Submission No 74

INQUIRY INTO PLANNING SYSTEM AND THE IMPACTS OF CLIMATE CHANGE ON THE ENVIRONMENT AND COMMUNITIES

Organisation: Australian Parents For Climate Action

Date Received: 3 November 2023

Submission to Planning System & Impacts of Climate Change on the Environment & Communities Inquiry

NSW Parliament, Portfolio Committee No. 7 - Planning and Environment

3 November 2023

Parents for Climate
c/o ELA, Upper Ground Floor
55 Brisbane Street
Surry Hills NSW 2010

Dear Committee,

Parents for Climate represents over 17,000 parents, grandparents and carers from across Australia including over 4,000 in NSW. We are Australia's leading organisation for parents advocating for a safe climate. Our supporters span the political spectrum and hail from varied socio-economic positions across all Australian electorates. We seek non-partisan responses to climate change and its impacts.

We advocate for Australian governments and businesses to take urgent action to cut Australia's carbon emissions to net zero as quickly as possible. We encourage Australia to take a leadership role on the world stage, leading by example and calling for other nations to take the necessary action to protect our children's futures.

This submission was prepared by volunteer Campaign Researcher Helena Read, with input from Campaign Manager Michael Pulsford and Policy and Submissions Team Coordinator David McEwen, and has been approved by Nic Seton, CEO of Parents for Climate.

Terms of Reference

We address the question of how the planning system can best protect our children from climate change impacts by ensuring childcare centres and preschools are planned and developed to remain cost-effective, low-energy, thermally-comfortable buildings in the context of the expected future climate of 2050.

We submit that childcare centres and preschools serve increasingly not only as places of education and care but also climate refuges, and that relying on a precarious, fossil fuel-powered electricity grid poses an unnecessary risk to the children who seek shelter within them.

Local planning authorities must impose conditions upon new builds to accelerate Australia's progress in reducing emissions and ensure autonomously-powered climate refuges in times of grid failure.

Reforms to the *National Construction Code* and *State Environmental Planning Policies* are necessary to future-proof the buildings in which our children grow and learn to ensure they are equipped to mitigate and adapt to conditions caused by a changing climate, as well as the community's need for establishments which are fit for purpose.

Executive Summary

- Preschools and childcare centres equipped with resilient renewable power sources are essential to protect the health, wellbeing and educational outcomes of our children;
- Uptake of solar energy must be accelerated;
- If adopted, the amendments proposed in the *National Construction Code 2025* requiring solar energy for all new commercial buildings offer no guarantee that the systems installed pursuant to the Code are appropriate;
- Climate considerations must therefore be embedded in the development application process;
- There is a growing need for resilient heat, bushfire smoke and flood refuges which should be met through planning rules that require educational facilities and other public buildings to be appropriately equipped to protect occupants during periods of adverse conditions;
- The planning system must promote the continued affordability and availability of insurance and finance.

Since 2021, we have been at the forefront of securing renewable energy in schools through our *Solar Our Schools* campaign, resulting in the *NSW Smart Energy School Pilot Project*.[1] We are now extending the campaign to the childcare sector, commencing with a study of energy consumption and solar assets across Australia. For more information, visit www.parentsforclimate.org.

[1] Parents for Climate (formerly Australian Parents for Climate Action), 'Australian Parents for Climate Action Celebrates Schools Solar Program Expansion and $1m Funding Raised; Appoints New Directors and Chair' (Media Release, 2 May 2023) https://www.aap.com.au/aapreleases/cision20230502ae87374.

Recommendations

We recommend the NSW Government utilise its legislative planning powers to:

1) amend the *State Environmental Planning Policy (Sustainable Buildings) 2022*[2] to lower the capital investment value threshold for the renewable energy requirement;
2) introduce a renewable energy requirement in the *Education and Care Services National Regulations 2011 ('National Regulations);*[3]
3) amend the *National Regulations* to include a *Specific Solar Requirement* for new-build childcare centres and preschools;
4) develop standard conditions of consent and guidance to assist decision makers in imposing conditions that ensure the energy supply needs of the proposed project will be satisfied;
5) amend the *Education SEPP* to require a designated refuge, such as a school hall or library, in each educational facility;
6) adjust planning instruments to prohibit inappropriate development in at-risk areas.

Outcomes

If our recommendations are adopted, every new childcare centre will open its doors with a rooftop solar PV system appropriate to the size and needs of the centre, as well as batteries to guarantee a reliable energy supply.

Introduction

In Part A we present our case for protecting our children with resilient renewable power sources in childcare centres and preschools. We discuss health and educational outcomes, as well as financial and environmental savings. We then analyse the obstacles encountered by childcare operators wishing to install solar retrofits and the advantages of pre-installation to support our argument that solar should be a requirement for all new-build childcare centres and preschools.

We examine the issues associated with the *National Construction Code* and present solutions available through amendments to *State Environmental Planning Policies*.

In Part B we broaden our focus to providing climate refuges for the community and in Part C we briefly address the role of planning policies in protecting the interests of tax- and rate-payers.

[2] *Sustainable Buildings SEPP* 3.1(1).
[3] *Education and Care Services National Regulations 2011* (NSW) reg 25 *('National Regulations')*.

Part A - Protecting children with resilient renewable power sources

1. The case for renewable energy in the Early Childhood sector

The impact of excessive heat on children's health and educational attainment is well documented.[4] Increasing heatwaves pose a hazard not only to health, but to the power supply upon which HVAC systems depend.[5] The incorporation of resilient renewable power supplies is therefore an essential component of a safe environment in times of power outage,[6] which will be occurring more frequently with the projected increase in heatwaves.[7]

We applaud the NSW Government's *Cooler Classrooms* program, particularly the installation of rooftop solar PV systems at all new public schools and preschools[8] under the *Net Zero Plan*.[9]

However, as the childcare sector consists predominantly of private operators outside the remit of the NSW Department of Education, universal uptake of solar energy can be achieved only through the introduction of a solar requirement as a prerequisite to development approval.

Daylight operating hours and abundant roof space make childcare centres and preschools prime candidates to reap the benefits of solar energy, including funds diverted from energy bills to learning resources and educator salaries.

Table 1: *Summary of the annual savings in carbon emissions and reduced energy bills of five centres with rooftop solar PV systems installed through the Solar My School scheme:*

Centre	**System size**	**Annual savings**			**No. children**
		CO_2e	$	% energy bill	
Ascot Childcare & Kindy[10]	25kw	38.4T	9,600	100	N/A
Leaping Learners Leumeah[11]	21kw	19.3T[12]	7,620	60+	90
St Mary's Childcare[13]	15kw	17T	4,318	N/A	64
Leaping Learners Camden Park[14]	12.5kw	N/A	N/A	60+	84
Bronte Childcare Centre[15]	2kw	3T	600	N/A	45

[4] Xu, Z., Sheffield, P.E., Su, H. *et al.* 'The impact of heatwaves on children's health: a systematic review. *Int J Biometeorol* 58, 239–247 (2014). https://doi.org/10.1007/s00484-013-0655-x.
[5] https://www.energyfactsaustralia.org.au/explainers/blackouts-explained/
[6] https://www.climatechange.environment.nsw.gov.au/buildings.
[7] https://www.climatechange.environment.nsw.gov.au/heatwaves.
[8] Email from Community Engagement Team, School Infrastructure NSW to H Read, 27 Oct 2023.
[9] Dept. of Planning, Industry and Environment, New South Wales Government, *Net Zero Plan Stage 1: 2020-2030* (Plan, 13 March 2020) 32 <environment.nsw.gov.au>.
[10] https://www.solarhybrids.com.au/case-study/ascot-childcare-kindy-25-kw/
[11] https://inspireenergy.com.au/21kw-system-installed-at-leaping-learners-childcare-centre.
[12] https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results.
[13] https://solarmyschool.org.au/schools/
[14] https://inspireenergy.com.au/12.5kw-system-installed-at-leaping-learners-childcare-centre.
[15] https://solarmyschool.org.au/schools/

In the absence of an existing database providing insights into energy usage in the childcare sector, we conducted our own study of 74 NSW preschools and childcare centres.[16]

Table 2: *Average daily energy use of three categories of Early Childhood Education (ECE) setting by enrolment (number of children enrolled) and Gross Floor Area (GFA).**

ECE setting	**Average daily use/enrolment (kWh/child/day)**	**Average daily use/GFA (kWh/m²/day)**
Long Day Care Centres (LDC)	1.7	0.46
Child Care Subsidy Preschools (CCS PS)**	0.76	0.18
Preschools	0.68	0.18

*Exact GFA information was not available, calculated based on 3.25m²/enrolment
**Preschool age group (no babies), LDC operating hours

Based on these averages, we estimated the size of rooftop solar PV system required to supply centres based on the category of ECE setting and planned number of enrolments or GFA of child-suitable indoor space, whichever is greater (Table 3).

Table 3: *Size of solar system required by each category of ECE setting based on the number of enrolments or GFA.*

No. children	**GFA (m²)**	Solar system size required (kW)		
		LDC	**CCS PS**	**PS**
20	**65**	10	6.6	6.6
30	**97.5**	15	6.6	6.6
40	**130**	20	10	10
50	**162.5**	25	15	10
60	**195**	30	15	15

We submit that rooftop solar PV systems, sized to provide sufficient energy for the centre's size and capacity, are essential to ensure that new-build childcare centres and preschools remain fit for the purpose of protecting our children's health in the coming decades without compromising necessary emissions reduction.

[16] Helena Read, 'Energy Consumption in NSW Early Childhood Centres and Preschools' (Unpublished Research Report, Parents for Climate, 2023).

2. Analysis of barriers to uptake

According to the *Financial Review*,[17] the slow uptake of rooftop solar for small and medium-sized businesses is explained by the lack of incentives for landlords to install solar panels, which carry no benefit for themselves.[18] This corresponds with the experience reported by the centre operators we consulted.

This problem of 'split incentives' is particularly pertinent in the childcare sector, which operates predominantly from leased premises.[19]

Energy efficiency upgrades are beneficial to the landlord only where adding to tenant retention or rental/capital value; there is no incentive to improve a commercial property unless rental income is affected. There is no guarantee of recouping investment through rent due to lack of demand for sustainable premises. Operators wishing to install solar energy systems are expected to finance the installation which, in many cases, is not feasible due to short-term leases.[20]

The *'Achieving Low Energy Commercial Buildings in Australia'*[21] report summarises further barriers to landlords implementing energy efficiency projects in existing mid-tier commercial buildings.[22]

Solar installation is becoming increasingly affordable and financing options are available,[23] such as Power Purchase Agreements (no upfront costs) and Environmental Upgrade Agreement (long-term, low-interest loans for renewable energy upgrades repaid through council rates). However, perceived financial and capital constraints, prioritising the minimisation of costs and a reluctance to invest in longer-term impact[24] remain barriers to solar uptake amongst childcare operators[25] and landlords of mid-tier commercial buildings in general.[26]

Lack of knowledge or access to information regarding options and assistance available,[27] and a lack of skills, time and resources to plan, investigate and implement a solar energy project[28] are cited as further barriers to solar uptake by landlords.

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[17] Ben Potter, 'How Vinnies cracked rooftop solar's landlord problem', *The Australian Financial Review*, (online, 11 Oct 2023).
[18] Ben Potter, 'How Vinnies cracked rooftop solar's landlord problem', *The Australian Financial Review*, (online, 11 Oct 2023).
[19] Conversation with childcare operator (M Pulsford, Campaign Manager, Parents for Climate, Zoom call, 28 Sep 2023).
[20] Ben Potter, 'How Vinnies cracked rooftop solar's landlord problem', *The Australian Financial Review*, (online, 11 Oct 2023).
[21] 'Achieving Low Energy Existing Commercial Buildings in Australia - Final Report', Ernst & Young, 28 October 2019 '*Achieving Low Energy Report*'.
[22] '*Achieving Low Energy Report'*, 34.
[23] https://energyaction.com.au/australian-commercial-solar-benefits.
[24] '*Achieving Low Energy Report'*, 34.
[25] Conversation with childcare operator (M Pulsford, Campaign Manager, Parents for Climate, Zoom call, 28 Sep 2023).
[26] '*Achieving Low Energy Report'*, 34.
[27] '*Achieving Low Energy Report'*, 34.
[28] '*Achieving Low Energy Report'*, 34.

Amongst the childcare operators consulted, researching and applying for finance and selecting contractors, is likewise perceived as a considerable barrier.[29] This barrier is worsened by chronic staff shortages in the childcare sector.[30]

Lease management

Operators of multiple centres often manage multiple leases with different landlords.[31] The complexity of obtaining landlord consent for installation of solar panels, removing panels and undertaking repairs at the end of the lease are also reported by operators as obstacles to the widespread installation of solar PV systems.[32]

The centres in our study operate predominantly from council-owned properties with a typical lease period of 5 years,[33] which has implications for the appeal of a long-term investment in solar panels and obtaining finance.

For all of these reasons, relying on subsequent retrofits is not conducive to an acceleration in solar uptake.

3. The National Construction Code and the case for mandatory solar pre-installation

The *'Achieving Low Energy Commercial Buildings in Australia'*[34] report describes the level of change delivered by existing policy instruments as *"insufficient"* with stakeholders calling for *"strong mandatory requirements"*[35] in national building regulations.

The *National Construction Code 2022 (NCC 2022)* imposes a requirement that "at least 20% of the roof area of a building must be left clear for the installation of solar photovoltaic panels" and that the "main electrical switchboard … accommodate the necessary circuit breakers and battery system."[36]

This is of no assistance in overcoming the aforementioned barriers faced by landlords and childcare operators wishing to install solar energy and therefore will not increase uptake.

Furthermore, without stipulations that the location of the designated area face northwards to optimise direct sun exposure,[37] or remain free of shadow from surrounding buildings and vegetation, compliance with the current provisions may ensure roof space for future solar retrofits, but the feasibility of such installations is far from guaranteed.

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[29] Conversation with childcare operator (M Pulsford, Campaign Manager, Parents for Climate, Zoom call, 28 Sep 2023).
[30] Black, E, 'Childcare Centres Turning Away Parents Because of Staff Shortages,' *The Australian Financial Review*, (online, 25 Aug 2023).
[31] Email from childcare operator to H Read, 9 Oct 2023.
[32] Conversation with childcare operator (M Pulsford, Campaign Manager, Parents for Climate, Zoom call, 28 Sep 2023).
[33] Email from childcare operator to H Read, 17 Oct 2023.
[34] '*Achieving Low Energy Report'*, 47.
[35] '*Achieving Low Energy Report'*, 47.
[36] *National Construction Code (NCC) 2022,* J9D5.
[37] https://www.solargain.com.au/blog/how-plan-solar-when-building-new-home.

We endorse the solar requirement proposed for *NCC 2025,* subsequent to the *Commercial Buildings Low-Energy Trajectory Final Report.*[38] Pre-installation will not only accelerate uptake of renewable energy and carbon abatement but also render the process less costly.

Wiring and installing the requisite electricity meter prior to gyprocking of walls is easier, quicker and cheaper.[39] According to the *NCC 2022 Webinar Series: Commercial Energy*,[40] new commercial buildings are assumed to have adequate structural capacity to accommodate solar but there is no indication that newer buildings would be exempt from the requirement of a structural engineering certificate and visit from an engineer[41] prior to installation of a commercial-sized solar array, which adds complication and expense to the project.

In many cases, compliance with unencumbered space requirements[42] precludes the retrospective installation of solar panels during hours of operation, incurring the additional costs of out-of-hours rate of payment for tradespeople and a dedicated project manager.

Although the cost of installation would be transferred to the subsequent childcare operator through increased rent, the overall reduced cost of pre-installation would relieve the operator of a significant financial burden, freeing up financial resources to benefit the children.

Pre-installation on a new roof will also avoid delays on account of the significant factor of roof lifespan.[43] Given the cost-effectiveness of working with natural investment cycles (typically 15 years) for replacement and refurbishment required to ensure adequate strength for solar installation,[44] poor energy performance can be 'locked in' for several years[45] if solar is not installed at the outset.

While we welcome the inclusion of a solar requirement, without specifications it fails to address the issues of potential for inadequate compliance, lack of resilience, and cost of delay.

The next decade is critical in avoiding dangerous climate change, detrimental in particular to the health of vulnerable groups such as children.[46]

The cost of deferring energy efficiency updates from *NCC 2022* to *NCC 2025* is calculated at $4.5 billion in opportunity costs, and 21.4 Mt CO2-e in lost GHG abatement.[47] Furthermore, unless responsible requirements are introduced, there is no guarantee that developers will install systems that are appropriate in size and quality,[48] and the lack of battery requirement renders the energy supply vulnerable.

The following recommendations address all of these issues.

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[38] Foo, G et al, 'Commercial Buildings Low Energy Trajectory NCC 2025 - Update to Achieving Low Energy Commercial Buildings in Australia - Final Report', 10 March 2022.
[39] https://www.solargain.com.au/blog/how-plan-solar-when-building-new-home.
[40] 'Commercial Energy Efficiency', *NCC 2022 Webinar Series* (Aus. Building Codes Board, March 2023).
[41] https://www.solargain.com.au/blog/how-plan-solar-when-building-new-home.
[42] *Education and Care Services National Regulations* ss 107, 108.
[43] Conversation with childcare operator (M Pulsford, Campaign Manager, Parents for Climate, Zoom call, 28 Sep 2023).
[44] https://solaristech.com.au/blogsdetail/decoding-risks-challenges-with-solar-panel-installation-and-their-solutions.
[45] '*Achieving Low Energy Report'* 29.
[46] https://climatechange.environment.nsw.gov.au/Impacts-of-climate-change.
[47] '*Achieving Low Energy Report'*, cited in Foo et al.
[48] Email from developer to H Read, 24 Oct 2023.

4. The Way Forward

Recommendation 1

Object: to codify an expansion of the solar requirement to include new-build childcare centres before 2025.

The NSW Government must amend the *State Environmental Planning Policy (Sustainable Buildings) 2022*[49] to lower the capital investment value threshold for the renewable energy requirement.

State Environmental Planning Policy (Sustainable Buildings) 2022 ('Sustainable Buildings SEPP')[50]

The *Sustainable Buildings SEPP* stipulates that 'In deciding whether to grant development consent to non-residential development, the consent authority must consider whether the development is designed to enable…the generation and storage of renewable energy'.[51]

This provision applies only to new builds with a capital investment value of $5 million or more.[52] Given that childcare construction costs currently stand at approximately $35,000 per place[53] and the centres in our study provide up to only 65 places,[54] development applications for new childcare centres would not be captured.

We recommend that the threshold be lowered to new developments with a capital investment value of $1 million, which would serve not only to capture the building stock of the childcare sector but also accelerate solar uptake across the commercial landscape.

We further submit that the drafting 'designed to enable…the generation and storage of renewable energy' is ambiguous and lacking in clarity and that decision makers must interpret 'designed to enable generation' as 'incorporating the means to generate', i.e. to include the installation of a rooftop solar PV system rather than simply leaving space for future retrofits.

Recommendation 2

Object: to require and empower decision makers to impose conditions of consent concerning renewable energy.

The NSW Government must introduce a renewable energy requirement in the *Education and Care Services National Regulations 2011 ('National Regulations').*[55]

In the absence of adequate provisions in the *National Construction Code* or *Sustainable Buildings SEPP*, uptake of renewable energy in the childcare sector may be accelerated by the imposition by consent authorities of rooftop solar PV systems as a condition of consent.

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[49] *Sustainable Buildings SEPP* 3.1(1).
[50] *State Environmental Planning Policy (Sustainable Buildings) 2022* (NSW), 3.2 (1)(d) *('Sustainable Buildings SEPP').*
[51] *Sustainable Buildings SEPP* 3.1(1).
[52] *Sustainable Buildings SEPP* 3.1(1)(d).
[53] Bleby, M, 'Shrinking childcare facility pipeline pushes up cost of places', The Australian Financial Review, online, 27 March 2023.
[54] Read, H, 'Energy consumption in NSW childcare centres and preschools', Unpublished study, Parents For Climate, 2023.
[55] *Education and Care Services National Regulations 2011* (NSW) reg 25 *('National Regulations')*.

In order to be enforceable, such conditions must be authorised by the *Environmental Protection and Assessment Act 1979 ('EP&A Act').*[56]

Under the *EP&A Act*,[57] consent authorities are required to take into consideration the provisions of any environmental planning instrument[58] and the public interest.[59] We submit that, provided it does not affect the feasibility of childcare centre developments and therefore create a supply shortage, any measure that results in a reduction in emissions must be in the public interest. However, a more robust solution would be to codify a solar requirement in an environmental planning instrument, such as a *State Environmental Planning Policy* (*SEPP*).[60]

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 ('Education SEPP')[61]

Under the *Education SEPP*[62] a consent authority must take into consideration the *Department of Planning, Industry and Environment Child Care Planning Guideline ('Child Care Planning Guideline')*[63] when assessing a development application for a centre-based child care facility.[64]

Child Care Planning Guideline

We submit that development applications for facilities lacking in solar energy generation fail to demonstrate that the proposal complies with Principle 4 of the *Child Care Planning Guidelines:*[65]

> *Well-designed facilities are durable and embed resource efficiency into building and site design, resulting in less energy and water consumption, less generation of waste and air emissions and reduced operational costs.*[66]

We further submit that solar energy potential constitutes a key 'intrinsic resource', the exploitation of which must be maximised.[67]

The *Child Care Planning Guideline*[68] requires compliance with the *Education and Care Services National Regulations 2011 ('National Regulations')*[69] under the *Education and Care Services National Law.*[70]

Inclusion of a solar requirement in the *National Regulations* would not only require consent authorities to consider the incorporation of rooftop solar PV systems but also empower them to impose enforceable conditions of consent.

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[56] *Environmental Protection and Assessment Act 1979* (NSW) (*'EP&A Act'*).
[57] *EP&A Act* s 4.15(1).
[58] *EP&A Act* 4.15(1)(a)(i).
[59] *EP&A Act* 4.15(1)(e).
[60] Telephone conversation with Environmental Defenders Office, H Read, 30 Oct 2023
[61] *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 (NSW) ('Education SEPP').*
[62] *Education SEPP* s 23.
[63] New South Wales, *Government Gazette of the State of New South Wales*, No 501, 1 Oct 2021 *('Child Care Planning Guideline').*
[64] *Child Care Planning Guideline* 5.
[65] *Child Care Planning Guideline* 7.
[66] *Child Care Planning Guideline* 7.
[67] *Child Care Planning Guideline* 12.
[68] *Child Care Planning Guideline* 23.
[69] *Education and Care Services National Regulations 2011* (NSW) reg 25 *('National Regulations')*.
[70] *Education and Care Services National Law 2010* (NSW) s 43.

Recommendation 3

Object: to prevent the installation by developers of inadequate, poor quality systems.

The *National Regulations* must be amended to require the following in development applications for new-build childcare centres and preschools:

Specific Solar Requirement

(i) roof plan showing the north-facing location of a solar PV system and battery and any overshadowing from surrounding buildings and vegetation;
(ii) calculations, carried out by a building practitioner, of the projected daily energy usage of the building based on the gross floor area (GFA) and number of places proposed;
(iii) specifications of the solar PV system a size capable of satisfying the projected energy needs of the building based on the calculation by GFA or number of places, whichever is greater;
(iv) specifications of a battery to ensure a continuous, autonomous energy supply.

Without specifications, developers will remain at liberty to install the smallest and cheapest system available as a means of complying with the solar requirement.

Furthermore, the lack of battery requirement in either the *Sustainable Buildings SEPP* or the *National Construction Code* jeopardises the proposed building's capacity to operate on an autonomous building supply and must be remedied.

Recommendation 4

Object: to reduce discretion, establish consistency and optimise emission-reduction outcomes.

The NSW Government should develop standard conditions of consent and guidance to assist decision makers in imposing conditions that ensure the energy supply needs of the proposed project will be satisfied.

We wholeheartedly endorse the Environmental Defenders Office's report 'Climate-Ready Planning Laws for NSW - Rocky Hill and Beyond'. Of particular relevance to this submission is Recommendation 12:

> *Develop standard conditions of consent aimed at reducing emissions and ameliorating impacts of climate change.*[71]

Decision makers should be provided with access to (and required to consult with) energy specialists to verify that the information supplied in the development application is accurate and that the proposed location, size and model of rooftop solar PV system will be adequate. This would improve outcomes for the operation of the childcare centre by reducing discretion, establishing consistency in the planning system, resulting in buildings effective and fit for the purpose of providing a safe environment for children without decelerating carbon abatement.

[71] Environmental Defenders Office, 'Climate-Ready Planning Laws for NSW - Rocky Hill and Beyond' (Report, March 2019) 49.

5. Summary

Positive energy intensity developments increase GHG emissions in Australia and contribute to global heating, threatening a safe, liveable climate for our children's future and the generations that follow.

The approval of such developments which delay carbon abatement is unconscionable and unnecessary when time is of the essence and renewable energy solutions are so readily available.

We support the inclusion of solar requirements in the *National Construction Code 2025*, however, the delay in implementing these measures will incur an unacceptable cost to carbon abatement.

We submit that this cost should be mitigated by embedding climate considerations within the development application process, imposing a *Specific Solar Requirement* as a condition of consent to development approval.

Part B - Climate Impacts Related to the Planning System - Beyond Renewable Energy

As asserted above, extreme weather events are projected to increase in the coming decades, such as heatwaves; bushfire smoke or dust storm; and, variously according to local climate risks, bushfires, cyclonic winds, extreme rain/hail, and flooding (coastal inundation, riverine and/or flash).

Through planning requirements, educational facilities (preschool to tertiary) and other public facilities such as libraries, hospitals and community halls, should be equipped as resilient climate refuges.

Recommendation 5

Object: to protect members of the community from extreme weather events.

The *Education SEPP* should be amended to require a designated refuge, such as a school hall or library, in each educational facility.

This refuge should include:

- Resilient electricity supply (solar plus batteries), capable of powering air conditioning, air filtration and communications systems, independent of grid failure.
- Effective occupant protection from bushfire smoke including:
  - A high level of air filtration;
  - Provision of filtered outside air to avoid buildup of carbon dioxide or other toxins inside the space; and
  - A positively pressurised, well sealed space with airlock-style entry to the space to minimise entry of smoke, dust or other airborne pollutants.
- A high level of insulation, with oversized cooling capacity to cater for greater than normal occupancy in extreme heatwave conditions (where, for example, overnight purging may not be feasible).
- Appropriate additional protections catering for regional climate risks such as cyclonic winds, extreme rain/hail or flooding.
- Designs that can accommodate overnight and extended stays by families, including adequate accessible bathrooms and meal preparation facilities.

Part C - Broader Climate Impacts Related to the Planning System - Insurance and Finance

There are myriad issues that could be addressed in the course of this inquiry, including how the planning system currently facilitates development in locations that are becoming increasingly marginal given the varied impacts of climate change.

Recommendation 6

Object: to ensure the continued affordability and availability of insurance and finance.

The NSW Government must adjust planning instruments to prohibit inappropriate development in at-risk areas.

Planning systems must adapt, and avoid maladaptation, in order to protect tax- and rate-payers from:

1. Legal actions against the Crown by property owners concerned at adverse valuation impacts as a result of proposed zoning or hazard mapping changes aimed at limiting unsuitable development in the face of mounting climate risk exposure;
2. Repair costs for public (and/or public/private) infrastructure serving exposed properties; and
3. Spending on defences to prevent private and/or public property and infrastructure that should never have been built (given what we have long known about the mounting impacts of climate change), such as seawalls, or the undergrounding of electrical infrastructure serving exposed properties that are at at repeat risk of damage from bushfires.

Conclusion

We thank you for considering our submission.

We urge the NSW Government to use its legislative planning powers to ensure that childcare centres and preschools are equipped with resilient renewable power sources to protect the health, wellbeing and educational outcomes of our children.

Appendix

Table 4: *Daily output of solar PV system by system size.*

Solar system size (kW)	**Daily Output (kWh)**[72] [73] [74]
6.6 (entry level)	25.7
10	37
15	60
20	75
25	97.5
30	110

Table 5: *Average daily energy usage and required size of solar system by each category of ECE setting based on the number of enrolments or GFA, whichever is greater.*

No. children	**GFA (m²)***	**LDC**		**CCS PS**		**PS**	
		Av. energy usage (kWh/day)	Req. solar system size (kW)	Av. energy usage (kWh/day)	Req. solar system size (kW))	Av. energy usage (kWh/day)	Req. solar system size (kW)
20	**65**	34	10	15.2	6.6	13.6	6.6
30	**97.5**	51	15	22.8	6.6	20.4	6.6
40	**130**	68	20	30.4	10	27.2	10
50	**162.5**	85	25	38	15	34	10
60	**195**	102	30	45.6	15	40.8	15

** 3.25m² per child*[75]

[72] https://captaingreen.com.au.
[73] https://quotes.solarproof.com.au/system-sizes.
[74] https://solarcalculator.com.au/solar-power.
[75] *National Regulations* ss 107, 108.