

Using the financial model workbook for Carbon Innovation Grants Program (CIGP) – Pilot projects application

1 Introduction

The financial model workbook (Microsoft Excel) serves three main purposes to help the assessors understand:

- what you plan to do
- the financial viability of the project
- the expected emissions savings and financial viability of the project.

Two versions of the workbook are available from the website, a worked example, which demonstrates how the spreadsheet can be used for several example project modules, and a blank template. You can either work from the blank template or start with the worked example and change it to cover your project.

1.1 Disclaimer

This financial model workbook is intended to draw out specific information for project evaluation purposes. It has been designed for simplicity. However, it is limited and any use of it to manage your project is at your own risk. The Department of Water and Environmental Regulation takes no responsibility for any use of this template outside of the Carbon Innovation Grants Program (CIGP) application process.

This model has significant limitations. It does not incorporate depreciation or tax impacts, on the premise that it is measuring the inherent value of the project, rather than the tax structuring of it.

The model assesses cashflow by year rather than month, and works with current year Australian dollar prices, effectively assuming that inflation affects all costs and revenues equally over the life of the project unless you indicate otherwise by completing the assumption values by year in the **Assumptions** section of the **Inputs+outputs tab**.

Additionally, the model does not accommodate assumptions (such as input and output prices or emissions or other resource intensities) varying over time.

1.2 Conventions – colours and money, carbon and energy

The workbook uses a basic colour code:

Green is for user input of values or labels like cost components and module descriptions.
Light green is for values with a calculated or suggested default that you can type over.
Yellow highlighting indicates a value has been typed over a formula. If you need to do this, please leave the yellow highlighting to draw attention to the change and indicate in a cell comment why the change was needed. If you do this by mistake, you can reverse it using Undo or Ctrl+Z.

The model tracks the project's impact on key resources using a set of columns containing the resource intensity. For example, when using grid electricity from the South West Interconnected System, the emissions intensity was 0.56 tonnes CO₂ equivalent per MWh in 2025. CIGP examines energy, emissions and money resources as shown below.

Peach cells indicate values relating to energy.
Grey cells indicate values relating to greenhouse gas (CO ₂ equivalent) emissions.
Gold cells indicate values relating to money.

Capture all money values in current year Australian dollars as the time value of money will be handled in the internal rate of return and net present value calculations.

1.3 Navigation

The first tab of the financial model workbook, called **Index**, has a table of contents. You can use it to quickly navigate to a section. You can return by clicking on the **Index** tab again.

1.4 Submitting your application

When you have completed your financial model, please attach it in spreadsheet form with your application. Do not submit it as a PDF. The assessors may need to check your formulae and comments.

2 Tab structure

There are three main tabs in the financial model as outlined below. Further detail on how to complete each tab is included in section 3.

2.1 Project Model tab

The **Project Model** tab covers what you will build, the inputs it will need, the outputs it will produce, and the impact of these inputs and outputs on key resources (emissions, energy, money).

The basic structure is two groups of columns, one for the modules you will build and the other for the resources you are tracking. The rows are for inputs and outputs, and they are grouped for project construction, operational inputs, operational outputs and decommissioning. Values calculated here feed the **Cashflow** table below by year for each module.

Modules can be useful for tracking things that have cost or revenue streams attached. For example, if you are installing solar that will displace diesel generation for 5 years, and after that displace grid electricity, you can use one module for the first five years and a second for the remaining time. Remember to put the residual costs/values against the last module that uses the equipment. Also, if you are replacing for example a gas process with an electric one, you can use one model for the current gas process and another for the new electrical process. You can indicate you are decommissioning the gas by setting a quantity for the module of -1 and that you are commissioning the electric process by using a +1 quantity.

The quantity column can also be used when you are expecting to build more than one of an item. For example, if you are proposing an energy update for households, you could model one household in the column and use the quantity figure to indicate how many households will be impacted and get the overall economic and emissions outcome.

2.2 Funding tab

This shows the total project costs calculated from the Project Model tab. You will need to enter the expected sources of funding to cover all project costs and any real or nominal financial return required for sources of funding. This tab includes grant fund parameters for reference.

2.3 Inputs+Outputs tab

This tab summarises the key parameters of the project and its outputs. The Validation section checks that the grant fund rules are not violated, Project Summary section provides summary of the project's outputs or performance, and Assumptions list covers the list of input assumptions. Putting these together allows you to easily see the results

of changes you make to the assumptions. It also makes it easier to use Goal-seek function to work out what input values are required to reach a specific output value.

2.4 Other tabs

Other tabs included in the workbook are:

- **In-kind** – Where you can record any sources of funding supplied as in-kind goods or services
- **Milestones** – An automated summary of your project milestones (no user input required)
- **Charts** – An automated summary of funds and cashflow (no user input required)
- **Merit Criteria** – A summary of the merit criteria for CIGP (no user input required)
- **Eligible costs** – A summary of the types of costs CIGP can fund (no user input required)
- **Scratchpad** – Optional tab for the user to complete miscellaneous calculations
- **Glossary** – Current terms.

3 Tab sections

Within the tabs, there are numbered sections. The suggested path to complete the spreadsheet is by following the numbered sections.

3.1 Project Model tab – 1. Construction or capital costs

This section is used to capture the items you will need to spend money on. Do not include GST. This section distinguishes between eligible and ineligible costs. Eligible costs are those that are eligible for CIGP funding. There is a tab in the workbook called **Eligible costs** which explains which costs are eligible. The grant payment cannot be more than 25% of the total eligible expenditure for each milestone.

In this section, at the top of the [**Project Model**] tab, capture the names of each module or cost centre as column headings, and the various inputs that go into that module as rows. Modules are intended to be high-level components of the project, such as a solar array, carbon capture, carbon sequestration, an electrolyser, a pyrolysis plant, an industrial process, or a battery. Generally, a module would be a project component that creates an output or revenue stream and has a fixed timing associated with it.

If you need to add a new module column, add it in the middle as there are formulae (totals in column E) that refer to the first and last module columns. If you do add a new column, ensure you add a complete column as the new column will need to show all the way down to the Cashflow section at the bottom of the sheet. You may need to copy adjacent formulae or formatting (from left to right) into your new column.

For each module, row 2 (called a Quantity) holds a quantity, often 1, 0 or -1. The impacts of the module are multiplied by the quantity.

The intent here is to allow easy experimentation with configuration options. If you put a 0 in the quantity, the model removes all the impacts of that module without deleting the data. You can switch the module on again by putting a 1 in the quantity row. If you put 2 there, the model assumes you have two of those modules. It can be useful to use -1 in the column to indicate a module that you are decommissioning. For example, if you are replacing a gas process with an electric one, capture each as a module, but put -1 in the module quantity for the gas module and 1 in the column for electric module.

You can also use this to compare alternative modules. For example, if you have an iron ore process that can run on coal, charcoal or regenerated carbon monoxide or electricity, you can create all three modules in their own columns but use a quantity of 1 for the selected module and 0 for the others to choose the best option. This lets you compare performance of the overall project with each module type.

Use the green cells to capture construction inputs. Use the resource columns to the right of the modules (peach, grey and gold) to capture the resource intensity for each input and resource (energy, emissions and money).

We recommend that you complete the cells in the resources columns by linking to input and output values in the **Assumptions** section. The assumptions section has a column to provide the source or reasoning behind each assumption. This can help the assessors have confidence in your numbers. Alternatively, you can capture the values directly in the coloured resource intensity columns at the right and use cell comments to support your assumptions. Capturing the values in the assumptions section makes it much easier to do What-If or Goal Seek calculations, and to see the result of changes in assumptions.

A **Quantities** column is also available to the right of the modules, to experiment with inputs and outputs. It allows you to set up optional inputs and see the impact of switching between them. For example, you may have three different vendors quoting for wind turbines. You could capture these as three rows in the construction section and use the quantity column to put a 1 for the supplier you want to assess and zeros for the others.

3.2 Project Model tab – 2. Timing and grants

Use the dark green cells to capture the number of months from project start to the main costs and until revenue starts flowing for each module. Check the calculated values match your project expectations. Note the project operating life is in years where other rows are in months. The calendar date for module start and end of life are for your information only and are not used in calculations. The model tracks dates in months since project start.

You should also capture the capacity factor (dark green cells), which is the expected yearly output divided by theoretical maximum yearly output operating continuously at full capacity. For example, solar panels, which do not work at night, are likely to have a capacity factor in the 15% to 35% range. A 1 MW solar system with a capacity factor of 30% can produce for $30\% \times 24 \text{ hours} \times 365 \text{ days} = 2,628 \text{ hours}$ or 2,628 MWh per year. Alternatively, you can capture the number of operational hours per year. These fields are used to convert hourly capacities into annual production rates

Use this section to indicate which modules form part of your application. The modules you include should logically fit together as a project and be sufficient to produce outputs.

3.3 Project Model tab – 3. Operating inputs or costs

Use the green cells to capture operational inputs or costs.

Use the resource columns (peach, blue, brown, grey and gold cells) to the right of the modules to capture the resource intensity of these inputs.

Add rows if necessary. If you need to add a new project cost row, add it in the middle as there are formulae that refer to a range between the first and last project cost row. You may need to copy adjacent formulae (from above or below) into your new row.

Please use the **Justification for assumptions** column of the Assumptions section to explain the source of values and how confident you are of the value. Information you put in this column will help assessors to have confidence that the project assumptions are sound. Alternatively, you can capture the values directly into the coloured resource columns at the right and use cell comments or notes to support your assumptions.

3.4 Project Model tab – 4. Operating outputs or savings

This section works very similarly to the operational inputs section. Use the dark green cells to capture operational inputs or costs. Use the resource columns (peach, grey and gold cells) to the right to capture the resource intensity of these outputs. Add rows if necessary.

3.5 Project Model tab – 5. Decommissioning

Here you can capture the financial and emissions impact of the project reaching end of life. If the project or its modules still have a value, capture this as the residual value (positive number). If there will be a cost to dispose of modules, or remediate the site, capture this cost (as a negative number). If there will be a carbon emissions impact from closing the project, include it here as well. Note these cells are direct input, not formulae. It is suggested that you use cell notes (right click on a cell and select [New Note]) to describe values you capture. You could also use calculations on the Scratchpad tab to show how your figures are derived or put assumptions in the **Assumptions** table with associated explanations.

3.6 Project Model tab – 6. Net benefits (outputs less inputs)

There are no inputs in this section, which calculates the resource totals using the data from sections above. Note that the last row in the grey emissions section calculates the cost per lifetime tonne of emissions reduced. This can be helpful in assessing the merit of individual modules. Similarly, the last row in the gold financial section calculates return on capital employed for each module. This can be helpful in deciding whether to make changes to any of your modules.

Note that not all costs are allocated to modules, so both figures will be a general guide only.

3.7 Project Model tab 7. Cashflow tab

There are no user inputs on this tab. The green colour column captures miscellaneous cashflows in the appropriate year. The rest of the Cashflow table will populate automatically.

This table provides the basis to calculate the internal rate of return (IRR), simple payback and net present value (NPV) with and without grant funding. These values show up in section 11 **Project Summary (Inputs+Outputs)**. You should check that the values seem realistic and if not, check your inputs.

Note that if you have captured decommissioning costs or revenues, these should automatically be applied in the appropriate year.

3.8 Funding tab – 8. Funding

Identify the sources of project capital in the dark green cells. Capture the project funding by indicating the amount from each source category and the rate of return required for each amount. For debt, this will be the interest rate you are charged. For equity, it is the minimum return that you or your investors will expect. For grants which do not need to be paid back, it will be zero. From this information, the spreadsheet calculates the weighted average cost of capital (WACC). This is used to set a default assumption for the discount rate, but you should check that this is appropriate for your project.

Capture the threshold return rate (also called the hurdle rate) for investment. This is the minimum return that your organisation requires for a project with this risk profile to be funded.

You can use the **In-kind** tab or the **Scratchpad** tab to show calculations of values and use links in the project funding section to show where the values come from.

Check the calculated percentage of eligible costs you want to apply for from the grant, noting the maximum is 25% and the maximum amount that can be requested is \$1.5 million.

Use the **Justification for assumptions** column to give any supporting information.

3.9 Funding tab – 9. CIGP parameters

This section captures the scheme parameters. You should not change these values.

3.10 Inputs+Outputs tab – 10. Validation

Check the **Validation** section which contains several checks on your data. If any of these validations fail, they will be highlighted in red. You should address this issue by checking your inputs to the **Project Model** or **Assumptions** section before you submit your application. If your project is for a sub-commercial scale pilot, it is normal for revenue/IRR checks to be red. If your project is a commercial scale project, but there are still red warnings in the validation section, you should check whether there is an inherent issue in the project data, or even the project itself.

3.11 Inputs+Outputs tab – 11. Project summary

This shows a short summary of the project inputs and outputs. You should review it to check that the values match your expectation of the project.

3.12 Inputs+Outputs tab – 12. Assumptions

Capture the project start date and operational life. This sets up the years for the cash flow table and the start month for modules. These two assumptions are required. Add any other assumptions you need for your calculations. For each assumption, complete the [Justification for assumptions] column. Add extra rows if you need.

Check the calculated percentage of eligible costs you want to apply for from the grant, noting the maximum is 25% and the maximum amount that can be requested is \$1,500,000.

Use this section to capture the emissions intensity, buy and sell prices and energy intensity of any inputs or outputs associated with the project. Many of the values in light green are based on the National Greenhouse Accounts Factors 2023 (link below). You should provide updated or project-specific values where available and fill in the Justification for assumptions column. Projected future emissions intensity of the South West Interconnected System and North West Interconnected System can be found in Appendix D of the DCCEEW Emissions Projection Report linked below. For both projects that consume grid electricity, and projects that sell renewable electricity to the grid, it is recommended to use the projected emissions intensity for the year your project begins operation. Please explain your rationale if you choose a different method.

- [National Greenhouse Accounts Factors - DCCEEW](#)
- [Projecting greenhouse gas emissions - DCCEEW](#)

Capturing values in the assumptions section allows you to capture the source or justification of the value. It also means that you have a central point of reference for the value even if you use it in several places in the spreadsheet.

The Assumptions section and the Project summary section showing project outputs are deliberately located together to allow you to see the impact of changing inputs. That is why this tab is called the [Input-output explorer].

The Assumptions override value column can also be used to manually test out situations. For example, if you wanted to see what would happen if the selling price for your products increased, you can type the new value in the override column and see the results in the Project Summary section above. When you have finished testing new values in the override column, simply delete them and the default value will be used again.

The override column is also convenient if you want to use Excel's Goal Seek functions. For example, you can use the What-If function to ask what CIGP grant is needed for the IRR with CIGP funding to reach the investment threshold.

3.13 In-kind tab – 13. In-kind contributions

You can use this section if you want to capture in-kind expenses.

In-kind expenses refer to non-cash costs where goods or services are provided instead of money. These are expenses that are paid for with resources other than cash, such as materials, labour or equipment.

3.14 Milestones tab (section 14)

This table has been set up to give CIGP administrators some indication of the timing of grant payments for the project. There are formulae in row 2 which populate the table from assumptions on the **Project Model** tab. The formulae rely on a new Excel feature called 'spilling'. If this does not work for you, Delete Row 3 for columns B, C and D. You can then manually populate the table with key milestone or module events, their costs and completion date.

Note that for successful applicants, a more detailed milestone table will be negotiated as part of the funding agreement.

3.15 Charts (section 15)

The **Charts** tab will now show pie charts for sources and uses of funds as well as a line graph showing simple payback with and without the grant.