PROWESS   **DELL** Technologies   **intel.**   **intel XEON**

Modernize for Efficiency

Research by Prowess Consulting shows that current-generation Dell™ PowerEdge™ servers powered by Intel® Xeon® 6 processors can decrease server energy consumption while maintaining performance.

Modern data centers face a dual challenge: rising energy costs and tightening sustainability mandates. And both of these challenges come while also supporting increasingly demanding workloads. Research by Prowess Consulting shows that upgrading from 16th generation Dell™ PowerEdge™ servers to 17th generation models powered by Intel® Xeon® 6 processors can deliver significant energy savings without compromising performance.

Using the Dell™ Enterprise Infrastructure Planning Tool (EIPT), we modeled four representative use cases—general compute, dense compute, edge/small and medium-sized business (SMB), and AI inferencing—under consistent performance conditions. Our results reveal up to:

- **42% lower power consumption** for edge/SMB deployments.[1]
- **33% reductions** for AI inferencing workloads.[1]

Across all scenarios, organizations can achieve meaningful cost savings and emissions reductions, including up to:

- **$237,000 annually** for general compute.[1]
- **622 metric tons of CO_2 emissions avoided** for AI inferencing in a one-third fleet refresh.[1]

Beyond efficiency gains, we found that 17th generation PowerEdge servers offer advanced telemetry, automation, and thermal design innovations that can support sustainability and compliance goals. ISO-power analysis highlights another advantage: dense compute environments can double core counts within the same power envelope, enabling workload consolidation without increasing energy consumption.

Modernizing with 17th generation PowerEdge servers and Intel Xeon 6 processors can position organizations to reduce operating expenses (OpEx), meet environmental, social, and governance (ESG) mandates, and prepare for future workloads—all while maintaining predictable performance. For the full study details, visit "**Increase Power Efficiency Without Diminishing Performance**."

Latest-generation Dell™ PowerEdge™ servers, powered by Intel® Xeon® 6 processors, maintain performance while delivering:[1]

Up to 13% power reduction for **general compute** workloads

Up to 20% power reduction for **dense compute** workloads

Up to 42% power reduction for **edge/SBM** workloads

Up to 33% power reduction for **AI inferencing** workloads

Endnotes
[1] For details, see the full study: "**Increase Power Efficiency Without Diminishing Performance**."