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Department of Planning, Housing and Infrastructure
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Subject: Project Mars Data Centre, Lane Cove West (SSD-82052708) – Environmental Impact Statement (EIS)

Dear Patrick Copas

I refer to your request for advice sent (26 March 2026) to the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) Energy, Climate Change and Sustainability (ECCS) about the above matter.

ECCS has reviewed the Environmental Impact Statement (Urbis, March 2026), and relevant supporting technical reports and provides its comments and recommendations at Attachment **A**. Further information from the proponent is required to ensure it aligns with the Commonwealth Government's expectations for data centres, especially Expectation 2 – Supporting Australia's energy transition and Net Zero Targets.

NSW Government policy intent for data centre developments can be found in the recent [Infrastructure NSW \(INSW\) Data Centre Consultation Paper](#), which includes the following principles for data centre investment in NSW.

- Principle 2: Data centre developers and operators need to fund their infrastructure requirements, in addition to what is already planned and funded, to not increase prices for households
- Principle 3: Data centres need to be efficient and make sustainable use of our energy and water systems as well as the environment” and
- Principle 4: Data centre approval and compliance must be based on reliable and transparent data.

In summary, the ECCS issues include but are not limited to:

Power Usage Effectiveness

- the proponent should demonstrate a Power Use Effectiveness (PUE) of 1.3 in accordance with SEARs, and how this figure is calculated and continually monitored over the life of the asset.



Energy consumption and demand flexibility

- The proponent should provide:
 - Information on energy use during the different phases of the life of the data centre.
 - a draft Demand Response and Peak Reduction Plan that sets out how it will manage operations during peak electricity demand.

Energy Supply and Emission Mitigation

- A draft plan on how sufficient long duration, time-matched firm renewable generation PPAs, with new generation projects to ensure additionality, will be procured through the life of the development to satisfy the data centre's energy demand and when these PPAs will be in place for the whole data centre.

Power System Impacts

- What systems will be incorporated to mitigate grid impacts, including the use of telemetry to facilitate the management of grid stress events.
- To reduce grid stability impacts, a draft plan on how they intend to comply with National Electricity Rule standards, including the AEMC's draft determination for the Package 2 Access Standards, should be issued.

Backup Generation

- A more complete analysis of potential backup generator use is needed, e.g. including Major Event Days "unnormalized" network outage data in analysis of potential use of backup generators.
- A plan on how to minimise the use of diesel backup generation, and to reduce emissions impact from its use.

ECCS would like to review the revised documents before any conditions of consent are issued. Should you have any further queries in relation to this submission please do not hesitate to contact the ECCS team at colette.grigg@dcceew.nsw.gov.au

Yours sincerely

Colette Grigg, 15/05/2026

Director, Energy Transition Policy
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Attachment A – Detailed advice to DPHI Planning & Assessment regarding the Project Mars Data Centre, Lane Cove West (SSD-82052708)

In preparing this advice, ECCS has reviewed the following documents:

- EIS – March 2026
- Appendix KK – Infrastructure Requirements Report
- Appendix T – Air Quality Impact Assessment
- Appendix JJ – Social Impact Assessment
- Appendix P – Environmental Sustainability Governance (ESD) report
- Appendix LL – NABERS Commitment Letter
- Appendix II – Net Zero Commitment Letter

Key assessment issues

Issue	Detailed Requirements
Power Usage Effectiveness (PUE)	Principle 3 of the INSW NSW Data Centre Consultation Paper require data centres to be efficient and make sustainable use of our energy and water systems as well as the environment. The facility is currently being designed with an assumed PUE of 1.35 which places the proposed development at NABERS energy star rating between 4.5 and 5 stars. The proponent should commit to reaching a PUE of 1.3 and a NABERS 5-star rating, which has been promoted by the Commonwealth Government as the standard for efficient design. The proponent should also commit to implementing an ongoing continuous improvement framework. Recommendation <i>Further information sought</i> • A draft plan setting out actions the proponent takes to achieve a PUE of 1.3 and then continue to

	improve efficiency over the life of the asset. The draft plan could include: ○ PUE Performance Schedule for each phase of operation. It should account for the lower efficiency (higher PUE) expected during initial commissioning and the first 12-24 months of ramp up. ○ Information on the PUE contribution from critical systems, including the high-reliability cooling system, which are likely to be more energy intensive (closed-circuit cooling towers/air-cooled chillers) and lighting controls. Will the cooling system drive most of the centres non-IT energy use? ○ Beyond mention in SEARs of mitigating the urban heat island effect, has the proponent considered whether waste heat recovery could be used support a lower PUE? ○ How the issues listed above, along with the maintenance of a 5-star NABERS Energy for Data Centres rating by full operation, will be verified and communicated, including through annual reporting.
Energy consumption and demand flexibility plans	Principle 3 of the INSW NSW Data Centre Consultation Paper requires data centres to be efficient and make sustainable use of our energy and water systems as well as the environment. Some hyperscalers use intelligent workload systems and other demand response initiatives to reduce their energy consumption and maximise the use of renewable energy. The proposal should incorporate such systems to enable it to mitigate grid impacts. The proponent should set out actions on how they plan to become more demand responsive throughout the life of the project. Recommendation <i>Further information sought</i> • Further information on the capacity of the UPS and on-site lithium-ion batteries, including: ○ Energy capacity in MWhr ○ How long these batteries are designed to run for before backup diesel generators are activated • Proponent to set out energy use during the different phases of the life of the data centre, including: ○ Phase 1: Establishment of the technical buildings A and B, and the onsite substation. This building will house the core operational functions and will represent initial load on the grid

	- o Phase 2: Includes delivery of Building C which consolidates the site to its full capacity. - o Any significant variations to power use during the five construction certificate stages for site establishment and structural works. - o Annual ramping schedule • Proponent to submit a Demand Flexibility and Peak Reduction Plan that sets out how it will manage operations during peak electricity demand or periods of low VRE. The Plan should set out: - o identify specific non-critical functions that can be curtailed or deferred during periods of high grid stress or peak electricity demand and periods of low variable renewable energy supply (VRE). - o Governance arrangements for providing this demand flexibility. - o What intelligent workload systems will be adopted to facilitate reduction of energy consumption during grid stress events. - o How the plan will be regularly updated, communicated and verified throughout the life of the facility, including through public reporting.
Power Purchase Agreements (PPAs)	The 2025 Energy Security Target Monitor's central scenario projects a 1,565 MW shortfall in energy supply in 2033-34 and a 892 MW shortfall in 2034-2035. The NSW Climate Change (Net Zero Future) Act 2023 legislates the following targets for reducing net GHG emissions in the state: - o a reduction of at least 50% of 2005 emissions levels by 30 June 2030, - o net zero emissions by 30 June 2050. - o a reduction of at least 70% of 2005 emissions levels by 30 June 2035 Without appropriate regulatory settings, the entrance of large loads such as data centres will increase reliability risks in the system, particularly in the near term (noting that data centres can be developed more quickly than generation and network projects). Principle 2 of the INSW NSW Data Centre Consultation Paper requires data centres to fund their infrastructure requirements in addition to what is already planned to not increase prices for households. PPAs are a means to support the transition of the NSW energy system to renewable energy, which is essential to meet NSW and Australian Government legislated Net Zero targets.

	Data centres represent significant new electricity demand entering the energy system which could prolong the operation of coal-fired power stations. To offset these impacts, data centres need to support the development of new renewable energy supply within NSW through long duration, firm PPAs. Recommendation - The proponent to demonstrate: • Whether net zero emissions targets will be met through PPAs and renewable energy certificates or will the proponent undertake other actions? • A draft plan on how sufficient firm renewable supply will be secured to satisfy the data centre's daily energy demand profile (including night-time load) and when these PPAs will be in place for the whole data centre. The plan could include: - o How they plan to verify customer-led PPAs under the Tenant Renewable Electricity Uptake Program. - o The intended duration of PPAs to be secured, - o How supply for nighttime and winter loads during periods of low VRE would be secured, - o What level of medium and long duration storage would be contracted - o What level of regular public reporting on energy usage, contracting and sources is intended. - o Any potential for procurement strategies to be underpinned by renewable generation assets located within the NSW NEM region. - o Potential to procure PPAs with renewable energy assets not have reached a financial investment decision at the time of contracting to trigger new investment in NSW.
Power System Impacts and Back-Up Generation	The proposed data centre will have a total power consumption of 81 MW. Recommendation <i>Further information sought</i> - How the Data Centre's full load will be met prior to completion of any required upstream augmentations including: - o Timing of new 132 kV feeder energisation - o Any interim constraints or staged load uptake limits - o Whether the Distribution Network Service Provider has provided advice to the proponent on capacity constraints and need to upgrade the network. - Any systems intended to mitigate grid impacts including

	○ Real-time visibility of load, UPS behaviours, and PV output, load behaviour during stress periods ○ How, under each operating scenario, there is use of SCADA telemetry, monitoring, or control systems to verify capability ○ How the integration of the on-site Photovoltaic installation will contribute to daytime load reduction, output during peak-demand periods, interaction with UPS/battery systems, as well as a PV maintenance and performance plan to support contribution. ○ Whether power demand for temporary construction has been assessed cumulatively with nearby projects, and whether the DNSP has confirmed adequate temporary supply capacity? ○ Can the proponent confirm what is considered minor power use in stage 3 of construction? - How diesel will be used during grid stress periods including ○ Whether the proponent will develop a diesel minimisation plan aligned with grid-stress periods ○ Whether all 49 units of diesel generators are required to run concurrently under a worst-case scenario ○ Whether HVO will be used for first fill and all commissioning/testing - Assess the feasibility for onsite or proximate battery embedded storage systems to provide part or full back-up supply. - What actions will proponent take to mitigate GHG emissions emitted from backup generation? Will offsets be purchased? - Probabilistic analysis of outages and resulting impacts should include unnormalized data. Analysis should also outline what measures will be taken (e.g. powering down all non-critical functions) to mitigate impacts during such events, particularly in relation to sensitive receptors - A draft plan on how the proponent intends to comply with the AEMC's draft 'Improving the NEM access standards – Package 2' requirements. This draft determination includes AEMC's proposed new grid standards for data centre connections.
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