

SWGIT™: GREEN COMPUTE BY DESIGN

Forcing Sustainable, Sovereign Workloads on Google Cloud

1. MEASURABLE SUSTAINABILITY IMPACT

40–80% reduction in ghost compute: Driving direct energy and carbon savings per workload by eliminating "zombie" cycles.

Lower power draw per effective compute unit: Maximizing work-per-watt via pre-execution gating.

Real-time auditability: Built-in compliance for **NIST 800-53, FIPS 140-3, and CMMC 2.0.**

Reclaimed Capacity: Reclaiming wasted headroom to fund premium GCP services like **Vertex AI and BigQuery.**

2. DATA CENTER & FEDERAL COMPLIANCE IMPACT

SWGIT™ enables agencies and enterprises to meet strict green mandates at the execution layer:

- **Federal DCOI & FEMP:** Achieves higher rack density and improved PUE without infrastructure changes.
- **DoD Sustainable Procurement (SPP):** Delivers verifiable resource reduction at the compute layer.
- **EIA Mandatory Energy Reporting (2026):** Cryptographic Trust Receipts provide immutable proof for Scope 2/3 emissions accounting.
- **Grid & Thermal Optimization:** Prevents erratic power spikes to maximize Google's 24/7 renewable PPAs while lowering rack-level heat to free up critical cooling capacity for high-density AI clusters.
- **Enterprise ESG Retention:** Delivers deterministic Scope 3 data directly to GCP customers via cryptographic receipts, creating an unmatched retention mechanism for compliance-driven enterprises.

TECHNICAL VALIDATION: HOW SWGIT™ CLAIMS EFFICIENCY

A. The 40–80% Ghost Compute Reduction: By moving authorization to a pre-execution deterministic gate (denying processor clock advancement until intent is verified), it stops unauthorized, looping, or malicious workloads from hitting the CPU/GPU at all.

B. PPA Optimization & Grid Stabilization: By enforcing sub-millisecond, deterministic gating at the workload layer, SWGIT flattens unpredictable processing spikes, allowing Google to better align actual consumption with Power Purchase Agreements (PPAs).

C. High-Density AI Cluster Cool Down: Dropping the volume of wasted compute lowers cumulative thermal dissipation at the rack level, preserving cooling budgets for intensive AI training/inference.

D. Cryptographic Proof for Scope 3: SWGI generates an immutable, tamper-proof Trust Receipt for every approved or blocked action, providing the first "silicon-to-ledger" emissions audit trail.

3. STRATEGIC VALUE TO GOOGLE CLOUD

- **Competitive Moat:** Positions Google Cloud as the premier platform for "Green Sovereign Compute" in regulated and defense markets.
- **Anthos & Sovereign Cloud Integration:** Native compatibility with GKE, Anthos Fleet, and Confidential Computing.
- **ESG Leadership:** Directly advances Google's 2030 carbon-free energy goals through customer-side utilization efficiency.

Conclusion: SWGI™ forces the stack to be green by design. By preventing waste before it begins, SWGI™ delivers measurable energy efficiency, carbon reduction, and data center optimization while meeting the highest levels of governance.

We are ready to demonstrate this capability in your validation environments and support co-sell motions with Public Sector and sovereign customers.