

BURLINGTON ELECTRIC POWERS UP

Affordable HP Workstations energize engineers



“These are rugged, powerful systems. We are continually impressed by how much performance and speed we were able to afford with our HP xw4550 Workstations.”

—Michael Raine, Sr. Network Administrator, Burlington Electric Department

HP customer case study: HP xw4550 Workstations provide affordable power for demanding, image-intensive engineering applications

Industry: Energy

HP recommends Windows Vista® Business

Objective:

Enable engineers to handle high-bandwidth, image-intensive applications at an affordable price-point

Approach:

On recommendation of Ormsby's Computer Systems, implement high-powered HP xw4550 Workstations

IT improvements:

- Faster data processing, file handling
- Users can work with multiple large image files at once
- Applications load, run faster
- Improved reliability

Business benefits:

- Affordable systems purchased under budget
- Utility able to add larger monitors to further boost user productivity
- Users making faster progress on roll-out of new grid management software

Burlington Electric Department, a municipal electric utility serving about 16,000 residential and 3,600 commercial customers in the City of Burlington, Vt., has long relied on HP Business Desktop PCs and servers for its business applications.

For its more demanding applications, however—such as the CAD programs its engineers use to map the city's electrical infrastructure—BED has discovered a new solution: the HP xw4550 Workstation. Affordable enough to fall well within BED's budget, the fast and



“With the HP xw4550 Workstation, our engineers work with multiple CAD and high-resolution image files at once. They load fast, so our users are more productive. And the price of the Workstations came well under our budget—so low that we had money left over to invest in the large, 22-inch diagonal monitors our engineers prefer for viewing drawings and working with split-screen windows.”

Michael Raine, Sr. Network Administrator,
Burlington Electric Department



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powerful xw4550 systems have boosted engineer’s productivity by speeding up applications and handling large files with ease. And the HP Workstation’s energy efficiency aligns with BED’s environmental values by minimizing power usage as well.

Money left over

The decision to purchase the new Workstations was based in part on BED’s experience with three HP xw4400 Workstations that it purchased to run a radio dispatching system and a power plant control system. The Workstations had replaced a pair of non-HP PCs that had proven both under-powered and unreliable. “They were problematic,” says Michael Raine, Sr. Network Administrator, Burlington Electric. “They were failing a lot.” The HP Workstations, on the other hand, proved to be both powerful and reliable, handling the dispatching tasks with ease. So when it was time to replace the desktops BED was using for its engineering applications, Brad Ormsby, President of HP channel partner Ormsby’s Computer Systems, Inc., recommended the HP xw4550 Workstations.

The HP Workstations were a fit in every way, Ormsby says. The price was right—the xw4550 system were so economical, in fact, that the utility had funding remaining to invest in 22-inch diagonal monitors—larger screens that it originally thought it could afford.

Power to spare

The Workstations’ 4 GB of memory deliver the computing power the utility needs. BED is preparing to roll out a Geologic Information System (GIS); this application combines spatial data, such as aerial photographs, with other data such as schematics to make managing the electrical grid easier and more automated. “Once it’s up and running, our GIS will help us respond more effectively to outages,” Raine explains. “We’ll be able to tell more quickly which circuits are open, right down to which houses have lost power.”

“When I first learned about the HP xw4550 Workstations, I knew they were the affordable, high-power solution Burlington Electric engineers need. The Workstations’ AMD Opteron processors and architecture maximize the systems’ performance because data is cached on the processor itself, reducing slow-downs in data processing. Combined with HP’s competitive pricing, the Workstations were the perfect fit for Burlington.”

Brad Ormsby, President, Ormsby’s Computer Systems, Inc.

To implement the GIS, however, BED engineers need to work with very large data files, AutoCAD drawings and high resolution “orthophotos” (specialized aerial

photographs). In many cases, users must work with multiple orthophoto files at once.

Ormsby knew the HP Workstations could handle it. "I'd taken some training on the new Workstations that covered CAD certification," Ormsby says. "I knew the HP xw4550 Workstation's dual-core design and AMD processors¹ would deliver the processing power Burlington Electric needs for its high-bandwidth applications."

Raine agrees. "The engineers noticed right away that their applications run faster. They've told me they can get more done because they're not sitting around, waiting for files to load. They can make changes to drawings more quickly than they could in the past."

"I use the HP website to submit calls if I need support. I've found it works very well. If Burlington Electric experiences the need for a part replacement, I open a ticket online with the system model, serial number, and the code. Within a couple of hours, I get confirmation that the part has shipped."

Michael Raine, Sr. Network Administrator, Burlington Electric Department

The Workstation's 80-watt, energy efficient power supply with ENERGY STAR® qualified configurations and EPEAT Gold listing was another plus, Raine adds. "Reducing power usage is extremely important to

Burlington Electric," he notes. "The Workstations have helped us advance toward our goal of reducing our own internal power consumption."

Raine also trusts HP to back up the Workstations with top-notch support. "I use the HP website to submit calls if I need support," he says. "I've found it works very well." If Burlington Electric experiences the need for a part replacement, for instance, "I open a ticket online with the system model, serial number, and the code. Within a couple of hours, I get confirmation that the part has shipped."

Continually impressed

BED relies on HP technology in other ways besides its high-powered Workstations. The utility's Microsoft® Exchange network runs on a clustered HP ProLiant DL380 server environment. Two HP ProLiant DL360 systems serve as domain controllers. The utility is virtualizing some stand alone HP PCs using Microsoft Virtual PC on two HP ProLiant DL360 G5 servers running VMware. For disk-to-disk back-up, the utility runs an HP StorageWorks Modular Smart Array (MSA) 500 system. "A virtualized environment improves manageability and that is always a plus," he says.

BED's 125 member management, IS, and administrative staff runs Microsoft Office applications on HP Compaq Business Desktop 5000-series PCs and HP Compaq 8000-series Performance Notebook PCs.

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Customer solution at a glance

Primary applications

Engineering applications

Primary hardware

- HP xw4550 Workstations
- HP xw4400 Workstations
- AMD Opteron processors
- HP Compaq Business Desktop 5000 series PCs
- HP Compaq 8000 series Performance Notebook PCs
- HP ProLiant DL380 servers
- HP ProLiant DL360 G5 servers
- HP StorageWorks Modular Smart Array (MSA) 500 system

Primary software

- AutoCAD
- Microsoft Office Suite software
- Microsoft Exchange
- Microsoft Virtual PC
- VMware

HP Services

- Three-year, 24 x 7 support contract



"The HP desktop PCs have been very reliable," Raine says. "I've used other brands of desktops before joining Burlington Electric. The HP systems are solid machines that give fewer problems, even toward end-of-life."

Raine sees that same reliability in the HP xw4550 Workstations. "These are rugged, powerful systems. We know we can trust them to perform." BED trusts them so much, in fact, it plans to buy additional systems for another high-bandwidth job: running its

environmental monitoring stations. "It's an intense application," Raine says. "The Workstations will be handling real-time data capture of 20 different data points, 24/7." And because the environmental monitoring is government-mandated, there's no room for error. But Raine knows the HP xw4550 Workstations will be up to the task. "We are continually impressed by how much performance and speed we were able to afford with our HP xw4550 Workstations," he says.

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¹This system requires a separately purchased 64-bit operating system and 64-bit software products to take advantage of the 64-bit processing capabilities of AMD technology. Dual/quad/triple-core processing available with AMD technology is designed to improve performance of this system. Given the wide range of software applications available, performance of a system including a 64-bit operating system and a dual-core processor will vary.

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This customer's results depended upon its unique business and IT environment, the way it used HP products and services and other factors. These results may not be typical; your results may vary.

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