



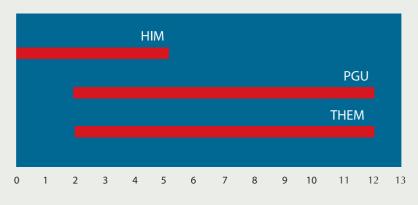
HIGH EFFICIENCY

For Telecom BTS power supply applications, Ausonia has developed a complete family of **HIGH EFFICIENCY DC POWER SOLUTIONS**, representing the latest variable speed DC gensets technology now available in the market.

This products family offers the right balance among lowering $\rm CO_2$ emissions, reducing operational costs and enhancing the overall generators fleet efficiency, guaranteeing a specific fuel consumption rate of only $\bf 0.4~l/kWh$.

The family includes three main product ranges (HIM, PGU, THEM), whose different configurations are suitable to satisfy every typical site scenario, bad grid or off-grid, answering to different power needs from the Customers, as well as to a wide scenario of implementation strategies.

Typical Applications of Ausonia DC Solutions



BTS Average Load (kW)

Ausonia High Efficiency DC Gensets solutions are available in different configurations, duly equipped and designed to satisfy multiple specific demands of its Customers.

- RAPID "PLUG & PLAY" CONNECTIONS WITH SOLAR, WIND AND GRID
- HIGH QUALITY FUEL LEVEL SENSORS WITH FUEL ANTI-THEFT SYSTEMS
- WEB BASED REMOTE MONITORING SYSTEM WITH STATISTICS & REPORTS
- DC DISTRIBUTION & ENERGY METERS FOR MULTITENANT SITES
- DC AND AC OUTPUT VOLTAGES WITH SCALABLE CAPACITY





DC Generator with Battery Hybrid Integrated Module

With a field proven 10 year track record, the **Hybrid Integrated Module (HIM)** represents the forerunner hybrid solution by Ausonia, integrating in one single product a variable speed DC generator rated @-48V and deep cycle batteries from any technologies (Lithium/VRLA/AGM).

The HIM solution provides a specific **fuel consumption rate of 0,4 l/kWh** and this can be even lower, especially in case of very low load applications, or with the possible integration of Renewables energies **(Solar & Wind)** and/or **Grid** inputs, as site load and battery are automatically fed by the cheapest energy source available on site. On top of the savings procured by the reduced fuel consumption, the Ausonia Hybrid Integrated Module allows to extend the engine service interval and overall product lifetime, thanks to the significant

reduction in the daily engine running hours.

Main Performances HIM Range			
Average BTS load (kW)	Fuel consumption (I/day)	Engine running hours (I/day)	
1,0	9,9	4,1	
2,0	21,1	7,5	
3,0	30,1	9,5	

Main Performances HIM Range with 3 kWp Solar			
Average BTS load (kW)	Fuel consumption (I/day)	Engine running hours (I/day)	
1,0	4,6	2,7	
2,0	15,8	6,0	
3,0	25,1	7,9	



Single DC Generator Power Generation Unit

Among the High Efficiency Products family developed by Ausonia, the **Power Generation Unit (PGU)** represents the immediate solution to Customers who are looking to hybridize their existing sites with a **low CAPEX** product. The Ausonia PGU range includes a variable speed DC generator equipped with a smart controller ready to run the system in cycling operation with external batteries (Lithium/VRLA/AGM).

The solution is also deployable as **back-up power** to Grid outages, allowing the customers to save on ATS expenditures, or also to run as emergency energy source in Solar PV installations.

With the versatility to be deployed even in **dual configuration (1+1)**, the PGU is ready to be installed to power off-grid sites in remote or rural areas, even when it comes to high power consumptions sites.

With a very attractive initial investment and with immediate significant **OPEX savings**, the PGU allows reaching the payback in a few months only.

Main Performances PGU Range		
Average BTS load (kW)	Fuel consumption (I/day)	
2,0	18,2	
3,0	27,3	
4,0	36,5	



Dual DC Generators Twin High Efficiency Module

The **Twin High Efficiency Module (THEM)** by Ausonia integrates, in one single product, two variable speed DC generators in a total redundant configuration.

The solution is designed to run in **dual mode (1+1)** on off-grid sites in rural and remote areas. The system allows reaching a specific fuel consumption of only **0,4 I/kWh**, offering the highest power availability rate and the **longest maintenance intervals** and **backup autonomy** today available in the market.

When necessary, the generators can automatically switch their operation into parallel mode, in order to cover temporary high load demands, and, if equipped with Ausonia Web-based RMS and Energy Meter, it can indicate from remote the power consumption by each tenant. The specific characteristics of this system, which **guarantees fuel efficiency** notwithstanding its continuous operation, allow the entire THEM range to achieve excellent performances, even under very hard climate conditions and harsh environments.

Main Performances THEM Range		
Average BTS load (kW)	Fuel consumption (I/day)	
2,0	18,2	
4,0	36,5	
6,0	54,7	



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