



## Utility Company Increases Query Times by 75 Percent, Can Respond Faster to Customers

**Customer:** Saudi Electricity Company  
**Website:** <http://www.se.com.sa>  
**Customer Size:** 29,000 employees  
**Country or Region:** Saudi Arabia  
**Industry:** Power & Utilities

**Partners:** HP, BNW, and Symantec  
[www.bnw.com.au](http://www.bnw.com.au)

### Customer Profile

Based in Riyadh, Saudi Electricity Company (SEC) generates, transmits, and distributes electricity throughout the Kingdom of Saudi Arabia.

### Solution Spotlight

- Increases BI query response times by 75 percent and boosts ERP processing performance by 42 percent.
- Reduces a batch processing job from 8 hours to 20 minutes, speeding customer response times.
- Improves IT efficiency and helps SEC easily handle SAP system growth.

For more information about other Microsoft customer successes, please visit: [www.microsoft.com/casestudies](http://www.microsoft.com/casestudies)

“Using SQL Server as the standard platform for our SAP ERP gives us great performance and provides extremely reliable data to our people.”

Yahya Abdulrahman, Information Technology & Communication  
Executive Director, Saudi Electricity Company



Saudi Electricity Company (SEC) provides more than 90 percent of the electricity generation, transmission, and distribution in the Kingdom of Saudi Arabia. Because it needed to increase the performance of its SAP systems and keep up with growth, the company deployed an IT infrastructure based on Microsoft SQL Server 2012 Enterprise software. SEC has increased query response times by 75 percent and has improved customer response times. The solution also increases IT efficiency and can meet the firm’s growth needs.

### Business Needs

Saudi Electricity Company (SEC) is the largest utility company in the Kingdom of Saudi Arabia, serving 8 million customers and operating more than 60 power plants.

In recent years, the company has grown dramatically. “We’ve more than doubled our capacity since 2005, and we anticipate 8 percent growth in demand for our services annually,” says Sam Badan, Nebras Technical Services Manager, SEC. “Having the right technology in place to support that rapid increase is very important to us.” To keep pace, SEC sought to upgrade its IT

infrastructure, which supports a comprehensive SAP implementation that includes modules for plant maintenance, materials management, financials, human resources and payroll (ECC), business intelligence (BI), and other services. “Our hardware was aging and overdue for an overhaul, and we were having performance issues on the entire SAP system,” Badan says.

Better performance was critical for the firm’s SAP systems, because many of the company’s internal business divisions—including inventory, facility management,



and plant maintenance—all depend on the fast delivery of data to respond quickly to customer requests for new service or maintenance.

In mid-2012, SEC began searching for a new hardware and software solution.

## Solution

SEC had been using Microsoft SQL Server software since 2006, and the company was interested in migrating to the latest version, Microsoft SQL Server 2012 Enterprise. “We originally selected an Intel, Windows, and SQL Server 2005 solution when the perceived standard for very large SAP deployments was UNIX platforms,” says Badan. “We visited other utilities that had successfully deployed on Windows and SQL Server, and we also studied Gartner reports. Through our research, we concluded UNIX was a shrinking market and that SQL Server 2005 had the minimum set of enterprise features we required. The widespread availability of 64-bit Intel servers meant we could successfully deploy a large-scale system without needing expensive, difficult-to-support proprietary solutions.”

Since its decision, SEC has noted the strong industry trend towards Intel-based systems. “The Gartner reports we relied upon proved to be 100 percent accurate and correctly predicted that Intel-based systems meet or exceed the requirements of companies as large as SEC and even larger,” says Badan. “We have been very satisfied with SQL Server, and we expected the latest version to be more powerful and even better-suited for our growing SAP deployment,” Badan says.

In late 2012, SEC started to put the new hardware in place and in Q1 2013 migrated its entire SAP environment to SQL Server 2012 Enterprise, running on the Windows Server 2008 R2 Enterprise operating system. The company deployed the software on new HP ProLiant DL 580 G7 server computers, with HP ProLiant DL 380p Gen8 server computers for the SAP application servers. The implementation was performed by technology partner BNW in just three months, with minimal downtime. “The availability of skilled partners like BNW is an

important validation of our decision to adopt a mainstream standards-based solution,” says Badan.

SEC also took advantage of data compression in SQL Server 2012 to reduce the size of the company’s data warehouse from 3 terabytes to 1 terabytes. “We thought that we would improve system performance by reducing overall database size,” Badan says. “And in conjunction with the large amount of physical RAM in the database servers, we deliver ‘in-memory’ performance to our users.” More than 20,000 SEC employees access SAP systems supported by SQL Server 2012. Each day, more than 15,000 users are logged in, with 5,000 active users on SAP ECC.

## Benefits

With SQL Server 2012, SEC has 75 percent faster BI query response times and faster ERP batch processing response times, and it can respond to customers faster. The company’s IT staff is also more efficient, and SEC can support future growth.

### Speeds Database Query Times by 75 Percent

With a smaller database, SEC can store more data per gigabyte of space, which improves SAP system performance. “Using SQL Server 2012, our average BI query response times are 75 percent faster and batch jobs on the ERP system are 42 percent faster,” says Badan. “And network throughput has increased as well, after standardizing on 10-gigabit ethernet. Now, the average physical I/O response time on the database is around 5 milliseconds, which is below the benchmark of 20 milliseconds. Everything from BI reporting to collaborating on the company’s online portal is much faster now.

### Helps SEC Respond Faster to Customers

SEC has improved its customer service, because the SAP system gives SEC business groups the ability to respond faster to customer requests. “With SQL Server 2012, one of our business groups has been able to reduce one of its most critical monthly financial closing batch processing job from 8 hours to 20 minutes,” says Badan. “With the improvement in response times we’re seeing with SQL Server 2012, we can respond faster to customer requests, which is very beneficial to our overall business,” says Badan.

Yahya Abdulrahman, the company’s Information Technology & Communication Executive Director, adds, “Using SQL Server as the standard platform for our SAP ERP gives us great performance and provides extremely reliable data to our people.”

### Improves IT Efficiency and Supports Growth

The organization’s IT administrators have become more efficient, not only because of faster system performance but also because of a 46 percent reduction in servers. “With better performance and fewer servers, there are fewer moving parts to manage and we spend less time on maintenance,” says an IT administrator for SEC. “Managing and supporting SAP is easier because employees are more satisfied, so they aren’t calling us as much.”

SEC now has the right solution in place to handle growth. “We are growing by about 90 gigabytes per month, and as we roll out more power plants, that will become bigger,” says Badan. “This solution is robust, and it gives us the capacity and performance we need to easily handle our fast business growth.”

## Software and Services

- Microsoft Server Product Portfolio
  - Windows Server 2008 R2 Enterprise
  - Microsoft SQL Server 2012 Enterprise

## Hardware

- HP ProLiant DL580 Gen7 servers
- HP ProLiant BL460c Gen8 servers
- HP 3PAR storage and Symantec Backup