Xcel Energy®

HealthPartners

System-wide virtual desktop upgrade saves energy and money.

> It's a great example of how we look at a variety of ways to operate more efficiently while maintaining high standards of patient comfort.
>
> Dana Slade,
> HealthPartners Sustainability Program Manager

Upgrade to efficiency

With more than 25,000 computers in 90 hospitals and clinics across the Twin Cities, the leaders of the Information Technology department at HealthPartners are always looking for the safest, most energy efficient way to operate that still affords flexibility to push out regular updates.

The answer was to implement a virtual desktop infrastructure or VDI to better manage the many computers needed across the health care system.

"Our director of IT security felt strongly that it was easier to secure patient data if we got the hard drives off the desk," says Adam VanAlbrecht, HealthPartners technical project manager.

So in 2011, VanAlbrecht and others on staff began the massive upgrade project and worked with Xcel Energy to get rebates to offset the cost.

The benefits of virtual desktop devices

Virtual desktop devices are also referred to as either "thin clients" or "zero clients," compared with the term "full client," meaning a personal computer (PC). With thin clients, the operating system resides on the device, but application processing is on a server. With zero clients, everything runs on the server. Both thin and zero clients are becoming a go-to solution to replace PCs in many corporate settings. Businesses making the switch report improved data security, cost savings, increased reliability and productivity.

These devices rely on the principles of server-based computing technology in which applications are installed, managed, supported and executed on the server — not on the PC. This solves many fundamental problems associated with managing the applications on the PC itself.

Project Snapshot	
Project	Replace almost 2,500 desktop personal computers with zero clients
Cost	$262,000
Xcel Energy rebate	$134,000 ($60 per unit)
Annual energy savings	$76,000 a year in energy savings and $60,000 a year in non-energy operation and maintenance savings, compared with maintaining PCs
Direct payback term*	About one year

*Additional licensing, server and other infrastructure costs will be incurred at the central data center.

The workstation is comprised of a monitor, keyboard, mouse and processing power to interact with the server. It uses less space and can be mounted to a wall or under a desk since there is no tower and no local storage. It operates the same as a desktop.

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He says the priority list follows this order:

1. Security. No data is stored on desktops, reducing the number of risks.

2. Upgrades. Software is upgraded frequently. A VDI makes it easier and faster to update all devices at once.

3. Cost effectiveness and sustainable measures. There is significant energy savings and cost savings compared to running an equivalent number of PCs.

4. End device cost saving. The VDI is simply a network device making the equipment on the desk comparatively cheap. More is spent on servers but the money saved on the devices more than makes up for it.

Benefits of a VDI

- **Increased security: Lower risk of viruses** — VDIs do away with hard drives and administrators can restrict the access to USB sticks and CD ROMs. This prevents users from loading foreign applications onto the devices, resulting in increased security levels and virtually eliminating viruses. It is also a secure approach for working from home, as no corporate data is downloaded to virus-prone home computers.

- **Reduced administration and end user support** — Devices are far simpler to manage. Administrators can perform upgrades, deploy patches, applications and virus updates solely on the terminal servers for thousands of users—without having to visit the individual workstations.

- **Adding or replacing clients is far easier** — In a server-based computing environment, adding computers for new employees can be done in a matter of minutes. Also, should a device fail, the computer can be restored in minutes simply by replacing the device.

"It's a good option for a generic work station," says VanAlbrecht, explaining why they began the process in their exam rooms. "Shared work stations used to access medical records are the perfect place for these devices. Any specialized use like radiology or cardiology doesn't work as well." With that in mind, approximately 3,000 of HealthPartners devices were switched at various locations around the Twin Cities area.

They've also implemented a single sign-on or SSO device for multiple users accessing the same medical record to essentially tap in and out of devices without having to log in or out. The nurse, doctor or other professional simply taps his or her identification badge and is automatically logged in.

"It's much faster and everyone on staff loves it," says VanAlbrecht.

Sustainable practices
The VDI system implementation is one of many efficiency projects completed by HealthPartners over the last decade.

Dana Slade, HealthPartners sustainability program manager, and many others in the HealthPartners system, have worked with Xcel Energy on lighting, heating, cooling, motors and efficiency controls projects over the years, accumulating hundreds of thousands of dollars in Xcel Energy rebates and long-term, energy efficiency cost savings too.

"This is one aspect of our comprehensive sustainability program," says Slade. "It's a great example of how we look at a variety of ways to operate more efficiently while maintaining high standards of patient comfort."

"Dana is very engaged," says Scott Kurtz, Xcel Energy account manager. "His job as the sustainability manager is to make sure every kilowatt hour and therm that can be saved is being saved. He's won awards for his work and is more than willing to go the extra mile to get us what we need to help him get rebates."

The admiration is mutual.

"Scott has been a good sounding board for things we're working on," says Slade. "He's a good business partner for us as an organization."

Next steps
Slade says they're already talking about signing up for solar. He's working with Kurtz to determine the best way to get involved with renewable energy options.

It's the next step in a long line of efficiency and sustainability measures prioritized by HealthPartners, implemented by technical experts and rebated by Xcel Energy.

For more information about Xcel Energy's Computer Efficiency rebate program, call an energy efficiency specialist at **855.839.8862** or contact your local Xcel Energy representative.

Benefits of a VDI
- **Disaster recovery: Data is more secure and easier to back up** — If a terminal fails, important data isn't lost since it is stored on the server. Having a centralized storage system allows for faster and easier back-ups as well as efficient disaster recovery.

- **Lower power consumption: Save on electricity and heat generation** — A VDI device uses only a third of the power that a PC uses and generates far less heat and noise, resulting in substantial long-term savings.

- **Easy licensing management and conformance to legal requirements** — Due to the centralization, software licensing becomes far easier to monitor and manage. Only the servers need to be audited and not the device itself.