

Whole-of-life Cost Calculator Worked Example Explanatory Notes - Textiles

Procurement name	<i>Whole-of-life Cost Calculator worked example - Textiles</i>
Procurement type	<i>Goods</i>
Contact	<i>Colin, Procurement Manager</i>

1 Scenario

Your agency commonly wears uniforms when on-site, performing visible work, or interacting with customers. The existing uniforms used are outdated, and many employees have complained that the polyester material no longer reflects the team's values. A budget has been set aside to procure new uniforms for the team.

As the procurement officer, you have been tasked with assessing the whole-of-life costs (WOLC) of these options using *Template 3 – Whole-of-Life Cost Calculator* of the NSW Government *Guide to Environmentally Sustainable Procurement*, to inform the decision-making process.

Three different suppliers have submitted quotes through the procurement process, each offering uniforms made from a different material.

Table 1 Uniform procurement options

Options	Option 1 – Cotton uniform	Option 2 – Year-round uniform	Option 3 – Season specific uniforms
Items	Cotton shirt, pants and jacket.	Linen shirt and pants with a wool jacket.	A cotton shirt and pants for summer and a long-sleeved wool shirt and woollen pants for winter.
Description	A cheap and comfortable natural fibre that's easy to wash, but can deteriorate with excessive cleaning.	Linen is an excellent choice for clothing in hot environments, being relatively low maintenance, while a wool jacket provides an effective insulating outer layer during colder months, although it requires more care.	A dual uniform set designed to maximise comfort throughout the seasons and extend the uniform's lifecycle.
Goods useful life	4 years	6 years	5 years

Screenshots of the calculator have been provided above the relevant guidance text.

2 General set up

2.1 Step 1 – Review Applicability

Move to the ‘Applicability’ sheet and review the use case against the provided examples.

Good, with unknown or potentially significant operating costs

Uniforms



If the time and resources required to conduct whole-of-life cost calculation is greater than the benefit that will be derived from understanding the results, it is not appropriate.

The new uniforms match the ‘Good, with unknown or potentially significant operating costs’ example (Row 14), which is rated as ‘somewhat appropriate’. Most of the costs for these options will be available through supplier quotes, and additional information is expected to be accessible from agency-held data or online sources. The options also have different capital costs and varied useful lives. Therefore, it is determined the potential value of completing the calculation outweighs the time and resources required, making it appropriate to assess the options. However, if data were not readily available, it may not have been appropriate.

2.2 Step 2 – General parameter update

Move to the ‘General parameters’ sheet next and review the provided parameters.

1. Calculator switches

Discounting switch

See instructions for explanation of discounting.

Discounted

Escalation switch

See instructions for explanation of escalation.

Escalated

For now, the escalation and discounting switches remain at their default values (escalated and discounted) and will be revisited later in the process (see Step 10).

a Calculation parameters

Base year (FY starting)

Year

01-Jul-25

Duration of calculation (number of years)

Number of years

4

Rows 20 and 22 – Update the base year to align with the current financial year. This value is independent of when the procurement process or operations will begin, as it relates solely to escalation and discounting. Setting the base year to the current financial year ensures that all values are discounted to today’s dollars, with escalation applied only to future years. Note that Row 22 will initially appear blank when filling in a new calculator but will automatically populate when the option’s useful life values are added in the next section.

b Discount and escalation parameters

Year (FY starting)

NSW Treasury economic performance and outlook, Sydney CPI³

Cost escalation

Per cent per annum

01-Jul-24	01-Jul-25	01-Jul-26	Long term average
3.00%	2.75%	2.50%	2.50%

Financial discount rate

Per cent per annum

6.80%

Placeholder value. See instructions.

Rows 27 – Review the cost escalation, which reflects the expected increases in costs in the future. If specific cost escalation is unavailable, it is acceptable to use the expected inflation rate. A check against the Sydney consumer price index (CPI), outlined in NSW Treasury’s economic performance and outlook, confirms that the current cost escalation rates are up to date.

Row 29 – Review the discount rate, which represents the financial risk of the project and is based on the weighted average cost of capital (WACC). The default value of 6.8% is based on the midpoint value in IPART’s August 2024 bi-annual WACC update. This rate should be verified against the most recent update from IPART, or a specific project value will be calculated in consultation with NSW Treasury. Refer to the NSW Treasury Guidelines (Appendix C) for further guidance on appropriate rates.

c Carbon parameters			
Emissions factor from consumption of purchased or acquired electricity	kg CO2-E / kWh	0.73	Source: DCCEEW Australian National Greenhouse Accounts Factors
Year (FY starting)	Year	01-Jul-24	01-Jul-2501-Jul-26
Carbon emissions value per tonne	AUD \$ 2024, Carbon emissions in the Investment Framework TPG24-34 ⁴	\$130	\$131\$133
All groups Australia latest CPI	ABS Australia All Groups CPI, Jun base year/Jun-2024 ⁵	139.40	Placeholder value. See instructions
Index factor for carbon values		1.00	
Year (FY starting)	Year	01-Jul-24	01-Jul-2501-Jul-26
Carbon emissions value per tonne	AUD, \$, indexed to the base year	\$131	\$132\$134

Rows 33 to 42 – Carbon parameters are based on the following documents:

- Carbon emissions in the Investment Framework TPG24-34
- Federal DCCEEW Australian National Greenhouse Accounts Factors
- ABS Australia All Groups CPI

Review these documents to ensure the latest figures are used. In this example, no changes were required, and the default values have been retained. Note that the linked sources may be superseded by newer releases.

There are no additional user assumptions to add for this example.

3 Option-specific inputs

3.1 Step 3 – Options

Move to the ‘Option-specific inputs’ tab.

a Identification			
Option title	Text	Cotton uniform	Year-round uniformSeason specific uniforms
Type of procurement	Category	Good	GoodGood
Useful life of product	Years	4	65

Rows 14 to 15 – Each option requires a unique title (as listed in Table 1), and the procurement type is classified as a good.

Row 16 – In this worked example, the useful life is assumed to be twice the life of an individual article of clothing, as the agency plans to buy in bulk and keep some stock in storage. Under this assumption, Option 1 (cotton) is expected to wear out quickly due to the outdoor conditions and regular cleaning. Option 2 (linen) is expected to withstand wear and tear better due to its more durable material and has been given the longest useful life. As Option 3 (dual uniforms) will provide workers with two sets of uniforms, its useful life is calculated as twice the average of the two materials’ expected lifespans (2 years for cotton, 3 for wool).

Note: While the goods have different useful lives, the calculator sets the calculation period based on the shortest total lifecycle among all options. For example, if one option requires 3 years for procurement and has a 4-year operational life, and another requires only 1 year for procurement but has a 5-year operational life, the calculation period would be 6 years. In this example, all options are estimated to have a 0-year acquisition period, and the shortest useful life is 4 years. Therefore, the total calculation duration is set to 4 years, as shown in Row 22 of the 'General parameters' sheet. Any additional value from goods with a longer useful life is accounted for as a residual value, which will be explained further in Steps 7 and 9.

3.2 Step 4 - Acquisition costs

Move to Rows 18 and 19

b Acquisition stage

The **total cost method** directly inserts the total costs of the acquisition stage per year into the calculation. The **percentage cost method** calculates the percentage cost of acquisition incurred per year based on the total acquisition expenditure.

To allow for easier comparison of options with different useful lives, both methods account for the end-of-life stage costs and end of asset resale revenue by discounting these values and subtracting from the acquisition cost to give an **effective acquisition cost**. The acquisition cost goes up if it costs more to dispose of the asset than what is gained from resale. It goes down if the resale value is higher compared to cost of disposal. The **percentage cost method** distributes this impact across the whole acquisition, whereas for the **total cost method** this impact occurs in the first year only.

The **effective acquisition cost** is a calculated value that is used within the calculator to better compare options across whole of life, whereas the actual acquisition cost is what should be used in further financial assessment.

Please use either the total cost method or the percentage cost method for each option. The calculator will use the total cost method by default.

Total cost method	Total cost method	Total cost method
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Row 19 – Since all three options mainly involve supply costs (in this worked example, this refers to this refers to the cost of the uniforms being manufactured and delivered by the supplier) for the acquisition, the total cost method is chosen because the additional flexibility of the percentage cost method is not required.

Move to Rows 41 to 50

Acquisition cost Year 1
Acquisition cost Year 2
Acquisition cost Year 3
Acquisition cost Year 4
Acquisition cost Year 5
Acquisition cost Year 6
Acquisition cost Year 7
Acquisition cost Year 8
Acquisition cost Year 9
Acquisition cost Year 10

\$. AUD

\$101,250.00	\$120,000.00	\$114,300.00

All options include a single acquisition cost in year 1, covering the purchase of all articles of clothing including spares. For Options 1 and 2, a full set of spare shirts and pants is included in the procurement. Jackets are expected to be more durable and require fewer replacements, so only half as many spares are purchased. For Option 3, employees receive two sets of uniforms and are expected to alternate them with the seasons, extending the lifespan of each. As a result, a smaller stock of spares is needed, intended only for major incidents such as tears or spills while working on site.

In addition to the base purchase price, the cost of branding varies by material. Printing on cotton is a common and well-established process, while branding linen and wool requires a more complex process, resulting in a higher cost per shirt.

Because there is only one input cell per year, these costs should be prepared in an external Excel file and the total cost copied into the calculator once finalised. The costs used in this worked example are shown in Error! Reference source not found..

Table 2 Acquisition cost breakdown

Cost	Option 1	Option 2	Option 3 - Cotton	Option 3 - Wool
Employees	500			
Shirts per employee	3			
Pants per employee	3			
Jackets per employee	1		0	
Spares (number)	1,500 per article (250 for jackets)		300 per article	300 per article
Shirt cost	\$10	\$11	\$10	\$12.50
Pants cost	\$15	\$16.50	\$15	\$20
Jacket cost	\$25	\$35	N/A	N/A
Branding (shirts and jackets)	\$2 per item	\$3 per item	\$2 per item	\$4 per item
Total shirt cost	\$30,000	\$33,000	\$18,000	\$22,500
Total pants cost	\$45,000	\$49,500	\$27,000	\$36,000
Total jacket cost	\$18,750	\$26,250	\$0	\$0
Total branding cost	\$7,500	\$11,250	\$3,600	\$7,200
Total	\$101,250	\$120,000	\$114,300	

Note: The values in this table are hypothetical and based on industry benchmarks. When assessing the WOLC of different options during a procurement process, the cost data entered into the calculator will depend on the stage of procurement. During the planning phase – when details are uncertain – cost estimates should be informed by early market engagement, previous contract data, expert advice or

formal cost estimates. In contrast, during the tendering phase, costs should be based on supplier quotes or estimates provided by a qualified quantity surveyor or cost estimator.

Rows 52 to 61 – These rows show the ‘effective’ acquisition cost for each year, including cost increases due to escalation. For Year 1 specifically, this also includes any disposal costs and residual value, ensuring these are included in the calculations regardless of whether the calculation period matches the product’s useful life. Any additional value provided by options that extend beyond the calculation period is captured as a residual value, which is further explained in Steps 7 and 9.

3.3 Step 5 – Operational costs

Move to Row 64

c Operation stage

Operations start year (insert number only)	First year of operations	Year 1	Year 1	Year 1
Electricity usage in operation stage	kWh, p.a.	0	0	0
Proportion of renewable electricity used in operation stage	Per cent	0%	0%	0%
Electricity cost	\$. AUD / kWh	\$0.00	\$0.00	\$0.00
Renewable energy electricity cost premium	\$. AUD / kWh	\$0.00	\$0.00	\$0.00
Lease payment per annum	\$. AUD	\$0.00	\$0.00	\$0.00
Operating cost per annum (excluding electricity usage)	\$. AUD	\$0.00	\$0.00	\$0.00
Re-occurring annualised fees and charges (e.g., rent; excluding electricity usage)	\$. AUD	\$3,750.00	\$3,500.00	\$864.00

Row 65 – All options will be in use immediately after they are procured, so Year 1 is the appropriate starting year for all options.

Row 67 – There is no electricity use directly attributable to the business for the goods themselves, so this section is left blank. Energy costs associated with cleaning are covered by the uniform allowance (see Row 73 below), and carbon emissions from cleaning performed by employees are assessed separately (see Step 8).

Rows 68 to 70 – Electricity costs and renewable electricity usage should be based on best available information. As this worked example has no electricity usage, this section has been left blank.

Row 72 – There are no lease payments as no equipment or facilities are leased.

Row 73 – Operating costs in this worked example include uniform allowances provided to employees to cover cleaning and maintenance. The rate, as set out in C2024-09 Meal, Travelling and Other Allowances for 2024-25, line item 15, is \$6.00 per week per employee (500), equating to \$156,000 per year. This figure exceeds the acquisition cost and skews the visual interpretation of the graphs in the ‘Results’ tab. Since the allowance is the same across all options and does not influence the comparative results, it has been excluded from this worked example to make it easier to interpret the key differences between options. Note that while this approach can support informal comparison, any formal analysis or outputs from the calculator should include all relevant costs.

Row 74 – Each option incurs a recurring fee for storage of spare uniforms. Assuming each spare is 30 cm x 30 cm x 6 cm (with jackets considered double the thickness) and using a storage cost of approximately \$31 per square metre (based on available market rates), Options 1 and 2 would cost \$6,000 in the first year, while Option 3 would cost \$1,440. However, as the spares are gradually used over time, storage space requirements reduce. To reflect this, a linear reduction in storage volume over each option’s useful life is assumed, resulting in a 10% reduction in cost per year. The

total expected storage cost is averaged over the uniform’s useful life to determine a cost per year. For Option 1, this comes to \$3,750 per year; for Option 2 \$3,500 per year; and for Option 3 \$864 per year, as shown in Table 3.

Table 3 Storage costs for each option

Year	Option 1	Option 2	Option 3
1	\$6,000	\$6,000	\$1,440
2	\$4,500	\$5,000	\$1,152
3	\$3,000	\$4,000	\$864
4	\$1,500	\$3,000	\$576
5	-	\$2,000	\$288
6	-	\$1,000	-
Total	\$15,000	\$21,000	\$4,320
Average per year	\$3,750	\$3,500	\$864

3.4 Step 6 – Maintenance costs

Move to Row 76

Maintenance costs are not relevant for this example and have been left blank, as all maintenance costs are covered by the uniform allowance.

3.5 Step 7 – End of life costs

Move to Row 100

Cost of disposal	\$, AUD	\$4,987.50	\$4,987.50	\$4,410.00
Realised value of components	\$, AUD	\$0.00	\$0.00	\$0.00
Residual value	\$, AUD	\$0.00	\$40,000.00	\$22,860.00

Rows 102 to 105 – To support environmental outcomes, the agency has chosen to pay for uniforms to be recycled at end of life, rather than allowing the garments to go to landfill. Based on current market rates for textile recycling, disposal costs have been included for each option. There are no residual component values at end of life. However, Options 2 and 3 include calculated residual asset values, as they are expected to have remaining useful life after the 4-year calculation period.

3.6 Step 8 – Carbon dioxide equivalent emissions

Move to Row 107

f Carbon dioxide equivalent emissions

Acquisition stage carbon dioxide equivalent emissions	CO2-E p.a., tonnes, total	39.90	21.16	46.62
Operation stage carbon dioxide equivalent emissions (non-renewable electricity usage)	CO2-E, tonnes, annualised	0.00	0.00	0.00
Operation stage carbon dioxide equivalent emissions (excluding electricity usage)	CO2-E, tonnes, annualised	0.00	1.75	7.00
Maintenance event 1: carbon dioxide equivalent emissions	CO2-E p.a., tonnes, annualised			
Maintenance event 2: carbon dioxide equivalent emissions	CO2-E p.a., tonnes, annualised			
Maintenance event 3: carbon dioxide equivalent emissions	CO2-E p.a., tonnes, annualised			
Maintenance event 4: carbon dioxide equivalent emissions	CO2-E p.a., tonnes, annualised			
General annual maintenance carbon dioxide equivalent emissions	CO2-E p.a., tonnes, annualised			
End-of-life stage carbon dioxide equivalent emissions	CO2-E p.a., tonnes, annualised	0.00	0.00	0.00

Row 109 – Based on available carbon emissions rates per kilogram of clothing, the upfront carbon for each uniforms option, including distribution emissions, has been calculated. Both cotton and wool have significantly higher embodied carbon than linen. This is due to cotton farming's higher use of chemicals, such as pesticides and fertiliser, while the methane emissions from sheep lead to high carbon emission equivalents for wool production.

Row 112 – While washing uniforms does produce minor emissions, non-wool options are not expected to require additional cleaning cycles and are assumed to be absorbed into employees' regular washing routines. For wool jackets, regularly brushing down is assumed, with machine washing only once per month. For wool clothing, it is assumed that uniforms are washed once per week during colder months (5 months per year) and require a separate wash cycle from the employee's normal cleaning routine. Publicly available energy use rates for cleaning cycles have been used to estimate the associated annual carbon emissions.

Row 114 to 118 – As there are no maintenance activities, there are no maintenance emissions included.

Row 120 – It is assumed that all uniforms are recycled at end of life. As the carbon impacts of recycling are similar across all fabric types, the differences are assumed to be negligible and therefore emissions from this stage have been excluded.

Note: Emissions considered negligible in this calculator, reflect their limited influence on comparative outcomes between options. However, this does not imply that they would be negligible for the purposes of measuring and reporting emissions against baseline emissions or other targets.

4 Calculation sheet

The 'Calculation' sheet contains all the formulas and data used to produce the outputs on the 'Results' sheet. While there are no required inputs on this page, and all comparative results can be viewed on the 'Results' sheet, this sheet may provide some insights into how the outputs are calculated and how costs are distributed year-by-year costs over the calculation period.

Note: The costs on the ‘Calculation’ sheet are potentially escalated or discounted, which should be considered when checking the cost values. To simplify checks, it is recommended to temporarily turn off escalation on the ‘General parameters’ sheet prior to performing these checks.

For additional assurance, three spot checks should be performed to minimise the risk of errors. Suggested spot checks for this worked example include:

- **Acquisition costs:** Compare ‘Option specific inputs’ cell I52 against ‘Calculation’ cell G241 to confirm the year 1 acquisition cost is correct.
- **Recurring operational fees:** Compare ‘Option specific inputs’ cell G74 against ‘Calculation’ row 52 to confirm the recurring fee is applied across each year.
- **Residual value:** Compare ‘Option specific inputs’ cell H105 against ‘Calculation’ row 181 to confirm the residual value is applied in the final year.

These spot checks are specific to this worked example; the user’s judgement should be used to determine bespoke spot checks for each use of the calculator.

5 Outputs

5.1 Step 9 – Results

Move to the ‘Results’ sheet

The ‘Results’ sheet provides an overview of the outputs of the calculator once all relevant information has been entered.

1. Statistics

Parameter	Unit	Output Format	Option 1	Option 2	Option 3
Product title	Text		Cotton uniform	Year-round uniform	Season specific uniforms
Type of procurement	Category		Good	Good	Good
Useful life of product	Years		4	6	5
Calculation duration	Years		4	4	4
Total acquisition cost	\$, AUD	Discounted, Escalated	\$105,344	\$124,094	\$117,920
Total operation cost	\$, AUD	Discounted, Escalated	\$14,118	\$13,177	\$3,253
Total maintenance cost	\$, AUD	Discounted, Escalated	\$0	\$0	\$0
Total residual value	\$, AUD	Discounted, Escalated	\$0	\$35,360	\$20,208
Net cost	\$, AUD	Discounted, Escalated	\$119,462	\$101,911	\$100,964
Total economic cost of carbon (if relevant)	\$, AUD	Undiscounted, Escalated	\$5,249	\$3,745	\$9,979
Total tonnes of CO2-equivalent emissions	Tonnes		40	28	75
Net cost ranking	Rank		3	2	1
Total economic cost of carbon ranking (if relevant)	Rank		2	1	3
Total tonnes of CO2-equivalent emissions ranking	Rank		2	1	3

Rows 10 to 28 – This section provides a direct quantitative comparison of all options.

Rows 12 to 15 – These rows show the key descriptive details for each option.

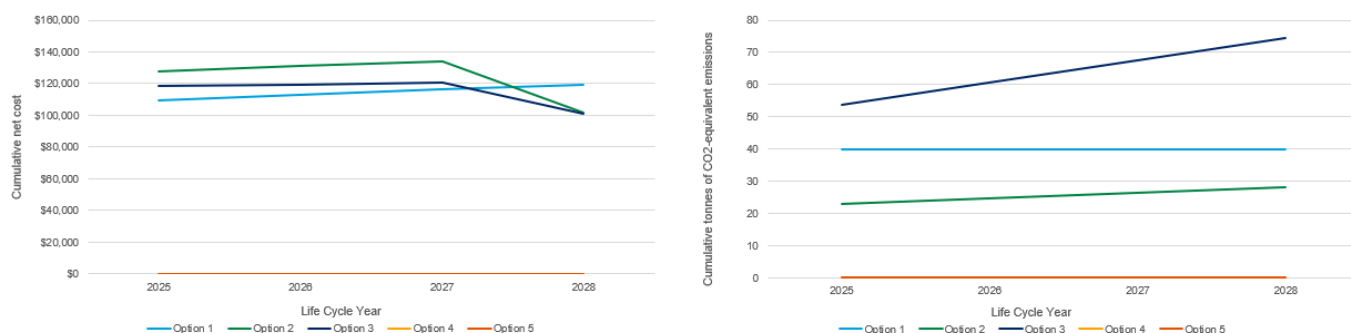
Rows 17 to 21 – These rows summarise the cost information. Column G lists the current state of the switches (see Step 10) on the ‘General parameters’ sheet. These rows allow direct comparison of

cost types across options. For this example, Options 2 and 3 are the cheapest options and nearly identical in cost.

Rows 23 and 24 – These rows provide an overview of the carbon emissions and associated economic cost. Due to the high emissions per kilogram of material and ongoing cleaning requirements, Option 3 has the highest carbon emissions, while Option 2 has the lowest. Note that as the cost of carbon is an economic value, it is never subject to financial discounting.

Rows 26 to 28 – These rows show different ways of ranking the options based on net cost, economic cost of carbon, or the total emissions. Option 3 is ranked as the best option in terms of net cost, which is further examined below.

Move to Row 30



Beneath the summary statistics are two comparison graphs. By default, the calculator applies escalation and financial discounting, which expresses all costs in today's (base year) dollars. This allows a like-for-like comparison across options.

Cumulative net cost graph

This graph shows the cumulative costs (acquisition, operation, maintenance and residual) for each option, year by year. While each year's information is relevant, several key trends stand out:

- In Year 1, all three options are relatively similar in cost, though Options 2 and 3 are slightly higher due to the higher cost of the material used.
- Between Years 1 and 3, the higher operational costs of Options 1 and 2 become noticeable compared to Option 3. However, these differences do not change the overall rankings of the options.
- Between Years 3 and 4, a shift occurs. The residual values applied to Options 2 and 3, due to their longer useful life (refer to Row 14), causes a decrease in their cumulative costs. As a result, Option 1 becomes the most expensive. This decrease reflects the treatment of residual value:
 - Options 2 and 3 have longer useful lives than the 4-year calculation period (refer to Rows 14 and 15).
 - To account for its value beyond the calculation period, the calculator applies a residual value (listed in Row 20) in the final year. This adjustment effectively reduces Option 2 and 3's apparent costs, as it reflects the benefit of not needing to procure new uniforms immediately after Year 4.
- In the final year (2028), Options 2 and 3 have the lowest WOLC, primarily due to the longer life of the uniforms. Option 3 is the cheapest overall by approximately \$1,000.

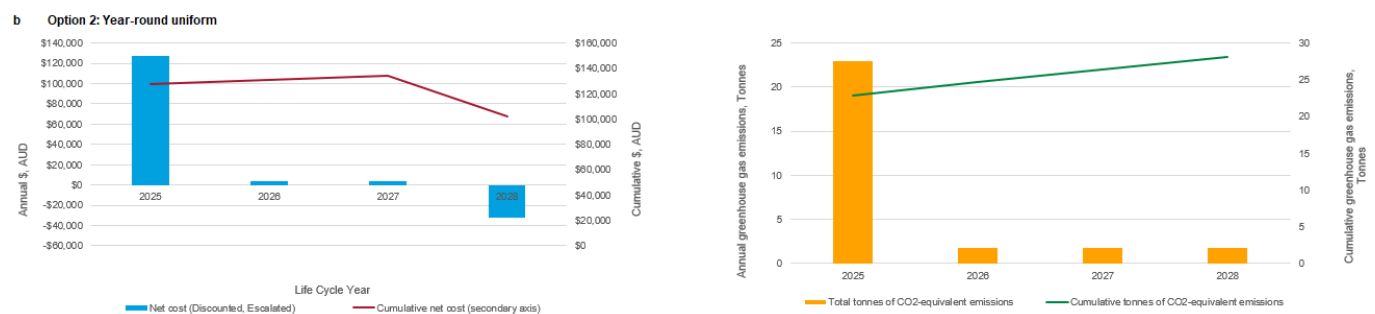
- This worked example showcases how WOLC modelling provides a more complete view than just acquisition and operational costs, by incorporating product lifespan. For example, if you add just the acquisition, operational, maintenance and residual costs of the goods over their useful life, Option 1 appears cheapest at approximately \$120,000, while Option 2 totals approximately \$137,000. However, this process fails to account for Option 2's additional two years of useful life, which are captured through the WOLC methodology.

Cumulative tonnes of emissions graph

This graph shows the cumulative emissions associated with each option across the procurement lifecycle (acquisition, operation, and maintenance) on a year-by-year basis. While each year's information is relevant, several key trends stand out:

- In year 1, unlike the cost graph, there is a large variation in carbon emissions across the options.
- Between Year 1 and Year 4, Option 1's value does not change, while Option 2 increases slightly. Option 3 has a significant annual increase due to the high energy requirements to clean the provided uniforms under that option.
- By the end of Year 4, the relative positions of the options have not changed. Despite Option 2 having greater operational emissions than Option 1, the substantial difference in the upfront carbon emissions between the materials keeps Option 1's total emissions higher.

Move to Row 32



The charts in this section provide individual breakdowns of each option and how the cumulative graph in Row 30 is developed. To avoid repeating information, only one example – Option 2 in Row 35 – is explored in detail.

The left-hand graph includes two y-axes: annual costs (primary axis) and cumulative costs (secondary axis). The blue columns represent the total annual cost, corresponding to the primary y-axis. There is a large cost in the first year, representing the acquisition cost of the uniforms, followed by smaller costs in the next 2 years representing the ongoing storage costs. In Year 4, there is a negative value, representing the remaining useful life value being applied as a residual value. These annual costs sum up into the red line on the secondary axis, the cumulative total, which is the same line shown in the comparison graph in Row 30.

The right-hand graph similarly features two y-axes: annual carbon emissions (primary axis) and cumulative emissions (secondary axis). Year 1 shows a high emissions value due to the upfront emissions in the uniforms, and Years 2 to 4 show smaller ongoing emissions from the clothes washing. Unlike with costs, there is no residual emissions benefit applied in Year 4, as doing so would misrepresent the actual emissions generated over the calculation period.

5.2 Step 10 – Switches

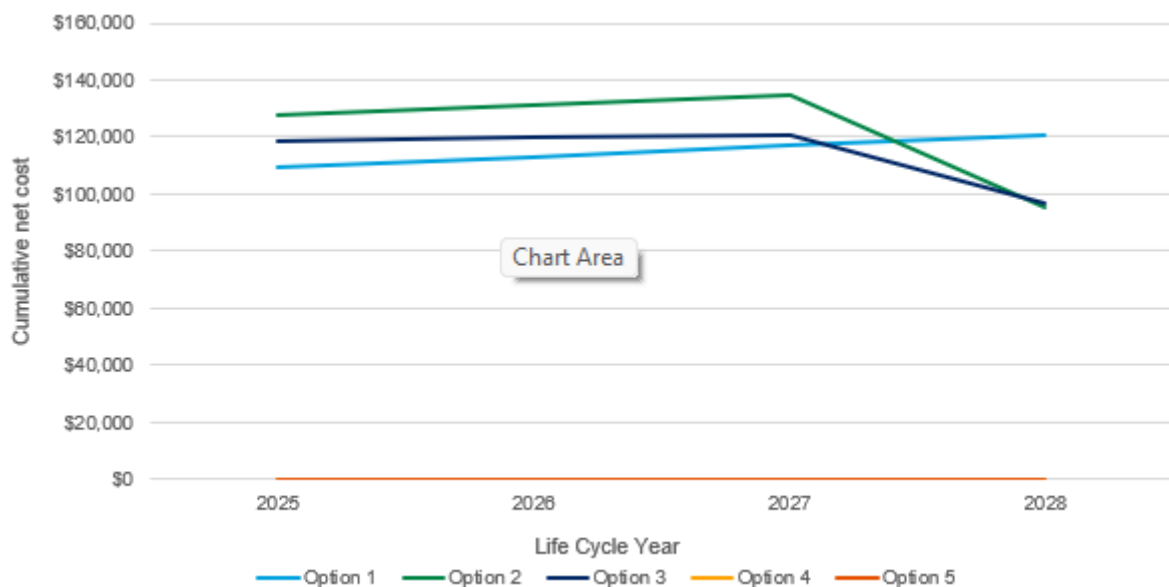
This section requires switching between the ‘General parameters’ and ‘Results’ sheets.

All costs shown in the ‘Results’ sheet (and described in Step 9) are currently in nominal, discounted dollars. This means they are expressed in today’s dollars (net present value), which allows for a meaningful comparison of the WOLC of options with different useful life periods.

An alternative view is to switch discounting off while leaving escalation on. This approach is useful for preparing inputs into agency budgets, as NSW Treasury requires financial impact statements to be presented in undiscounted terms.

In summary:

- Discounting must be applied when comparing options to understand their full financial implications over their lifecycle.
- Discounting can be turned off when developing inputs for agency budgets, for example, when preparing a financial impact statement.
- Escalation should rarely be turned off, as it reflects expected future cost increases.



Switch status: Escalation on, discounting off

There is one key point of interest in this view, where discounting is switched off. First, there is a slight increase in the cost of Option 1 and decreases in the costs of Options 2 and 3. This is because discounting reduces future costs more significantly, with later years (e.g. Year 4) being discounted more heavily than earlier ones (e.g. Year 2).

Option 1 includes only positive costs, so turning discounting off causes all its values to increase. But Options 2 and 3 have large residual values, which act as negative costs in Year 4. When these large residual values are no longer discounted, they have a greater impact in reducing total costs, leading to a lower overall WOLC. With discounting off, Option 2 now has the lowest WOLC. This view shows that Option 2 could potentially be the most cost-effective option from a future budgetary perspective.

In this worked example, there is no analysis which requires switching the outputs to unescalated.

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