



Lenovo's ThinkCentre A61e

ThinkCentre A61e saves more than a little green

Lenovo combined small size and weight with energy efficiency, simplicity of operation and ease of management in its Think Centre A61e:

Energy efficiency:

- ThinkCentre A61e complies with EnergyStar 4.0 and consumes less than half the electricity of a typical small form factor desktop, reducing electric bills.

Low environmental impact:

- The A61e received an EPEAT Gold rating for its energy efficiency and use of easily recycled components.
- Its low electricity use reduces greenhouse gas emissions.

Quiet operation:

- The A61e produces 3.8 bels of sound at idle and 4.1 bels under load, less than most offices' than background noise.

Small size and low weight:

- The A61e weighs 8-pounds and measures 10.8-inches wide, 9.5-inches deep and 3.2-inches high, making it the smallest ThinkCentre and reducing shipping and packaging costs.

Improved manageability and reliability:

- The A61e includes the Lenovo ThinkVantage Technology (TVT) PC management suite.
- Its energy efficiency guards against heat-induced hard drive failures.

Low cost of acquisition

- The A61e starts at under \$400, meaning it does not cost more than other small form factor desktops.

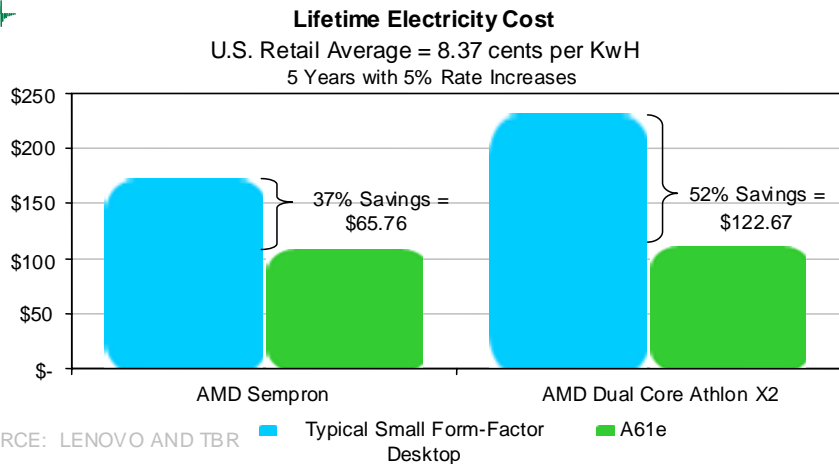
1. Lenovo's ThinkCentre A61e, fitted with an AMD Athlon X2 BE-2350 processor uses 90 watts of power at peak performance, while a Lenovo ThinkCentre A60 small form factor desktop with an Athlon X2 4200+ uses 203 watts at peak performance.

Executive Summary

TBR believes that businesses have begun focusing on energy efficiency as a method of providing relief from the rising cost of electricity and therefore reducing operating costs and differentiating from competitors.

Having adopted its own corporate responsibility program under which it is focused on increasing energy-efficiency and extending its recycling efforts, Lenovo is also offering its customers more energy efficient PCs. A large number of its ThinkCentre desktop, ThinkPad notebook and Lenovo 3000 models comply with the U.S. DOE's EnergyStar 4.0 energy efficiency standards, while also offering Lenovo ThinkVantage Technologies PC tools for increased manageability.

However, Lenovo's latest and most energy efficient PC, the ThinkCentre A61e ultra small form factor desktop PC, takes another step forward. Lenovo designed the A61e to consume approximately one-half the electricity of a standard small form factor desktop¹. Thus the A61e offer businesses significant savings from lower electricity costs, along with enhanced manageability, reliability and acoustics.



TBR believes businesses will achieve savings, including lower electricity bills as well as lower shipping and disposal costs, due to the PC's energy efficiency, size and weight and use of recyclable materials. Deploying A61e PCs can also reduce the amounts of greenhouse gasses released into the Earth's atmosphere as the PCs draw less electricity from power generators, many of whom burn fossil fuels.

TBR's analysis of the potential savings from ThinkCentre A61e deployments concluded:

- A medium-sized company would save in excess of \$100,000 over five years by deploying 5,000 A61e PCs.
- An enterprise with 50,000 A61e PCs installed would save more than \$1 million over five years, TBR's calculations found.
- A large company could eliminate the release of over 100 million pounds of carbon dioxide into the atmosphere over five years by deploying 50,000 A61e PCs.
- The A61e's small size and low weight reduce shipping and disposal costs, delivering additional savings of more than \$275,000 when operating 50,000 of the PCs for five years.



Lenovo's Latest ThinkCentre Desktop Brings Energy Efficiency to the Mainstream

The ThinkCentre A61e Offers Businesses Reduced Operating Costs and Environmental Impact Without Compromising Performance



Lenovo's ThinkCentre A61e

Facts about computers and energy efficiency:

Approximately 2.5 billion AC/DC power supplies are in use in the United States and 6 to 10 billion worldwide. More efficient design could cut use in half and save nearly \$3 billion in electricity costs in the U.S. alone.

– EPRI Solutions, The New York Times, September 26, 2006

Added heat from inefficient computers can increase the demand on home and office air conditioning and cooling systems, making the computing equipment even more expensive to run.

– Climate Savers Computing Initiative

A small office network with only two PCs can use as little as 130 kWh or as much as 1300 kWh annually.

– Energy Star

“The most rapid increase in energy demand is projected for electricity used for computers, office equipment, telecommunications, and miscellaneous small appliances.”

– U.S. Department of Energy, Annual Energy Outlook, 2005

“Energy use for personal computers is projected to grow by 4.5 percent per year and for other office equipment, such as copiers, fax machines, and larger computers, by 4.8 percent per year through 2025.”

– U.S. Department of Energy, Annual Energy Outlook, 2005

INTRODUCTION

Energy efficiency is the new metric by which businesses are measuring IT operations. Increasingly, energy efficiency is also becoming a factor by which customers and even government regulators are evaluating businesses.

Recent increases in electricity prices due to rising demand and higher fuel costs, along with a new focus on carbon emissions among governments around the world, have brought energy efficiency to the forefront. Businesses must now consider energy efficiency in their efforts to reduce operational costs and limit their impact on the environment. According to a July 2007 report by the U.S. Department of Energy, business' electrical rates rose by 5% year-to-year in 1H07 in the United States. With electricity prices on the rise due to energy costs and the increasing numbers of computers being deployed, the only way to reduce businesses' energy costs is by increasing their energy efficiency.

Lenovo is doing just that. By focusing on energy-efficient computing, Lenovo is helping businesses limit energy consumption and boost efficiency. The company has recently been designing more energy-efficient products, including the newly launched ThinkCentre A61e, an ultra small form factor desktop PC. The ThinkCentre A61e uses less than one-half the electricity of a typical small form factor desktop PC. As a result, deploying the PC reduces a company's annual PC-related energy costs by as much as 50%. But the A61e also offers additional savings, including reduced shipping and packaging costs thanks to its small size and weight of only 8 pounds. It also offers advantages in acoustics and reliability as its lower production of heat makes for quieter operation and reduces the potential for hard drive failure.

Lenovo achieved such dramatic reductions in power consumption by basing the ThinkCentre A61e on energy-efficient processors from Advanced Micro Devices. The chips consume less electricity and produce less heat than typical PC processors. Lenovo also equipped the desktop with an 85% efficient power supply, which means it wastes far less electricity than the typical desktop PC equipped with a 70% efficient power supply.

Making the switch to the ThinkCentre A61e offers businesses a host of savings. Not only does the machine use less electricity on a yearly basis, resulting in lower operating costs for its customers, but businesses can also benefit from lower maintenance, shipping and recycling costs associated with the A61e. At the same time, the A61e requires less energy to power which has the indirect effect of cutting the amount of greenhouse gases released into the Earth's atmosphere.

Lenovo's ThinkCentre A61e

Lenovo created its ThinkCentre A61e with the aim of offering the most energy efficient desktop PC available. At the same time, Lenovo delivered a desktop that is cool, quiet and easy to administer. Thus businesses that choose to deploy the ThinkCentre A61e can expect to reduce their operating costs in addition to improving their office environments as the machine outputs very low levels of noise.

The ThinkCentre A61e's features include:

- **Energy efficiency:** ThinkCentre A61e models consume a maximum of between 88 watts and 90 watts, less than half the energy consumption of a typical small form factor desktop model.
- The A61e is also Energy Star 4.0 compliant.
- **Low environmental impact:** The A61e has received an EPEAT Gold rating, thanks to its energy-efficient design and use of post-industrial recycled plastics and packaging.
- The A61e's lower electricity usage results in the release of smaller amounts of greenhouse gasses into the Earth's atmosphere
- **Quiet operation:** The A61e emits 3.8 bels of sound at idle and 4.1 bels under load, far less than other desktops which typically emit 4.5 to 4.8 bels.
- **Small Size:** The A61e measures just 10.8-inches wide, 9.5-inches deep and 3.2-inches high, making it the smallest ThinkCentre ever offered by Lenovo.
- **Less weight:** The A61e's 8-pound weight makes it the lightest desktop ever offered by Lenovo and offering savings on shipping costs.
- **Improved manageability:** The energy efficiency of the A61e means it produces less heat internally, allowing for its quiet operation and helping to guard against heat-related hard drive failures.

Why Energy Efficiency Matters

Until recently, businesses paid little attention to PC energy consumption and its affect on their operations. However, due to rising electricity rates and increased environmental awareness sparked by fears of global warming, energy efficiency has come to the forefront for high-level executives and IT managers alike.

Energy efficiency is a growing concern among businesses, said Robert Rosen, CIO of a U.S. government agency and the former president of the IBM user group SHARE.

"I really think the message that has to get out there is that, one, [energy efficiency] doesn't cost you anything in terms of performance and, two, it's clearly the right thing to do – energy is not an infinitely available resource – and, three, electricity costs are now showing up on the CFO's desk. And who is using [the most of] it? The IT department," he said.

TBR believes those companies that view information technology as a competitive advantage must embrace energy efficiency with the same enthusiasm. We believe that energy efficiency is quickly becoming a strategic differentiator as, globally, energy costs are expected to continue rising as demand increases and as the cost of power generation, driven by the cost of fuels, increases.

"We're paying more and more attention to [energy efficiency], now, because...the energy bills have escalated," Rosen said. "Now that they've gotten to high-level executives' desks, they're coming back and saying, 'What can you do to reduce these costs?'"

It's a simple fact that companies who spend less on energy bills have more resources for research and development, marketing and other vital operations. But businesses are also being compelled to pay greater attention to their energy consumption by concerns about power generation's connection with global warming.

Those concerns are beginning to inspire legislation for the regulation of businesses' greenhouse gas emissions. Meanwhile companies are beginning to require their suppliers to conduct more environmentally friendly operations, while consumers are also evaluating some purchases based on their perception of the seller's environmental impact.

TBR believe that businesses will demand more energy-efficient products, including computer hardware, and will make strategic investments in products with a demonstrated ability to drive cost savings and limited impact to the environment.

Lenovo has already moved to meet the need for greater energy efficiency with its ThinkCentre A61e. While much of the recent focus on computer power consumption has been on the datacenter and reducing the electricity consumption of servers and their respective cooling equipment, Lenovo saw a need in the desktop PC arena. The resulting ThinkCentre A61e was designed to be Lenovo's most energy-efficient and environmentally friendly desktop computing platform.

Client PCs' power consumption sometimes goes unnoticed. However, when strung together in large corporate office settings, hundreds or thousands of PCs can collectively consume large amounts of electricity. PCs' collective energy consumption is forecast to increase: According to the U.S. DOE, it will rise from 4.2% of commercial energy use in 2005 to 6.3% by 2010. TBR believes that PCs' predicted higher energy consumption will incur higher operational costs, countering companies' efforts to reduce operating costs.

Lenovo's product managers created the A61e to counter the trend toward higher energy consumption and simultaneously create an environmentally friendly ecosystem around the PC. The ThinkCentre A61e uses less than half the electricity of a typical

Management: Lenovo's ThinkCentre A61e

Lenovo not only created its ThinkCentre A61e to be the most energy efficient desktop PC available today, it also sought to improve the manageability and reliability of the new desktop.



Thus the A61e will come standard with Lenovo's ThinkVantage Technologies, the company's suite of hardware enhancements and software tools that help protect users' data and improve remote management, while offering cutting-edge components, including energy-efficient, single-core and dual-core desktop processors from Advanced Micro Devices.

Lenovo's portfolio of ThinkVantage Technologies (TVTs) is an important complement to its energy-efficiency efforts, providing an overall solution that delivers hard dollar savings to the customer by reducing the total cost of ownership associated with deploying and managing a PC over its lifetime.

The ThinkVantage portfolio provides a broad range of solutions to allow customers to manage their PCs throughout their entire lifecycle – from deployment to disposal. Lenovo has focused on ensuring that TVTs are easily deployed and managed by IT administrators, including management through tools such as LANDesk and Active Directory.

small form factor desktop PC¹. Consequently, the ThinkCentre A61e works to significantly reduce businesses' energy bills, while also increasing their environmental friendliness.

Deploying A61e desktops helps to reduce a business' environmental impact as its lower consumption of electricity reduces the amount of greenhouse gasses released by power generators. The ThinkCentre A61e also contains components with up to 50% recycled plastics and, in large orders, can be purchased with reusable packaging.

Lenovo even offers an optional solar panel as a renewable energy source for the ThinkCentre A61e. The panel is designed to provide electricity for an A61e when it is used in an outdoor setting such as point of sale for a home improvement retail store.

The ThinkCentre A61e was also designed to reduce the impact of operating and maintaining PCs on businesses themselves. The PC's energy efficiency translates into quieter operation and increased reliability of components such as hard drives. Lenovo also delivers each A61e with its ThinkVantage Technologies (TVT), a suite of PC management tools. Lenovo's TVT is a fully integrated suite of PC management tools designed to work in conjunction with its PCs.

Lenovo's focus on making the ThinkCentre A61e easier to maintain, transport, and dispose of when the time comes won the PC EPEAT Gold certification from the Electronic Product Environmental Assessment Tool. To gain EPEAT Gold certification, Lenovo had to design the ThinkCentre A61e to not only be energy efficient, meeting EnergyStar requirements, but also to contain a high percentage of recycled or recyclable materials, and to be easily recycled once it meets end-of-life. The result is a PC that cuts a business' energy consumption and reduces its overall environmental impact. Both factors

serve to increase a company's competitiveness by lowering costs and allowing it to market itself as "greener" than competitors – all without compromising on performance or manageability, or costing significantly more. Lenovo's ThinkCentre A61e will range in price from approximately \$400 to approximately \$700, according to the company.

Lenovo was able to achieve the A61e's reductions in energy consumption, noise, size and weight as well as increases in reliability by focusing on design. Lenovo made several key choices in designing the A61e that combined to reduce its electricity consumption and heat production, leading to other benefits, such as increased reliability and lower noise production.

Lenovo started by selecting cool-running, power-efficient AMD processors, integrated ATI Radeon graphics and an external power supply. Much of the ThinkCentre A61e's energy efficiency is derived from its processor. The A61e is the industry's first desktop to offer AMD's new 45-watt Energy Efficient Sempron and Athlon 64 X2 processors. AMD's dual-core Energy Efficient Athlon 64 X2 BE-2350, available in the A61e, runs at 2.1 GHz. But the processor consumes a maximum of only 45 watts of power, 20 watts less than AMD's standard 65-watt 65-nanometer Athlon 64 X2 processors.

Lenovo also elected to use a highly efficient power supply. PC power supplies, which switch alternating current electricity from a wall outlet to direct current electricity used inside a PC, are generally about 70% efficient, meaning that 30% of the electricity that moves through them is lost during the conversion process. Recently, 80%-efficient power supplies have been introduced. Lenovo, however, chose an 85%-efficient power supply for the ThinkCentre A61e. The external power supply is rated at just 130 watts, meaning it draws less power than most desktops. The higher efficiency rating and lower draw mean that less power is wasted in

¹ Lenovo's ThinkCentre A61e, fitted with an AMD Athlon X2 BE-2350 processor uses 90 watts of power at peak performance, while a ThinkCentre A60 small form factor desktop with an Athlon X2 4200+ uses 203 watts its peak.

Management: Lenovo's ThinkCentre A61e cont,

TBR has interviewed numerous Lenovo customers and has found that they were able to complete new computer rollouts more quickly and efficiently than before thanks to Lenovo's innovative ThinkVantage Technologies. The customers also reported higher end-user satisfaction and improved security and data protection.

Deployment:

Image Ultra Builder for image creation and management

Systems Migration Assistant for easy data transfer

Manager, Fingerprint Reader and Data Encryption to secure client data

Rescue and Recovery for backing up and recovering data

Network Connectivity:

Access Connections for seamless wired and wireless connectivity across unlimited locations

Data Protection:

Client Security Software, Password Manager, Fingerprint Reader and Data Encryption to secure client data

Technical Support and Software Updates:

Productivity Center and Rescue and Recovery for end-user self-help

System Update for update management

PC Disposal:

Lenovo PCs are designed to be easily recycled. But Lenovo also offers the Secure Data Disposal for removing data from the hard drive prior to disposal.

IT managers are being asked to do more while spending less. The combination of Lenovo's energy efficient computer products and TBTs helps lower IT support costs, freeing funds for strategic IT projects or to help companies' bottom lines.

converting from AC (alternating current) from a wall outlet to DC (direct current) used inside the PC.

Lenovo's focus on design simplicity also reduced the A61e's size and weight, while contributing to improvements in manageability, reliability and acoustics all without incurring a price premium.

Therefore, in designing the A61e, Lenovo limited the number of PCI slots and drive bays contained within the desktop. The decision to limit the slots and bays allowed Lenovo engineers to select the smaller and more energy efficient external power supply. The supply, which looks very much like a notebook power supply brick, in turn contributed to the machine's near-silent acoustical profile by helping to reduce the amount of heat produced within, which thus reduced the number of fans required to cool its internal components.

With less heat being produced inside its chassis to begin with, a single, low-speed fan accomplishes the job of cooling the A61e. With only one fan operating, the A61e only produces between 3.8 bels of noise at idle and 4.1 bels when running fully loaded. Thus it falls below near the threshold of background noise in a typical office, which measures about 4.3 bels, instead of adding to the noise within the environment.

Producing less heat also breeds greater reliability for the A61e. Hard drives are sensitive to heat, so when the temperature inside a PC's chassis reaches 55 degrees Celsius or higher, the potential for hard drive failure increases.

Lenovo designed the ThinkCentre A61e to maintain hard drive temperature at 45 degrees Celsius or below, without increasing the amount of noise the PC produces.

The cooler operating temperature helps avoid the losses in worker productivity and/or data that result from hard drive failure, and also helps eliminate a potentially costly IT

department desk-side visit to diagnose and replace the drive.

Further, the addition of legacy ports such as serial ports also requires additional power. Lenovo's ThinkCentre A61e offers six USB (universal serial bus) ports, an optional modem and memory card reader and can be fitted with a range of expansion cards, adding wireless networking capabilities for example, via an optional Expresscard adapter. The A61e is the first desktop to offer an Expresscard adapter. The option uses plug-in cards that are similar to a PC Card adapter, but about half the size.

TBR believes that, despite the capability to do so, few companies use the extra bays and slots to upgrade their PCs with new optical drives or graphics cards. Thus very few new desktop PCs need to provide additional drive bays and slots. Moreover, we believe that most business desktop PCs consume far more electricity than necessary, particularly when it comes to performing day-to-day office tasks such as sending e-mail or using word processing software. Most desktop PCs come equipped with relatively inefficient, 275-watt-or-higher power supplies, which are necessary to power their 65-watt to 100-watt processors and provide additional capacity should owners decide to populate additional drive bays and PCI slots.

Lenovo's ThinkCentre A61e redefines energy efficiency by using as little power as possible to accomplish computing tasks - an A61e consumes as little as 3.8 watts of power in standby mode, 47 watts at idle and 88 watts at peak. Yet TBR believes the ThinkCentre A61e has more-than-sufficient performance for accomplishing all the tasks that today's business worker needs to complete. The ThinkCentre A61e was not designed with computer-aided design work in mind, for example; yet, its available dual-core processor and AMD ATI integrated graphics allow it to handle tasks such as creating Microsoft PowerPoint presentations and even light photo and video editing with ease.

TBR Assumptions, Methodologies and facts about electricity costs

TBR estimates include a conservative 5% per year increase in electricity rates. For the past three years, electricity rates have increased at an even higher rate. We believe electricity prices will continue to rise. Regulatory actions and or “carbon taxes” are likely to further increase electricity prices in the future.

TBR’s electricity usage and cost figures depicted in the graphs on pages 5 and 6 of this paper were calculated based on a daily PC usage pattern that includes 70% of time spent in a sleep state, 5% of time spent in idle and 25% of time spent in an operational state.

Electricity rates vary both in the United States and internationally. Rates vary by approximately 300% throughout the United States, meaning that deploying the ThinkCentre A61e in areas with higher rates would produce even greater savings.

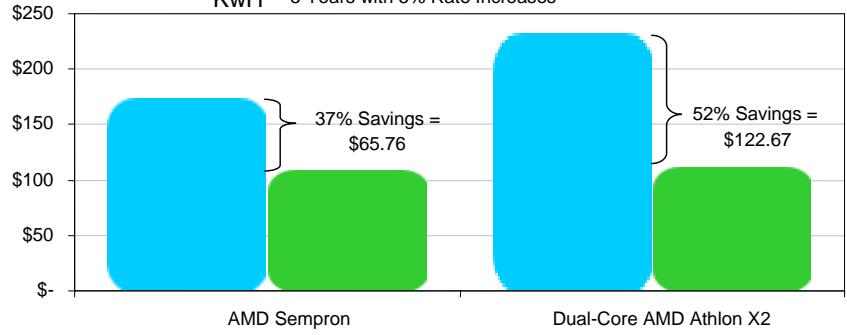
The “carbon cost” of electricity varies widely. The least expensive methods of power generation, such as burning coal, tend to produce the greatest amount of carbon dioxide. Whereas wind, water and solar-generated electricity have high upfront costs, they emit fewer greenhouse gasses.

The more power a computer consumes, the more heat it produces. This is another important consideration as air conditioning a building generally costs more than heating it. Thus saving power also helps reduce costs by lowering the need for cooling.



Lifetime Electricity Cost

U.S. Retail Average = 8.37 cents per KWh
5 Years with 5% Rate Increases



SOURCE: LENOVO AND TBR

Thus the A61e’s combination of energy efficiency, environmental friendliness and costs benefits businesses from both financial and environmental aspects.

with governmental agencies and environmental watchdog groups.

Key findings: There’s money to be saved

ThinkCentre A61e Athlon X2 Cost Savings

	Units	50	500	5,000	50,000
\$ Savings / Year		\$1,110	\$11,100	\$111,000	\$1,110,000
\$ Savings over 5 Years		\$6,133	\$61,335	\$613,345	\$6,133,451
CO ₂ Savings / Year (Pounds)		20,556	205,556	2,055,556	20,555,556
CO ₂ Savings over 5 Years (Pounds)		102,778	1,027,778	10,277,778	102,777,778

SOURCE: LENOVO AND TBR

The ThinkCentre A61e also fills another important role for businesses: promoting and maintaining a positive image.

Companies that purchase the ThinkCentre A61e and incur savings can tout their

Because it uses less electricity than other desktops, the ThinkCentre A61e costs far less to operate over its lifetime and also has a smaller carbon footprint as less carbon dioxide is released to power it.

ThinkCentre 61e Sempron Cost Savings

	Units:	50	500	5,000	50,000
\$ Savings / Year		\$595	\$5,950	\$59,500	\$595,000
\$ Savings over 5 Years		\$3,288	\$32,878	\$328,775	\$3,287,751
CO ₂ Savings / Year (Pounds)		11,019	110,185	1,101,852	11,018,519
CO ₂ Savings over 5 Years (Pounds)		20,556	205,556	2,055,556	20,555,556

SOURCE: LENOVO AND TBR

efficiency. At the same time, they can also use the advantages of lower costs against competitors and tout it to investors

Businesses can also leverage being proactively green to their advantage – both in marketing to customers and in interacting

Multiplied by tens, hundreds or thousands, the effect is cumulative for electricity costs, manageability costs and environmental impact. Companies can thereby lower IT operating costs and improve their environmental friendliness by using the ThinkCentre A61e.

Lenovo's energy efficient computers:

Lenovo's ThinkCentre A61e may be its most energy efficient desktop. However, Lenovo offers several additional ThinkCentre and ThinkPad models that conform to Energy Star 4.0 specifications.

ThinkCentre Models:

ThinkCentre M55

Models: 9166 desktop, 9167 minitower, 9168 small form factor desktop

ThinkCentre A61

Models: 9171 and 9191 minitower, 9169 and 9189 desktop

ThinkCentre M57

Models: 9172 desktop, 9174 minitower, 9181 small form factor desktop

ThinkPad models:

ThinkPad T61 and T61p

Models: 6377 to 6379; 6481 and 6457 to 6471 (excluding 6469); 7648 and 7659 to 7665; 8889 to 8900; 8938 to 8939

ThinkPad R61

Models: 7732 to 7735 and 7738; 7742 to 7743; 7751 and 7755; 7649 to 7650 and 7657; 8930 and 8932 to 8937; 8914 and 8919 to 8920; 8927 to 8929; 8942 to 8945 and 8947

ThinkPad X61 and X61 Tablet:

Models: 7666 to 7671; 7673 to 7679; 7762 to 7764 and 7767

Source: Lenovo

The ThinkCentre A61e's lower energy costs, combined with lower management costs, will allow businesses to recover a significant portion of the PC's initial acquisition cost during its three-to-five-year deployment.

While its electricity savings and manageability features are two major factors in the appeal of the ThinkCentre A61e desktop, another important factor is its ability to help companies reduce their carbon footprints.

ThinkCentre A61e drives Additional Savings

	50	500	5,000	50,000
Units	50	500	5,000	50,000
Shipping	\$86	\$576	\$3,840	\$25,600
Disposal	\$625	\$5,000	\$37,500	\$250,000
Shipping CO ₂ (Pounds)	180	1,797	17,974	179,736

SOURCE: LENOVO AND TBR

Using data supplied by Lenovo, TBR estimates that operating a single Athlon 64 X2 processor-based ThinkCentre A61e for one year will save up to \$22 versus a typical

TBR estimates that deploying a single ThinkCentre A61e will result in the reduction of more than 20,000 pounds of carbon dioxide released into the Earth's atmosphere

Comparison of Energy-Efficient PCs

Models	Lenovo ThinkCentre A61e	HP Business Desktop rp5700	Dell Optiplex 740 & 745 Energy Smart
Starting price	\$399	\$849	\$799 to \$819
Case size	3.2" x 10.8" x 9.5"	3.9" x 13.4" x 15.0"	3.7" x 12.5" x 13.4"
Weight	8 pounds	20 pounds	8 to 31 pounds, depending on form factor
Available processors	AMD Sempron LE-1150 (45W) AMD Athlon x2 BE-2350 (45W)	Intel Celeron 440 (65 W) Intel Core 2 Duo E6400 (65 W) Intel Pentium Dual-Core E2160 (65W)	Intel Core 2 Duo E4300, E4400, E6300, E6400 (65W) and AMD Athlon 64 x2 3800+, 4200+, 4600+, 5000+, 5200+ (65W)
Power Supply	130W, > 85% efficient	240W, 80 Plus®	275W, 80 Plus®
Expansion capability	ExpressCard	PCI	PCI

SOURCES: LENOVO, HP, DELL, AND TBR

small form factor desktop. The savings are a direct result of the ThinkCentre A61e model's features, including its energy-efficient processor and power supply.

Given that most companies use hundreds or even thousands of PCs, the power savings will compound to more than \$100,000 annually for a company operating 5,000 PCs, and will reach more than \$600,000 for the five-year lifespan of a fleet of 5,000 desktops.

per year due the PC's lower electricity consumption.

Thus a single Athlon 64 X2-based A61e, in one year of operation, will save the equivalent amount of carbon dioxide emissions created by two round-trip Boston to New York airplane flights.

A company operating 50 of the machines would save the equivalent amount of carbon dioxide produced by heating three homes using natural gas for a year.

Additional Resources for Energy Efficiency information

There are numerous additional sources that readers can turn to for information on energy efficiency, corporate environmental policy and environmental awareness:

Corporate Policy:

Lenovo's environmental policy:
www.pc.ibm.com/ww/lenovo/about/sustainability

Measurement:

Electronic Product Environmental Assessment Tool (EPEAT): www.epeat.net

DOE Energy Star program: www.energystar.gov

Environmental Awareness and Energy Policy information:

US DOE: www.energy.gov

Climate Savers:

www.climatesaverscomputing.org

Lenovo business PCs:

ThinkCentre: www.lenovo.com/thinkcentre

ThinkPad: www.lenovo.com/thinkcentre

ThinkVantage PC management tools:

<http://www.pc.ibm.com/us/think/index.html>

Conclusion: It is becoming easier to be green

Lenovo's ThinkCentre A61e represents the first line of defense for businesses' rising energy costs. Rising energy rates and concerns about greenhouse gas emissions can be countered by conservation, in this case by tapping the increased energy efficiency provided by Lenovo's ThinkCentre A61e.

The ThinkCentre A61e not only offers potential savings of hundreds of thousands of dollars in electricity costs over a period of five years, it also works to lower the total carbon footprint of a company that deploys it.

Given that Lenovo designed the A61e to serve as business workers' primary productivity tool, the PC conserves energy without compromising on computing performance, making concessions on manageability or exacting a price premium which would increase businesses' acquisition costs.

But being green also involves taking a broader focus. The A61e can be combined with other energy efficient computer hardware, including servers as well as corporate responsibility programs designed to reduce overall electricity consumption and decrease companies' impacts on the environment.

Although several other PC vendors offer so-called energy efficient PC models, TBR believes Lenovo is focused on addressing energy efficiency in a much broader scope.

The company has begun its own corporate responsibility program, which includes setting

goals of increasing its own internal recycling of waste materials and decreasing its manufacturing plants' energy usage.

As part of its efforts to implement environmentally aware policies and practices Lenovo has also become an active participant in the Climate Savers Computing Initiative.

The Climate Savers Computing Initiative, which was founded by Intel and Google, now includes a broad range of participants. Among them are AMD, Starbucks, Yahoo and several computer hardware and services companies.

As part of the initiative, participating computer and component manufacturers focus on designing more energy efficient computer equipment. Corporate participants commit to purchasing energy efficient computing products upon joining the initiative.

Yet Lenovo has not only implemented internal environmental practices. It offers customers a host of energy efficient PC products in addition to its new ThinkCentre A61e.

Together, Lenovo's ThinkPad, ThinkCentre, and Lenovo 3000 product lines offer dozens of desktop and notebook models which meet the U.S. Department of Energy's Energy Star 4.0 standards by including power supplies that are at least 80% efficient and by consuming 50 watts of power or less when idling.

Lenovo also works with its customers to take back computers and computer equipment. It offers customers a broad set of programs for either recycling or reusing PCs.

ABOUT TECHNOLOGY BUSINESS RESEARCH

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