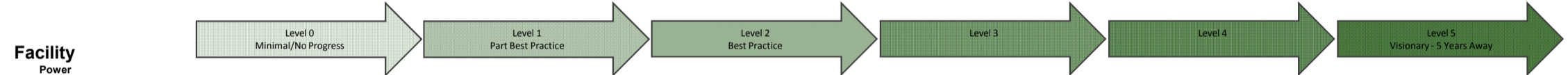


Data Center Maturity Model



1.1	Critical Power Path Efficiency - Building Entrance to IT load	• Mid to low efficiency <90% based on your typical utilization	• 90% efficiency based on your typical utilization	• 92% efficiency based on your typical utilization	• 94% efficiency based on your typical utilization	• 95% efficiency based on your typical utilization	• 96% efficiency based on your typical utilization
1.2	Architecture	• Low efficiency power infrastructure and inefficient UPS use • Greater redundancy than required • Numerous isolation transformers	• Eco Mode UPS if applicable to business type • Fewer and higher efficiency transformers (NEMA TP1 or equivalent) • Verify the product's efficiency curve is highest for the load range used vs. highest overall	• Consolidate transformers (use fewer series isolation transformers, consider autotransformers) • Select power (and backup) technologies based on TCO, Materials & Sustainability	• Eco Mode UPS that works for all business types • Scalable power infrastructure • Use products with flat, high efficiency at all loads • Review and capture waste heat (for example, to augment generator block heaters)	• Move to higher IT load voltage, either AC or DC	
1.3	Operations	• Maintained inefficiently/unbalanced	• Monitor equipment and performance in real time • Document and participate in the recycling plans for batteries and other consumables	• Provision power quality based on the equipment type • Align rack power sizing with typical uses	• Placement of large power equipment outside of the conditioned space to reduce cooling load (e.g. Switchgear, Transformer, UPS) • Use monitoring software data and other tools to implement real time changes (phase balancing, load changes, etc)		• Power infrastructure automatically adapts while maintaining required availability and redundancy
1.4	Generation				• Alternative method of backup power for the data center based on TCO, environmental and sustainability considerations • Use of onsite or offsite (require proof of "additionality") low carbon power generation - 5%	• Use of onsite or offsite (require proof of "additionality") low carbon power generation - 15%	• Use of onsite or offsite (require proof of "additionality") low carbon power generation - 35% • Implementation of new, currently undiscovered or undefined energy storage techniques