

Auxiliary Power Units



POWER IS A PROMISE. RELIABILITY IS THE PROOF.

Don't let a power failure compromise your mission. The engine and generator are the heart of your Vehicle Auxiliary Power Unit (APU), and their performance must be beyond question. At Propulsion Systems Laboratory (PSL), we provide the rigorous, data-driven testing you need to guarantee your APU's core components are ready for the demands of the field.

Partner with us to validate your APU engine and generator, mitigate the risk of power loss, and deliver the steadfast energy your critical systems require.

Our Specialized APU Engine & Generator Testing Services

We provide a comprehensive suite of testing capabilities focused on one goal: delivering the actionable data you need to build a superior and more reliable APU.

Endurance Testing: Forging Long-Term Reliability

An APU's value is measured in thousands of hours of dependable operation. Our specialized endurance testing subjects your APU engine and generator to prolonged, continuous operation under varied and demanding electric loads. This simulates a full service lifetime, allowing us to definitively evaluate long-term reliability and expose wear on critical components before they ever leave the lab.

- Benefit: Deploy with a proven, durable power source and eliminate the risk of critical power failure during silent watch or high-demand operations.

Performance Mapping: Optimizing Power & Efficiency

Unlock the full potential of your design. We conduct detailed performance mapping to optimize your APU engine's fuel consumption and the generator's electrical output across the entire operational envelope. We measure power quality, voltage stability, and efficiency to ensure clean, consistent energy delivery under all load conditions.

- Benefit: Ensure consistent, high-quality power for sensitive electronics and maximize fuel efficiency to extend mission duration and reduce logistical burdens.

Development & Durability Analysis: Engineering for Robustness

The decisive edge is engineered here. In our controlled, repeatable test cell environment, we validate the integrated engine and generator package. Through targeted instrumentation and detailed post-test inspections, we identify potential failure modes, analyze component stress, and provide the critical data needed to refine your APU design for ultimate robustness.

- Benefit: Eliminate performance variables, guarantee stable power delivery, enhance component durability, prevent unexpected failures, and extend the APU's operational service life.