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COMMUNITY INFORMATION SHEET · RENEWABLES DEVELOPMENT

Data centres as grid partners

How the grid's biggest new users can help stabilise it — flexible, dispatchable, integrated

The key idea: the biggest new load can be an asset

Data centres are the grid's fastest-growing users: about 2% of grid electricity today, heading toward 6% by 2030 on AEMO's projections, with 5.4 GW of connections in progress in early 2026. Treated as passive load, that growth strains the system. Treated as **integrated grid actors**, they bring what a renewables-heavy grid is short of: flexibility, fast response and firm equipment. Which Australia gets is a *design choice*, made in connection agreements and planning approvals.

Flexible and dispatchable demand

Not all computing is equally urgent. Some workloads, such as AI training and batch processing, can slow or shift to another time or site when the grid is tight, catching up when renewables are abundant. That makes a data centre a **dispatchable load**: demand that can be scheduled like generation. Critical loads (payments, health, real-time services) stay protected; flexibility comes from the share that can move. And unlike traditional heavy industrial loads, built around spinning machines and hot processes that take hours or days (and real cost) to wind down and restart, a data centre's load is software: it can turn down or back up in **seconds, without damage**, making dynamic, minute-by-minute coordination of demand and supply possible.

Demand response and on-site assets

Integration goes further than shifting workloads. Data centres hold grid-grade equipment as standard: batteries and generators sized to run the whole facility. Enrolled properly, that fleet can support the grid in stress events instead of sitting idle and on-site batteries can provide the same stability services as a grid battery (sheet 07).

The swing risk and the fix

The same speed cuts the other way: a large AI facility's demand can swing by **hundreds of megawatts in seconds** as big workloads start and stop, enough, unmanaged, to disturb the local grid. The emerging fix is a live, two-way **communication and orchestration layer** between data centre and grid operator: the grid signals stress and **AI orchestration** responds in seconds by slowing flexible workloads, adjusting cooling, or drawing on batteries. Utilities and major operators are piloting this now overseas.

What's changing in Australia

The rules are being written now: the AEMC has proposed connection standards for large loads (30 MW and above) so big facilities ride through disturbances rather than making them worse; AEMO says data centres must participate "in a fair and sensible way" and is preparing its first **Demand Side Statement of Opportunities**. For communities and councils this is the window: flexibility and demand-response participation can be asked about and committed to, while projects are on the table. *(Current at July 2026.)*

What good practice looks like

- Flexibility stated in numbers: how many MW can reduce, how fast, for how long. Not "we support the grid".
- Ride-through and connection standards met or exceeded and disclosed.
- On-site batteries/generators enrolled to support the grid in emergencies, where safe.
- A public annual figure for energy use and flexibility delivered: the water-transparency principle, applied to power.

Questions to ask

What share of this facility's load is flexible and is that in the connection agreement? Will its batteries and generators be available to the grid in a crisis? Does the operator participate in demand response and can it show where it has done so?

Want to know more? The AEMC's data-centre connection rule change and AEMO's demand-side publications are public; ask proponents how they'll comply. *Last checked: July 2026.* This sheet is general information, not legal or planning advice; a specific proposal is confirmed by qualified assessment.