

August 24, 2012

To whom it may concern:

Re: Submission - Review of the NABERS ruling Proportioning of Energy used by Cogeneration or Trigeneration systems

Please find the response **by CETEC** to the Consultation Position Paper below:

Although not directly related to the proportion of energy used by cogeneration or trigeneration for NABERS Ratings, CETEC believes that NABERS should consider the implications of cogeneration and trigeneration to the Outdoor and Indoor Environment. CETEC has conducted a number of technical and scientific studies (including an iconic and highly credentialed Melbourne based building) to demonstrate that the exhaust gases, including nitrous oxides and nitrogen dioxide produced and exhausted from co/trigeneration systems are significant and can have effects on human health. They also have the potential to create harmful ozone within the atmosphere. This issue has also been flagged internationally. For example, the Houston Advanced Research Centre stated that *"...widespread development of CHP projects (Cogen/Trigen) would essentially relocate the source of some of the NO_x emissions produced by the power generating sector from a few, very large point sources outside the city to many, small point sources inside the city. Implementation of CHP changes both the amount AND geographical distribution of NO_x emissions..."*

Furthermore, a 2008 study in the Office of Environment and Heritage found that *"In the period from 1992 to 2008, nitrous oxides emissions from industry in Sydney have increased by 51%. They are **projected to grow a further 13% over the next 8 years** to 2016. This scenario DOES NOT include any shifts in the location of electricity generation (such as cogeneration) which would exacerbate the challenge of reducing ozone levels"*

As NABERS is a holistic tool that currently considers four key aspects to sustainability performance (Energy, Water, Waste, and Indoor Environment), it is important to recognize that cogeneration and trigeneration will not only effect energy. The impacts may be seen by occupants, facilities managers, and policy makers for many years over the life of the building, with significant and costly outcomes.

Consideration could be given to those improving the emitted air quality of the exhaust system so that this does not influence the regional heath island effect, CO₂, CO, NO_x, NO₂, or other pollutants, including by-products of urea or other processes.

Regards,



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