



Australian Government
**Department of Climate Change
and Energy Efficiency**

Dear

I am pleased to advise that a consortium led by pitt&sherry (and including Exergy Pty Ltd, BIS Shrapnel and the Sustainable Built Environment National Research Centre) has been contracted by the Department of Climate Change and Energy Efficiency to undertake a baseline study of commercial buildings in Australia and their energy consumption.

The study – which is expected to be published in report form by mid-2012 – is intended to become a shared and public resource for the benefit of industry, analysts and governments alike. It will fill a significant gap in our shared knowledge of this important sector (including a wide range of publicly and privately owned building types).

The study will involve compiling a database which combines a large range of existing datasets into a detailed sample of a variety of commercial buildings. The database will enable the building of a detailed model of the stock of commercial buildings in Australia, which will then be populated with data on the energy consumption of the stock in as much detail as the data allows.

The model will be used to establish trends in energy consumption and greenhouse gas emissions since 1999 and will assist in establishing predictions of trends for both energy consumption and greenhouse gas emissions out to the year 2020. The model is expected to be updated regularly so it can be used to underpin statistical and policy analyses over time.

It is important that the study and model are as accurate and comprehensive as possible, not least so that the implications of policy choices relating to commercial buildings are well understood. Therefore we would like to capture – on a fully confidential basis – as much data as possible on the commercial building stock and its energy use data from public and private sector building owners and managers.

Should pitt&sherry, or their partners BIS Shrapnel and Exergy Pty Ltd, contact you about the provision of data with respect to your building(s) and/or existing dataset(s), we would greatly appreciate your participation.

Any information that you provide will be used by pitt&sherry (including Exergy Pty Ltd, BIS Shrapnel and the Sustainable Built Environment National Research Centre) for the purposes of building the model for this study and preparation of the associated reports only. At the completion of the study, the project database, model and all associated intellectual property will be retained by DCCEE and any identifying information contained therein is protected under the *Privacy Act 1988*. Identifying information will not be disclosed to



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anyone without the owner's permission. Information contained in the reports or any associated data releases will be presented in confidentialised and aggregate form, ensuring that no individual building or owner can be identified.

The attached note outlines the scope of this study but if you would like to find out further information, please contact Dr Cally Brennan on 02 6159 3525, email carolyn.brennan@climatechange.gov.au or Mr Ross Hamilton on 02 6159 3526, email ross.hamilton@climatechange.gov.au.

I look forward to any assistance you can provide towards this study.

Yours sincerely

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STUDY OF THE ENERGY CONSUMPTION IN COMMERCIAL BUILDINGS IN AUSTRALIA

Frequently asked questions

Why is this study being conducted?

At present, information on the commercial building stock and its energy use in Australia is relatively limited. At the same time, commercial buildings are believed to account for some 5% of energy use and at least 10% of greenhouse gas emissions in Australia, and these numbers have been rising rapidly through time.

Against this background, this study is intended to provide a solid evidence base to support statistical analyses and policy and program initiatives in the sector, in particular those aimed at driving improvements in the energy efficiency performance of commercial buildings in Australia.

The project will assist evaluating measures contained in the [National Strategy on Energy Efficiency](#) aimed at improving energy efficiency in commercial buildings. These are:

3.1.1. All jurisdictions will work together to develop a consistent outcomes-based national building energy standard setting, assessment and rating framework for driving significant improvement in the energy efficiency of Australia's building stock. To be implemented in 2011.

3.2.1. Significantly increase over time the stringency of energy efficiency provisions for all commercial buildings (Classes 3 and

5 to 9) in the Building Code of Australia (BCA) – starting with the 2010 version of the BCA.

3.2.2. Phase in from 2010 the mandatory disclosure of the energy efficiency of commercial buildings.

3.2.3. Implement the Heating, Ventilation and Air Conditioning High Efficiency Systems Strategy (Framework Cool Efficiency Program).

What is the scope of this study?

This study will undertake a national assessment of actual energy used, end-use energy consumption in, and greenhouse gas emissions from, the commercial building sector for the financial year 2008-09. It will establish trends in energy consumption and greenhouse gas emissions identified in the last study in 1999¹ and will establish predictions of trends for both energy consumption and greenhouse gas emissions out to the year 2020.

This work will be undertaken in two parts based on private and government owned buildings:

Part A – Private Buildings – obtain data for and report on private sector buildings including commercial offices, shopping centres, accommodation, private hospitals and educational institutions.

Part B - Government buildings - using information reported to

¹ Australian Greenhouse Office (1999) [Australian Commercial Building Sector Greenhouse Gas Emissions 1990–2010](#)



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Commonwealth and state/territory government energy efficiency programs, prepare a report on government owned buildings including health, educational, galleries, museums, law courts and correctional centres.

How will this study contribute to improved energy efficiency?

At present, energy efficiency initiatives are undertaken on a building-by-building basis, usually in response to an energy audit that identifies areas for improvement in that building.

What we don't know is how energy use is tracking across the whole commercial building market. This study will provide the information needed to understand where the opportunities are to improve energy efficiency in the market as a whole.

For example, we can gain a better understanding of whether HVAC systems are typically the right size for their current use, or whether there is extensive use of now obsolete technologies that could benefit from gradual phasing out.

The project is expected to provide sufficient data to enable the development of increasingly targeted and effective policies and guidelines, to help us all improve energy efficiency in future.

What will the study deliver?

The study will provide:

- a. a methodology for the efficient and accurate collection of energy consumption data from a representative sample of buildings for the 2008-2009 financial year,
- b. a model for collecting, collating, storing and reporting commercial building

energy consumption data which can be applied to this and future data collection processes,

c. a report on the energy consumption of and greenhouse gas emissions from commercial buildings in 2008-09, and

d. a report detailing trends from 1999 to the present and predicting trends in energy consumption of, and greenhouse gas emissions from, commercial buildings to 2020.

What type of buildings will be sampled?

The study will collate data on private buildings including:

- commercial offices,
- shopping centres,
- accommodation facilities,
- private hospitals, and
- private educational facilities

Public sector buildings will include:

- government owned health facilities (hospitals),
- government owned educational facilities,
- galleries,
- museums,
- law courts, and
- correctional centres

How many buildings will be sampled?

We hope to capture data from up to 1,000 buildings across private and government owned buildings, in order to create a robust model of energy use at the whole-of-building level. From these, approximately 400 buildings will be used for end-use data collection.



What type of energy data will be collected?

The study will collect data on the stock of buildings (including their functional and physical characteristics); whole of building, tenancy and end-use energy consumption from all purchased and on-site energy sources, including electricity, gas, solid fuel, liquid fuel, and renewable energy.

Will the study use existing data in the public domain?

Yes. The first priority is to collate data from existing reporting programs including:

- the Australian Bureau of Statistics data collections,
- data that exists for many government buildings and can be obtained from the relevant commonwealth or state government department,
- the National Australian Built Environment Rating System (NABERS) program,
- the National Greenhouse and Energy Reporting (NGER) scheme, and
- the Energy Efficiency Opportunities (EEO) program.

Will additional data be sought?

Where building stock or energy consumption data is inadequate or is not available in the public domain for a particular commercial building type, pitt&sherry will seek to access – by mutual agreement – data from a representative sample of commercial buildings of that type from other sources, including data sets held by governments, companies and industry associations.

Will I or my building be identified publically?

No. Any building owner or address information collected will be used by the consultant only for the purposes of the study, and then retained by DCCEE, and handled in accordance with the Information Privacy Principles as set out in the *Privacy Act 1988*.

Individual buildings, the particulars of their owners and tenants or their energy consumption will not be identified in the final report or any public data release.

Is there a steering committee?

Yes, the Department will establish an advisory committee which will include representatives from Federal, State and Territory governments, and the building and property industry.

When will the report be released?

It is expected that a report of the study will be released by mid 2012.

Who can I contact for more information?

Dr Cally Brennan on 02 6159 3525, email carolyn.brennan@climatechange.gov.au
Mr Ross Hamilton on 02 6159 3526, email ross.hamilton@climatechange.gov.au
