Parliamentary Budget Office

Carbon Drawdown: Income for land managers	
Party:	Australian Greens

Summary of proposal:

The proposal has 6 components that would have effect from 1 July 2022.

- Component 1 would invest $250 million across 3 years to establish the Green Agriculture Australia research and development centre.
- Component 2 would invest $10 million across 3 years to create an organic advisory service for famers in each state and territory.
- Component 3 would require the Clean Energy Regulator (the Regulator) to purchase Australian Carbon Credit Units (ACCUs) at $50/tonne.
  - This would replace the Regulator's current purchasing arrangements from the proposal start date.
- Component 4 would restore the Carbon Farming Futures Program at $25 million per annum.
- Component 5 would invest $20 million across 3 years to fund projects to support the hemp industry.
- Component 6 would invest $50 million across 3 years to create a research and development centre for seaweed farming.

Costing overview

This proposal would be expected to decrease the fiscal and underlying cash balances by $3,870.6 million across the 2022-23 Budget forward estimates. The decrease in the budget balances reflects an increase in administered expenses of $3,854.5 million and an increase in departmental expenses of $16.1 million.

Components 3 and 4 of the proposal would have an impact beyond the 2022-23 Budget forward estimates period. A breakdown of the financial implications (including separate public debt interest (PDI) tables) across the period to 2032-33 is provided at Attachment A.

The financial implications of Component 3 are highly uncertain and particularly sensitive to assumptions about the supply and demand for ACCUs. Demand for ACCUs from market participants other than the Australian Government (the Government) increased in recent months, but whether the increase will continue is difficult to determine. If the increase continues, ACCUs could be diverted away from the Government to other sources of demand in the market. Alternatively, the Government could remain as the predominant source of demand, but expenditure on ACCUs would be likely to increase substantially. Furthermore, the 2022-23 Budget included the measure *Energy and Emissions Reduction*, which allows holders of fixed-delivery contracts with the Government to exit these contracts on payments of an exit-fee. The rate at which fixed-delivery contracts are cancelled is an additional source of uncertainty.

In addition, the supply of ACCUs from 2022-23 onwards is assumed to increase at the rate observed between 2019-20 and 2020-21, but the Regulator's most recent report notes that the increase in demand for ACCUs in recent months means that supply to the secondary market is likely to increase beyond expectations. Aside from this possible behavioural response, novel technologies that decrease the costs associated with carbon abatement activities could increase ACCU supply beyond that attributed to market forces, compounding the existing uncertainty.

The above does not consider the interactions between supply and demand, but both factors could result in the financial implications of the proposal being significantly different than estimated. In any case, caution should be exercised when interpreting the financial implications in this response.

The PBO has not made an assessment as to whether the specified funds for the remaining components are sufficient to meet the objectives of the proposal.

Table 1: Financial implications ($m)(a)(b)

	2022-23	2023-24	2024-25	2025-26	**Total to 2025-26**
Fiscal balance	*-865.1*	*-945.2*	*-1,035.2*	*-1,025.1*	**-3,870.6**
Underlying cash balance	*-865.1*	*-945.2*	*-1,035.2*	*-1,025.1*	**-3,870.6**

(a) A positive number represents an increase in the relevant budget balance; a negative number represents a decrease.
(b) PDI impacts are not included in the totals.
\- Indicates nil.

Key assumptions

The PBO has made the following assumptions in costing Component 3 of the proposal.

- The auction and spot prices for ACCUs would increase by 5% per annum from 2022-23.
- In the absence of policy change:
  - the Government would fulfill 50% of its contracted volume of ACCUs purchases as at September 2021.
    - The 2022-23 Budget included the measure *Energy and Emissions Reduction* (Budget Paper No. 2, page 125), which allows holders of fixed-delivery contracts to exit their contract with the Government on payment of an exit fee.
    - Combined with an increase in demand for ACCUs from private entities, the PBO considers it unlikely that the current volume of contracts will be fulfilled, which is supported by commentary in the Regulator's December 2021 Quarterly Carbon Market Report.
- If the proposal was implemented:
  - the Government would fulfill its current volume of contracted ACCUs purchases as at September 2021 and remain as the dominant source of demand in the market.
    - This assumption was informed by the assumed increases in the auction and spot prices for ACCUs relative to the proposed price, which is much higher than both.
  - the supply of ACCUs would increase by 9% per annum from 2022-23.
    - This assumption was informed by the observed increase in ACCUs supply between 2019-20 and 2020-21 and includes a provision for the expected behavioural response due to the Government purchasing above the assumed auction and spot prices.

    - demand for ACCUs from corporations and state and territory governments would remain at around 5% of total supply from 2022-23.
- Current funds for the Emissions Reduction Fund (ERF) and the Climate Solutions Fund (CSF) would be re-allocated to implement the proposal.
- Departmental expenses to implement this component would be nil.

Methodology

Components 1, 2, 4, 5, and 6

- The financial implications of these components were as specified in the proposal, disaggregated into administered and departmental expenses based on similar budget measures.

Component 3

The financial implications of Component 3 were estimated as the total of 3 elements.

- The costs to the Government to fulfill its contracted volume of ACCUs purchases as at September 2021, based on the assumptions detailed above.
    - These were estimated as the difference between the Regulator's contracted purchases at the proposed price and the estimated purchases at the assumed auction price.
- The costs to the Government for future purchases at the proposed price of $50/tonne.
    - These were estimated by multiplying the projected supply of ACCUs from 2022-23 by the proposed price.
    - The estimated volume of ACCUs purchased by the Government was adjusted to provide for demand from corporations and state and territory governments.
- The re-allocation of funds from the ERF and CSF to implement the proposal.
    - Current funds for the ERF and CSF were subtracted from the 2 elements above to estimate the costs of the proposal above the budget baseline

Financial implications were rounded consistent with the PBO's rounding rules as outlined on the PBO Costings and budget information webpage.[1]

Data sources

Australian Government, 2022. *2022-23 Budget*, accessed 28 April 2022.

Clean Energy Regulator, 2022. *Quarterly Carbon Market Report – December 2021*, accessed 28 April 2022.

Clean Energy Regulator, 2021. *Quarterly Carbon Market Report – September 2021*, accessed 28 April 2022.

Clean Energy Regulator, 2021. *Auction Results: October 2021*, accessed 28 April 2022.

[1] https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Budget_Office/Costings_and_budget_information

Attachment A – Carbon Drawdown: Income for land managers – financial implications

Table A1: Carbon Drawdown: Income for land managers – Fiscal and underlying cash balances ($m)[(a)]

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	Total to 2025-26	Total to 2032-33
Expenses													
Administered													
Component 1	*-79.2*	*-81.3*	*-81.3*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-241.8***	***-241.8***
Component 2	*-3.1*	*-3.2*	*-3.2*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-9.5***	***-9.5***
Component 3	*-730.0*	*-810.0*	*-900.0*	*-1,000.0*	*-1,100.0*	*-1,220.0*	*-1,370.0*	*-1,530.0*	*-1,690.0*	*-1,870.0*	*-2,100.0*	***-3,440.0***	***-14,320.0***
Component 4	*-23.5*	*-24.3*	*-24.3*	*-24.3*	*-24.3*	*-24.3*	*-24.3*	*-24.3*	*-24.3*	*-24.3*	*-24.3*	***-96.4***	***-266.5***
Component 5	*-6.1*	*-6.3*	*-6.3*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-18.7***	***-18.7***
Component 6	*-15.7*	*-16.2*	*-16.2*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-48.1***	***-48.1***
Total – administered	***-857.6***	***-941.3***	***-1,031.3***	***-1,024.3***	***-1,124.3***	***-1,244.3***	***-1,394.3***	***-1,554.3***	***-1,714.3***	***-1,894.3***	***-2,124.3***	***-3,854.5***	***-14,904.6***
Departmental													
Component 1	*-4.2*	*-2.1*	*-2.1*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-8.4***	***-8.4***
Component 2	*-0.3*	*-0.2*	*-0.2*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-0.7***	***-0.7***
Component 3	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-***	***-***
Component 4	*-1.5*	*-0.8*	*-0.8*	*-0.8*	*-0.8*	*-0.8*	*-0.8*	*-0.8*	*-0.8*	*-0.8*	*-0.8*	***-3.9***	***-9.5***
Component 5	*-0.5*	*-0.3*	*-0.3*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-1.1***	***-1.1***
Component 6	*-1.0*	*-0.5*	*-0.5*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	***-2.0***	***-2.0***
Total – departmental	***-7.5***	***-3.9***	***-3.9***	***-0.8***	***-0.8***	***-0.8***	***-0.8***	***-0.8***	***-0.8***	***-0.8***	***-0.8***	***-16.1***	***-21.7***
Total (excluding PDI)	**-865.1**	**-945.2**	**-1,035.2**	**-1,025.1**	**-1,125.1**	**-1,245.1**	**-1,395.1**	**-1,555.1**	**-1,715.1**	**-1,895.1**	**-2,125.1**	**-3,870.6**	**-14,926.3**

(a) A positive number for the fiscal balance indicates an increase in revenue or a decrease in expenses or net capital investment in accrual terms. A negative number for the fiscal balance indicates a decrease in revenue or an increase in expenses or net capital investment in accrual terms. A positive number for the underlying cash balance indicates an increase in receipts or a decrease in payments or net capital investment in cash terms. A negative number for the underlying cash balance indicates a decrease in receipts or an increase in payments or net capital investment in cash terms.

\- Indicates nil.

Table A2: Carbon Drawdown: Income for land managers – Memorandum item: Public Debt Interest (PDI) impacts – Fiscal and underlying cash balances ($m)[(a)(b)]

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	**Total to 2025-26**	**Total to 2032-33**
Fiscal balance	*-10.0*	*-31.0*	*-54.0*	*-78.0*	*-106.0*	*-139.0*	*-179.0*	*-228.0*	*-288.0*	*-358.0*	*-448.0*	***-173.0***	***-1,919.0***
Underlying cash balance	*-9.0*	*-28.0*	*-51.0*	*-75.0*	*-102.0*	*-135.0*	*-174.0*	*-223.0*	*-280.0*	*-349.0*	*-437.0*	***-163.0***	***-1,863.0***

(a) As this table is presented as a memorandum item, these figures are not reflected in the totals in the tables above. This is consistent with the approach taken in the budget where the budget impact of most measures is presented excluding the impact on PDI. If the reader would like a complete picture of the total aggregate, then these figures would need to be added to the figures above. For further information on government borrowing and financing please refer to the PBO's online budget glossary[2].

(b) A positive number for the fiscal balance indicates an increase in revenue or a decrease in expenses or net capital investment in accrual terms. A negative number for the fiscal balance indicates a decrease in revenue or an increase in expenses or net capital investment in accrual terms. A positive number for the underlying cash balance indicates an increase in receipts or a decrease in payments or net capital investment in cash terms. A negative number for the underlying cash balance indicates a decrease in receipts or an increase in payments or net capital investment in cash terms.

[2] Online budget glossary – Parliament of Australia (aph.gov.au)