Building a "Green" Backup and Archive Solution

How to Make Your Data Center Eco-Friendly with NEO® 8000e

Why do you need it?

Enterprise data centers are faced with numerous challenges when it comes to backup and archive operations. One of those challenges is whether or not you have a solution that can help you effectively manage your ongoing total cost of ownership by reducing carbon footprint and energy costs for long-term data storage. Consider the following points:

➢ In 2007, the US Congress commissioned the Environmental Protection Agency (EPA) to study power consumption inside the data center.

➢ The EPA found that over 90% of all datacenters will experience power failures or limited power availability.

➢ Most energy experts agree that energy costs will continue to increase over the next few years – resulting in higher data center costs for power and cooling.

➢ Disk systems cost 24 times more to power and cool than tape systems*.

How we help...

NEO 8000e is the ideal enterprise-class solution for long-term, environmentally-responsible backup and archive. Utilizing less power than other enterprise tape libraries, NEO 8000e reduces your power and cooling costs. In addition, NEO 8000e's extremely dense footprint helps you lower your total cost of ownership and the costs associated with the use of costly data center floorspace. Consider, for example, the following comparisons of annual power costs associated with different enterprise-class libraries:

	Overland Storage NEO 8000e	SpectrLogic T950	Oracle SL8500	Quantum Scalar i2000
Watts	638	3600	1208	1320
Annual kilowatt hrs (24x365)	5,589	31,536	10,582	11,563
Electricity cost (kW/hr)*	$0.0983	$0.0983	$0.0983	$0.0983
Annual power cost	$549	$3,100	$1,040	$1,137

*according to 2010 US Energy Information Administration

There is no doubt that storage requirements continue to increase at staggering rates. Whether it's backup, archive, disaster recovery or regulatory compliance, data storage solutions are responsible for increasing data center power loads. With energy costs continually on the rise this means that unless your storage solution is designed to minimize the use of valuable energy and floor space resources, your cost of ownership is also on the rise. In addition to cost considerations, there is the impact storage solutions are having on the environment, and the creation of greenhouse gases. IT managers have already come to the realization that for long-term and off-line data storage, automated tape libraries are more energy-efficient than disk-based systems. But have they considered that energy costs vary from tape library to tape library?

Overland Storage – the Expert in Automated Tape Backup, Archive and Disaster Recovery

The NEO 8000e has been specifically designed to serve as a "green" backup and archive solution for your energy-efficient data center. NEO 8000e not only reduces your electric bills but also decreases cooling requirements. In addition to being an "environmentally friendly" solution, NEO 8000e provides extremely dense backup and archive capability, reducing the carbon footprint and minimizing the use of costly data center space. So how do we make NEO 8000e run so efficiently?

Right-sized Robotics

Bigger is not always better. While other tape library vendors may try to convince you that they have the biggest, most powerful robot on the planet, they usually won't tell you what impact that has on your energy costs. At Overland, we don't put any more power into moving cartridges than is necessary. We're reasonable about robotics. The NEO 8000e high-performance robotic mechanism provides the reliability, robustnesses and speed needed for data-intensive enterprise backup and archive applications without burdening you with excessive power and cooling costs.

*The Clipper Group Report

Power Optimization

NEO 8000e provides superior power efficiency with power supplies that are specifically designed to draw only the necessary amount of energy for robotic operation. Unlike other enterprise tape libraries, NEO 8000e isn't worried about providing enough power to light up an entire city block. The focus of NEO 8000e is to provide you with the highest-speed, most reliable, most efficient operation while minimizing power and cooling costs.

NEO 8000e is Cool

There's no doubt that moving things require energy and create heat. In order to ensure data availability, improve performance and reduce downtime and service costs, a tape library needs the proper amount of cooling. Because the NEO 8000e consumes less power than "the other guys", it also generates less heat and requires less cooling. With a superior method of dissapating the heat generated inside the library, NEO 8000e does a more efficient job of managing power and requires less cooling.

NEO 8000e is Simple

Many enterprise libraries try to draw you in with fancy features like interior lighting, a series of indicator lights and robotic cameras to help you figure out what's going on inside the library. At Overland, we don't worry about lights and cameras – we give you action! The convenient remote management capability that NEO 8000e provides lets you know what's going on inside the library. For the super-curious who want to take a real peek inside, NEO 8000e gives you a viewing window inside the library. Those extra fancy features like interior lightening and cameras are not only unnecessary, they draw power – which generates heat – which requires cooling. We keep it simple for a reason.

The Ability to Scale Should be a Benefit, not a Burden

Enterprise-class libraries offer the ability to scale your capacity and performance as your data storage needs change. However, it's important to consider just exactly how they do that. Most library designs use a base module that contains all the power and robotics needed to access not only the base module but the expansion modules as well. This puts all of the power requirements and expense into every base module, making your energy costs unnecessarily high in non-scaled environments. NEO 8000e takes a much more energy-efficient approach. With redundant power and redundant robotics in each NEO 8000e module, Overland provides you with an extremely energy-efficient, cost-effective base solution – and continues the trend with each expansion module. You get the best "bang for your buck" no matter how many NEO 8000e modules you install.

The Size of your Data Center Impacts your Energy Costs

The larger your backup and archive solution, the more room it requires – which means more lights, more power, more air conditioning, etc. Right? Not with NEO 8000e. It provides an extremely dense form factor, packing up to 1.5PB of storage into less than 7 square feet of data center space. Other enterprise-class tape libraries take up as much as 51 square feet of data center space. NEO 8000e either lets you have 7 times the capacity and performance in the same amount of space, or helps you shrink your data center floor space by 86%. The less data center space you use, the lower your lighting, power and cooling costs.

There's no doubt that NEO 8000e provides the best combination of enterprise-class capacity, performance, reliability, data availability and serviceability. Combine that with its extremely energy-efficient design, and you'll not only have a "green" data center, but you'll add more "green" to your company's bottom line.

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