Parliamentary Budget Office

ECR-2025-3374

Install air ventilation, HEPA filters and carbon dioxide monitors in all schools	
Party:	Australian Greens
Summary of proposal: The proposal would provide funding in 2026-27 for all schools in Australia to purchase and install an air ventilation system, high-efficiency particulate air (HEPA) filter, and a carbon dioxide monitor in each classroom and indoor communal space, such as libraries or break rooms. The proposal would be non-ongoing and start on 1 July 2026.	

Costing overview

The proposal would be expected to decrease the fiscal and underlying cash balances by around $388 million over the 2025-26 Budget forward estimates period (see Table 1). This impact reflects an increase in administered and departmental expenses.

The proposal would not have an impact beyond the 2025-26 Budget forward estimates period, other than for public debt interest (PDI) impacts. A breakdown of the financial implications (including separate PDI tables) over the period to 2035-36 is provided at Attachment A.

The financial implications of this proposal are sensitive to the estimated number of spaces eligible for ventilation equipment, as well as the assumed take-up rate by schools in response to this proposal and capacity of the industry to supply and install the equipment in the specified period. The Parliamentary Budget Office (PBO) notes that the proposal as specified would not cover significant and ongoing operating, maintenance or replacement costs. These costs would need to be financed from school budgets, which could affect policy take-up rates.

Table 1: Install air ventilation, HEPA filters and carbon dioxide monitors in all schools – Financial implications ($m)[(a)(b)]

	2025-26	2026-27	2027-28	2028-29	**Total to 2028-29**
Fiscal balance	-	-388.3	-	-	**-388.3**
Underlying cash balance	-	-388.3	-	-	**-388.3**

(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 this proposal.

- The proposal would only cover the initial costs associated with purchasing and installation of the ventilation equipment. Subsequent expenses (e.g. replaced filters and general maintenance) would be covered by existing school funding.

- Systems were calculated on a per-student basis. Approximately 0.11 air filters and CO2 monitors per student would be required to equip each classroom and other indoor communal spaces such as libraries, staff rooms, science rooms and multi-purpose halls.
  - Indoor communal spaces, such as multi-purpose halls, that are larger than 90m^2 would require multiple air filters and CO2 monitors[1].
- Schools that have already been equipped with sufficient similar air purifying systems and CO2 monitors would not be impacted by this proposal. All schools that have not already been equipped with sufficient similar air purifying systems and CO2 monitors would opt-in to this proposal.
  - The New South Wales state government announced that 19,000 air purifiers and 200 CO2 monitors would be purchased in 2022.
  - The Queensland state government announced that 252 air purifiers and 1,255 CO2 monitors would be purchased in 2022.
  - The Western Australia state government announced that 12,000 air purifiers and 1,500 CO2 monitors would be purchased in 2022.
  - The South Australia state government announced that 5,000 air purifiers would be purchased in 2022.
  - The Tasmanian state government purchased 4,500 air purifiers and 400 CO2 monitors for all Tasmanian government schools.
  - The Australian Capital Territory government purchased 400 air purifiers in 2020 and 80 CO2 monitors in 2021.
  - The Victorian state government announced that 110,000 air purifiers would be purchased for Victorian schools by the end of 2022.
- The proposal would be fully implemented within the first year of the commencement of the policy.
- The unit cost of an air ventilation system with a HEPA filter would be around $1,091 in 2026-27, including installation costs.
- The unit cost of a CO2 monitor would be around $120 in 2026-27, including installation costs.

Methodology

The Commonwealth Department of Education provided the 2025-26 Budget Commonwealth Recurrent Schools Funding Model for the costing which includes projected individual school student numbers. The initial establishment costs were estimated by multiplying the estimated number of air ventilation systems and CO2 monitors by the assumed unit costs as per *Key assumptions*.

The number of air ventilation systems and air filters was estimated using the number of students and the average number of filters per student, as per *Key assumptions*, accounting for existing filters that have been purchased in a state or territory.

The average number of filters per student was estimated by dividing the number of filters purchased in Victoria and Tasmania by the number of students in Victoria and Tasmania. The estimated quantity of CO2 monitors per student was assumed to be the same ratio as the air filters.

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[1] SchoolsVic (2024), *Ventilation and Air Purification*, accessed 29 October 2024

Financial implications were rounded consistent with the PBO's rounding rules.[2]

Data sources

ABC (2022), *Air purifiers are being installed in schools to combat COVID — but do they work?*, accessed 16 May 2025.

ABC (2022), *Majority of Queensland classrooms record higher carbon dioxide levels increasing COVID-19 risk, study shows*, accessed 16 May 2025.

Australian Bureau of Statistics (2025), *Schools, 2024*, accessed 16 May 2025.

Australian Capital Territory Government Education (2022), *EDU_2022_034_Records_Part-2.pdf*, accessed 16 May 2025.

Australian Capital Territory Government Education (2021), *ACT schools to monitor air quality with CO_2 sensors*, accessed 16 May 2025.

Commonwealth of Australia (2025) *Pre-election Economic and Fiscal Outlook 2025,* Commonwealth of Australia.

In Daily (2022), *Air purifiers arrive in schools to reduce COVID-19 spread*, accessed 16 May 2025.

New South Wales School Infrastructure (2022) *More natural air ventilation systems for NSW schools*, accessed 16 May 2025.

News.com.au (2022), *Covid-19 WA: Premier Mark McGowan reveals back to school plan during Omicron*, accessed 16 May 2025.

Premier of Victoria (2022), *More Air Purifiers On Their Way To Schools*, accessed 16 May 2025.

SchoolsVic (2024), *Ventilation and Air Purification: Operation and placement of air purifiers*, accessed 16 May 2025.

The Commonwealth Department of Education provided the Commonwealth Recurrent Schools Funding Model as at the 2025-26 Budget.

The Department of Finance and the Treasury provided indexation parameters as at 2025-26 Budget.

UNSW (2022), *Air quality monitoring to be expanded across NSW schools*, accessed 16 May 2025.

[2] https://www.pbo.gov.au/for-parliamentarians/how-we-analyse/pbo-rounding-rules

Attachment A – Install air ventilation, HEPA filters and carbon dioxide monitors in all schools – Financial implications

Table A1: Install air ventilation, HEPA filters and carbon dioxide monitors in all schools – Fiscal and underlying cash balances ($m)[(a)]

	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	**Total to 2028-29**	**Total to 2035-36**
Expenses													
Administered													
Air ventilation and HEPA Filters	-	*-317.0*	-	-	-	-	-	-	-	-	-	***-317.0***	***-317.0***
CO2 Monitors	-	*-52.8*	-	-	-	-	-	-	-	-	-	***-52.8***	***-52.8***
Total – administered	-	***-369.8***	-	-	-	-	-	-	-	-	-	***-369.8***	***-369.8***
Departmental													
Department of Education	-	*-18.5*	-	-	-	-	-	-	-	-	-	***-18.5***	***-18.5***
Total (excluding PDI)	-	**-388.3**	-	-	-	-	-	-	-	-	-	**-388.3**	**-388.3**

(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: Install air ventilation, HEPA filters and carbon dioxide monitors in all schools – Memorandum item: Public Debt Interest (PDI) impacts – Fiscal and underlying cash balances ($m)[a][b]

	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	**Total to 2028-29**	**Total to 2035-36**
Fiscal balance	-	*-8.6*	*-17.6*	*-18.3*	*-19.1*	*-20.0*	*-20.9*	*-21.8*	*-22.8*	*-23.9*	*-25.0*	***-44.5***	***-198.0***
Underlying cash balance	-	*-6.4*	*-15.3*	*-18.1*	*-18.9*	*-19.8*	*-20.7*	*-21.6*	*-22.6*	*-23.6*	*-24.7*	***-39.8***	***-191.7***

(a) As this table is presented as a memorandum item, these figures are not reflected in the totals 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[3].

(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.

\- Indicates nil.

[3] Online budget glossary – Parliamentary Budget Office (pbo.gov.au)