Current year rating.
- (4) For Activities using the “Historical Baseline NABERS Rating” calculation method:
 - the Historical Baseline NABERS Rating must meet the “similar configuration” criteria listed in the Energy Savings Scheme NABERS Method Guide, and
 - the Historical Baseline NABERS Rating must have been calculated within the timeframes set in the Energy Savings Scheme, and
 - the NABERS Rating must exceed the Historical Baseline NABERS Rating by at least 0.5 stars.
- (5) For forward creation:
 - The Maximum Time Period for Forward Creation is 3 years
 - The Rating Period for the Historical Baseline NABERS Rating must end no more than 15 months before the end of the Rating Period for the NABERS Rating

The Normalised REPS Gigajoules for this activity must not exceed 100,000 GJ.

4. INSTALLED PRODUCT REQUIREMENTS

- (1) At the time of installation, any new equipment installed as part of the Activity must comply with relevant Australian standards and the National Construction Code as applicable.

5. MINIMUM INSTALLATION REQUIREMENTS

- (1) Any electrical upgrades conducted as part of the Activity must be performed by a licensed electrical worker under the supervision of a licensed electrical contractor. Any electric wiring must comply with the latest AS/NZS 3000 wiring rules.
- (2) The Activity must be completed and certified in accordance with any relevant code or codes of practice and other relevant legislation applying to the Activity, including any licensing, registration, statutory approval, Activity certification, health, safety, environmental or waste disposal requirements

- (3) All removed equipment must be removed in accordance with the Environment Protection (Waste to Resources) Policy 2010 under the *Environment Protection Act 1993*. No dangerous materials can be disposed of in a landfill, instead it must be disposed of responsibly.

6. REPORTING REQUIREMENTS

For verification purposes, the following records will be retained in relation to the Activity:

- (1) Site Name
- (2) Site Address
- (3) The classification of the commercial premises in accordance with Australian and New Zealand Standard Industrial Classification (ANZSIC) codes at the divisional level
- (4) Description and Date(s) of the demand saving activity/activities were implemented, and supporting engineering project documentation on detailing activity/activities
- (5) NABERS Rating issued by the NABERS National Administrator
- (6) Where relevant, proof that all removed equipment has been properly decommissioned including proof of correct recycling or disposal

7. NORMALISED REPS GIGAJOULES

The normalised REPS Gigajoules achieved from undertaking this Activity is equal to:

Step 1: Calculate measured energy consumption:

Measured Electricity Consumption (MWh) = NABERS Electricity + On-site Unaccounted Electricity

Measured Gas Consumption (MWh) = NABERS Gas

Step 2: Calculate Benchmark NABERS Rating using either:

- a) the Benchmark NABERS Rating Index method:

Look up the Benchmark NABERS Rating in Table A20 of Schedule A of the Energy Savings Scheme Rule which corresponds to the relevant Current Rating Year and NABERS Rating;

- b) the Historical Baseline NABERS Rating method

Benchmark NABERS Rating = Historical Baseline NABERS Rating + Annual Rating Adjustment × (Current Rating Year – Baseline Rating Year)

Where Annual Rating Adjustment is the amount by which average NABERS Ratings increase each year and is the value in Table A21 of Schedule A of the Energy Savings Scheme Rule which corresponds to the relevant Current Rating Year and NABERS Rating

Step 3 – Calculate Benchmark Electricity Consumption and Benchmark Gas Consumption

Calculate the Benchmark Electricity Consumption and Benchmark Gas Consumption in MWh by using the NABERS Reverse Calculator for the relevant NABERS method, setting the target star rating to the Benchmark NABERS Rating, and giving all other input parameters the same value as for the NABERS Rating, including:

- Rating type;
- Building information (e.g. rated area, number of computers); and

- Percentage breakdown of energy consumption (on an energy use basis in MWh).

If necessary, for use with the relevant NABERS Reverse Calculator, round down the Benchmark NABERS Rating to the nearest half or whole star increment.

Step 4 – Calculate Energy Savings using either:

- a) Calculate Energy Savings with forward creation:

Electricity Saving (MWh) = (Benchmark Electricity Consumption – Measured Electricity Consumption) x Maximum Time Period for Forward Creation

Gas Saving (MWh) = (Benchmark Gas Consumption – Measured Gas Consumption) x Maximum Time Period for Forward Creation

- b) calculate Energy Savings top up or annual creation:

Electricity Savings (MWh) = (Benchmark Electricity Consumption – Measured Electricity Consumption) – Counted Energy Savings

Gas Saving (MWh) = (Benchmark Electricity Consumption – Measured Electricity Consumption) – Counted Energy Savings

Step 5 – Calculate Normalised REPS Gigajoules

Normalised REPS Gigajoules = Electricity Saving (MWh) x 3.6 x Productivity Factor + Gas Saving (MWh) x 3.6 x Gas Normalisation Factor

Where:

- the productivity Factor = **1.207**; and
- the Gas Normalisation Factor = 0.4; and

Step 6 – Maximum Normalised REPS Gigajoules

Normalised REPS Gigajoules = the lesser of 100,000 GJ or the output of step 5 above.