

# How a **greenhouse gas inventory** can **add value** to your business



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## What is it?

A greenhouse gas (GHG) inventory quantifies the emissions produced as a result of your business operations. A GHG inventory will include various sources of emissions and detail the quantity of fuel or energy consumed or produced, and the emissions resulting from the activity. GHG emissions are classified into three scopes that are defined in the *Greenhouse Gas Protocol*.

### Scope 1: Direct GHG emissions.

These occur as a direct result of activities undertaken by the company, from sources owned or controlled by the company, such as:

- Generation of electricity, heat or steam (combustion of fuel in stationary sources like boilers, furnaces or turbines).
- Physical or chemical processing (for example, the production of cement, aluminium, adipic acid, ammonia or waste processing).
- Transportation of materials, products, waste and employees (the combustion of fuels in company-owned or controlled vehicles, trucks, trains or aircraft).
- Fugitive emissions (intentional or unintentional releases from joints, seals, packaging or gaskets, methane emissions from coal mines, venting and gas transport and HFC emissions from air conditioning and refrigeration equipment).

It is mandatory to report scope 1 emissions under the National Greenhouse and Energy Reporting (NGER) Act.

### Scope 2: Purchased electricity.

Scope 2 emissions are indirect emissions that occur through the purchase of electricity from the grid. It is mandatory to report scope 2 emissions under the NGER Act.

### Scope 3: Other indirect GHG emissions.

Scope 3 emissions are emissions from sources not owned or controlled by the organisation but which arise due to the organisation's activities. Organisations have discretion over the scope 3 emissions they report, and as such, emissions activities reported under scope 3 vary across organisations. Scope 3 emission sources can include:

- Extraction and production of purchased materials and fuels.
- Transport-related activities (for example, transportation of purchased goods or materials, employee travel in private vehicles, waste transportation, transportation of sold products).
- Electricity-related activities not included in scope 2 emissions.
- Emissions from leased assets, franchises and outsourced activities.
- Use of sold products and services.
- Waste disposal (disposal of waste generated in operations, the production of purchased materials and fuels and the disposal of sold products at the end of their life).

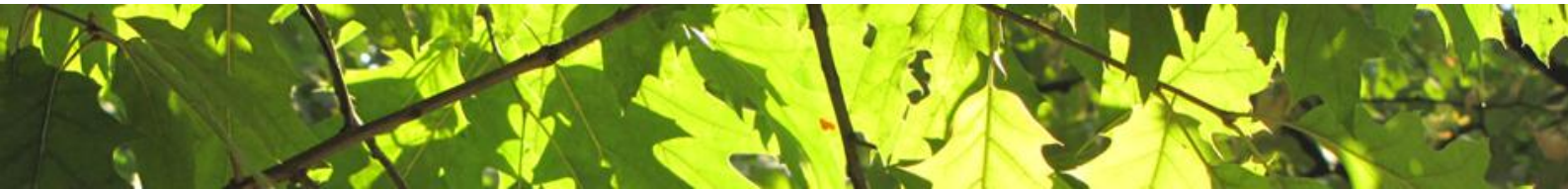


**Carbon House Pty Ltd.**

79 Russell St | PO Box 5318 WEST END QLD 4101

P: (07) 3844 4595 | F: (07) 3846 6919

W: [www.carbonhouse.com.au](http://www.carbonhouse.com.au)



## What is the outcome?

Developing a GHG inventory is a natural first step for a business beginning the journey toward sustainability. It allows for the quantification of emissions, which in turn allows for the management of these emissions. A well designed GHG inventory will provide your organisation with a benchmark of emissions performance which can inform the development of GHG emissions targets and strategies. Accounting for scope 3 emissions in your GHG inventory can get you thinking about impacts beyond your operational control, opening up sustainability beyond the confines of your business.

GHG inventories are not a static reporting tool. If well designed, they are easy to update and expand upon. Over time, you may find that business capability to measure additional emissions sources grows and that your inventory can grow too. GHG inventories also allow for the tracking of environmental performance over time and against benchmarks or targets.

## What are the benefits?

A well designed and maintained corporate GHG inventory can serve several business goals, including:

- Managing GHG risks and identifying reduction opportunities
- Helping to see the bigger picture of fuel, electricity and resource use in the business
- Public reporting and participation in voluntary GHG programs
- Participating in mandatory reporting programs such as NGERs in Australia
- Participating in GHG markets
- Industry recognition for early voluntary action.

## How to get started.

To develop a high quality GHG inventory, first get a copy of the *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* (available online) and read up on the detail. Make a list of all emissions sources your organisation has across all three scopes. Think about the data that you already have about these emissions sources – do you capture the amount of electricity that you use every month or quarter or just the cost? Do you know the quantity of fuel your fleet uses? Figure out the most effective way to gather all the data that you need. If there are gaps, consider how they are going to be filled. For example, you may need to implement new processes for capturing data relating to fuel use.

Decide how to break up the data that you have. For example, if you have multiple sites or different business units, you may want to list data by these units and then scale up the data for the entire organisation. How you break up your data will depend on your organisational structure and what you plan to use the data for. It's important in the design phase to get this right; know what you want out of your inventory and who will be using it. If you get the design right, everything else will fall into place.



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