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From: Foote, Jessica
Sent: Tuesday, 31 March 2026 3:03 PM
To: Writer, Simon; Graham, Michele; s22
Cc: s22
Subject: Notes Firmus meeting [SEC=OFFICIAL]

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Tim Rosenfield, Lauren Crystal
Shervin
Jess

s 22(1)(a)(ii) s47G
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s47G

Helps gvt counter asks for tax, subsidy etc from o/s. Paying market price power, paying grid upgrades. Not exporting value to US, using US demand to create value through Australian tax system. s47G, 47
. will pay tax on that. s47G, 47
s47G, 47

s 22(1)(a)(ii)

s 22(1)(a)(ii)

Firmus wanted contact in Federal for engt - Shervin confirmed its Ayres and Charlton office. Shervin explained ECMC and WMC mid-year. Keen to understand from Firmus approaches to energy, water, work with providers on demand flexibility. Firmus will send detail on their engineering solution they have worked with AEMO on grid stability.

Firmus not part of DCA. Want to set themselves apart as AI factory and fully support gvt direction set out in expectations.

s 22(1)(a)(ii)

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Meeting Notes 03.07.2026– Firmus (Tim Rosenfield), s22 , Shervin, Michele Graham

Key Messages

- Firmus presented on its recent commitments regarding energy procurement, grid support, water use and local economic benefits from its planned AI factory developments.
- The company positions itself as fundamentally different from a traditional data centre operator, with a stronger focus on AI compute workloads, grid responsiveness, domestic manufacturing and workforce development.

Energy Commitments and Grid Impact

Energy Procurement

- Firmus has committed to purchasing s47G, 47 .
- Power Usage Effectiveness (PUE) and operational efficiency are central design considerations.

Grid Support and Firming

- s47G, 47

  capacity to be built by energy partners within the first five years.
- While it is not possible to fully underwrite renewable generation from day one, Firmus has committed to enabling construction of **twice as much new energy capacity as they use within five years**.
- The company stated it is paying above-market rates to support new solar and wind developments and is not seeking subsidies.

Load Flexibility

- Firmus disagrees with the position s 22(1)(a)(ii) that large data centre loads cannot be switched off.
- The company intends to actively participate in demand management by:
  - s47G, 47 .
  - Taking facilities off-grid during periods of grid stress and high prices.
  - Operating off-grid for up to **220 hours per year in South Australia**.
- Firmus stated that if fully deployed in South Australia it could account for approximately **40% of grid demand**, meaning load reduction would materially reduce pricing pressure.

AI Workload Management

- Training workloads can be ramped down relatively easily.
- Inference workloads can also be reduced, but require more careful management.
- During periods of grid stress, Firmus advised it could reduce AI service capacity (e.g. token processing capability) to around **20% of normal operations**.
- Firmus noted it operates as a **"last-on, first-off" load** in Tasmania, allowing its facilities to be curtailed ahead of other users during grid stress events.

Backup Power

- Facilities will include approximately **10 minutes of battery storage** and **diesel generator backup**.

- Battery modules are roughly the size of shipping containers, with generators mounted above.
- Diesel fuel storage tanks will be underground.
- Planning assessments assume **generators** operate continuously (worst-case scenario), though Firmus expects actual use of only **10–15 hours per year**.

Water Use and Cooling

Cooling Technology

- Firmus uses a predominantly **closed-loop cooling system**.
- The company emphasised "dry cooling" and adiabatic cooling technologies, relying primarily on fans rather than water-intensive cooling.

Water Consumption

Tasmania (Launceston)

- Due to local climatic conditions, wet cooling is forecast to be required on only around **10 days per year**.
- Annual water consumption is estimated at approximately **3.4 million litres**, which Firmus compared to the annual use of a Sydney food-court restaurant.

South Australia

- Conditions are hotter and drier than Tasmania, requiring more water use.
- Estimated annual water consumption was compared to roughly **40 restaurants per year**, still substantially lower than conventional large-scale data centres.

Rainwater Capture

- South Australian sites at **Tailem Bend** and **Port Augusta** will incorporate extensive roof catchment systems.
- A significant proportion of water demand will be met through on-site rainwater harvesting, with minimal reliance on mains water.

Wet Mode Operations

- Facilities will generally operate in dry mode.
- During extreme temperatures, a fine mist is introduced into incoming air streams, reducing temperatures by around **10 degrees**.
- Wet mode is only required when wet-bulb temperatures exceed certain thresholds (around 26°C).

Community and Planning Considerations

Noise and Emissions

- Diesel generators create both noise and occasional emissions when operating.
- At approximately 1 km distance, Firmus estimates operating noise levels of around **10–20 decibels**, comparable to a library environment.

- The Tailem Bend site is located a considerable distance from residential areas, reducing potential community impacts.
- Firmus acknowledged generator placement can be a greater issue in urban locations.

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Economic Impact and Jobs

AI Factory Model

- Firmus argued AI factories create substantially more ongoing operational employment than traditional data centres.
- Construction employment is similar to conventional facilities, but ongoing staffing requirements are higher due to complex AI infrastructure.

Employment and Skills

- Example provided: the Melbourne cluster includes:
  - s47G, 47
  - s47G, 47
  - Thousands of kilometres of cabling
  - Around **40 MW** of load
- These facilities require specialist engineering, technical support and AI operations staff.
- Firmus is investing in training pathways and AI-related technical skills.

Economic Impact Study

- Oxford Economics is undertaking an economic impact assessment.
- Preliminary estimates suggest approximately **0.5 ongoing FTE per MW** of deployed capacity.
- The final report is expected in **mid-August**.
- I indicated we would be keen to see this and any case studies they can provide

Australian Manufacturing and Sovereign Capability

- Firmus emphasised domestic manufacturing capability as a key differentiator.
- Power and cooling equipment that is typically manufactured overseas is instead being produced in Australia.
- s47G, 47
- Cooling systems are produced in **Queanbeyan**, based on Firmus-owned intellectual property.
- s47G, 47 .
- The company supports workforce development through TAFE pathways.
- Firmus stated that around half the cost of a data centre is usually associated with equipment manufactured elsewhere, creating opportunities for greater local industry participation.

Current Employment

- Firmus advised it is currently employing approximately s47G, 47 , including procurement and assembly activities.

Artificial Intelligence and Automation

- Firmus uses AI to optimise aspects of facility operations.
- However, the company does not expect AI or robotics to replace diagnostic, troubleshooting and maintenance functions in the foreseeable future due to the complexity of the systems involved.

Questions Raised

Shervin

- Asked what proportion of the year the additional **firming capacity** procured by Firmus would be insufficient, potentially resulting in pressure being placed on the grid.

Michele Graham (she/her)
General Manager