

Hitachi Storage Solutions at Work

Pacific Hydro

INDUSTRY Utilities: Energy

SOLUTIONS Tiered Storage/Consolidation

Hardware — Hitachi Adaptable Modular Storage 200

Software — Hitachi Resource Manager™ utility package

Services — Provided by Global Storage



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*Daniel Hayward
Global IT Manager
Pacific Hydro*



Hitachi Data Systems Powers Up Storage for Renewable Energy Provider

When Pacific Hydro, a fast-growing Australian renewable energy company, faced rapid growth with an inflexible storage infrastructure, it sought out a centralized, cost-efficient tiered storage solution. Hitachi Data Systems answered the challenge with a solution based on the Hitachi Adaptable Modular Storage 200, which would serve as the framework for an easy-to-manage storage area network (SAN).

Today, Australia burns fossil fuels to meet about 90 percent of its energy needs — but Pacific Hydro is looking to change that. In recognition of a growing public interest in geothermal, wave, solar, biomass and other emerging technologies, Pacific Hydro has built a portfolio of hydro and wind farm projects, both across Australia and around the world. These projects include the award-winning Ord River Hydro project in the Kimberley region of Western Australia and Chalicum Hills Wind Farm in western Victoria, as well as international renewable energy generation projects in Chile, North America, Fiji and the Philippines. In 2005 IFM Renewable Energy, an Australian organization owned by a group of industry superannuation funds and supported by three million Australians, acquired the company.

Between public concerns over greenhouse emissions and a Commonwealth of Australia government mandate requiring electricity

retailers to source an additional two percent of their electricity from new renewable energy sources by 2010, Pacific Hydro's growth prospects are outstanding. However, like many medium-sized businesses, Pacific Hydro faces challenges related to rapid growth in the volume of data it needs to store and access every day. With about 100 employees in three offices and nine remote power stations in Australia, plus a growing number of international projects, the company's technology requirements are evolving rapidly.

Wanted: Scalability for Growth

In the past, Pacific Hydro had simply installed new hard drives in its servers to handle growing storage requirements. However, following the company's expansion into Chile, the IT environment was becoming more complex to manage, and this incremental approach to managing increased storage demands was no longer sufficient.

The company began looking for a scalable technology solution to meet its growing storage capacity requirements. The move was also driven by the need for better electronic record keeping, such as being able to address compliance requirements for the storage and retrieval of e-mail records, while keeping an easy-to-manage and cost-effective architecture.

"We wanted quality," says Daniel Hayward, global IT manager for Pacific Hydro. "We didn't want to go with a cheap or basic system that was only going to last us 18 months. We wanted a good partner who would support us and a system that was scalable."

New SAN Delivers Flexibility

To meet its demand for quality, support and scalability, Pacific Hydro turned to Global Storage, a Melbourne-based storage services supplier and Hitachi TrueNorth™ Channel partner, for a cost-efficient tiered storage infrastructure. Because the company needed to install its new solution within the current IT production environment without causing any downtime, Global Storage and Hitachi Data Systems worked with Pacific Hydro's team to carefully plan the rollout. Together, the extended team conducted a thorough review of the project requirements and existing IT environment before preconfiguring a Hitachi Adaptable Modular Storage 200 and installing it over a weekend.

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Designed for first-time SAN deployments, the customizable Adaptable Modular Storage 200, which contains eight hard drives, was easily configured to meet Pacific Hydro's exact specifications and scalability requirements. Adaptable Modular Storage 200 provides a cost-effective modular solution that offers both high performance and high availability to support business application requirements and escalating data growth.

This solution provides flexibility with support for several tiers of storage, including high-performance Fibre Channel and cost-effective SATA, as well as the ability to enable RAID-6 block-level striping with dual distributed parity to ensure high availability and to provide the utmost fault tolerance.

“We knew that we could keep using patches for our data storage problems, but the Hitachi SAN would be a long-term solution to help us grow from a medium-sized business to a larger business,” says Hayward.

To take full advantage of the sophisticated capabilities of the Adaptable Modular Storage 200, Pacific Hydro uses the Hitachi Resource

Manager™ utility package. Providing both a Web-accessible graphical management interface and a command line interface (CLI), the Resource Manager utility package enables easy management of the Adaptable Modular Storage 200. It also supports integration tasks, including mapping, monitoring and troubleshooting.

Based on the strong Adaptable Modular Storage 200 foundation, the new SAN aggregates large storage pools from across the enterprise, helping to provide better performance for the applications that drive Pacific Hydro’s business. Centralized storage aids in dramatically improving storage utilization — which contributes to lower costs. In addition, high-end features such as cache partitioning and RAID-6 help maintain maximum availability and fault tolerance so Pacific Hydro can meet application requirements for availability and performance in a small footprint, regardless of how quickly its data grows.



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Centralized Storage Provides a Foundation for Growth

The new consolidated, networked storage solution has reduced management complexity and cut operational costs for the organization. By consolidating storage capabilities into a single highly available storage system, Pacific Hydro gained the advantages of centralized management plus the simplicity of a single backup and restore platform.

Investing for the Future

Since the initial implementation, Pacific Hydro has purchased an additional four hard drives for its Adaptable Modular Storage 200 and is looking to acquire a SATA expansion tray with 15 SATA hard disks, providing an additional 4.8TB of data that can be used for archives and files that are accessed infrequently.

“The solution has done everything it advertised,” says Hayward. “You can’t ask for more than that. It’s great to look forward to growing our business without worrying about how to grow our IT infrastructure.”

Partner Spotlight

Global Storage is a leading Australian supplier of data storage and security solutions. A division of Source Technology, Global Storage is backed by 20 years of extensive technical experience. Global Storage’s core strength lies in forming strong relationships with its customers to deliver successful outcomes. This is achieved through a proven implementation methodology, ideally suited for small to medium-sized and large enterprises, which facilitates ownership through commitment to knowledge transfer. For more information, please visit www.global-storage.com.au.

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