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For Immediate Release

Voltage as a Service (VAAS): Unlocking Grid-Wide Benefits Across Commercial and Industrial Sectors

Melbourne, 21st October 2024 – Voltage as a Service (VAAS) is emerging as a critical solution for reducing energy consumption, cutting carbon emissions, and improving grid stability.

A new report highlights the transformative potential of adopting Voltage as a Service (VAAS) across Australia's Commercial and Industrial (C&I) sectors, revealing that widespread implementation could deliver substantial benefits to businesses, the energy grid, and the environment.

Voltage as a Service (VAAS) regulates and optimises the voltage supplied to equipment, ensuring it operates at optimal efficiency.

This simple but effective technology offers a path toward sustainable energy use without compromising business operations.

Key Findings from the Report

1. Significant Energy Savings

- C&I users could achieve energy savings of 5-15% depending on load type and initial voltage levels.
- With 170 TWh of annual electricity consumption in Australia, a conservative 5% savings from C&I users would equate to 4.25 TWh annually—enough to power 600,000 homes. A 10% saving could power 1.2 million homes.

2. Lower Carbon Emissions

- By reducing energy demand, Voltage as a Service (VAAS) could cut Australia's carbon emissions by 2.975 million tonnes per year, the equivalent of taking 650,000 cars off the road.
- At the higher end of potential savings (15%), emissions reductions could reach 8.925 million tonnes, comparable to removing over 2 million cars from the road annually.

3. Reduced Peak Demand and Grid Stress

- Voltage as a Service (VAAS) can reduce peak demand by 5-10%, preventing grid instability and reducing the need for costly peaking power plants.
- For example, a 5% reduction in C&I peak demand—if starting from 20 GW—would save 1 GW, equivalent to the output of a large gas-fired power plant.

4. Enhanced Equipment Protection and Longevity

 Voltage as a Service (VAAS) prevents over-voltage conditions, extending the lifespan of electrical equipment such as motors and transformers by 10-15%.

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 This also translates to reduced maintenance costs and fewer equipment failures, ensuring businesses save on operational expenses.

Broader Network and Financial Benefits

- Reduced Transmission Losses: Ensuring voltage levels remain optimal could reduce transmission and distribution (T&D) losses by 1-2%, especially during high-demand periods.
- Lower Operating Costs for Businesses: A business using 10 GWh annually could save 500 MWh per year, or \$75,000 annually, through Voltage as a Service (VAAS).
- Deferred Infrastructure Investment: Reducing peak demand and improving load efficiency would allow utilities to defer expensive grid upgrades, saving \$100-\$500 per kW of deferred capital expenditure.

Supporting Australia's Energy Transition

With the commercial and industrial sectors accounting for half of Australia's energy consumption, adopting Voltage as a Service (VAAS) across the board can play a critical role in achieving Australia's emissions targets. This technology offers businesses a win-win scenario: reduced operational costs and enhanced environmental performance.

Voltage as a Service (VAAS) not only supports grid stability but also reduces the need for new infrastructure investments, promoting a more resilient energy network.

Conclusion

The aggregated impact of grid-wide Voltage Optimisation is transformative. Implementing Voltage as a Service (VAAS) across Australia's C&I sector can deliver energy savings, emissions reductions, and financial gains, aligning perfectly with Australia's sustainability and energy transition goals.

As the nation seeks to build a more stable and sustainable energy future, Voltage as a Service (VAAS) offers a cost-effective, immediate solution to meet these challenges.

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