

## 2011 Showcase in Excellence Award Recipient

**Deer Valley Unified School District**  
*“Utility Management Process”***Company Information:**

*Highest Ranking Official:*  
Cindy Rudrud, Superintendent

*Contact Person:* Jim Migliorino,  
Associate Superintendent  
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*Type of work:* Deer Valley Unified School District educates over 34,000 students in grades Pre-K - 12 at 36 school sites. DVUSD has taken the initiative to manage utility delivery/consumption at school sites which is critical to customers receiving value both in the form of an environment conducive to learning and minimal budget impact.

*Workforce:*  
1,974 Teachers  
1,537 Support Staff  
93 Administrators  
3,604 Total Employees

**Testimonial of Value of the Arizona Performance Excellence Award Program**

*“Providing an environment that is conducive to learning is the primary goal of utility management. This process is essential to resource conservation, budget and student outcomes. Since 2006, we have used the Malcom Baldrige criteria as a way to improve utility efficiency using utility data to identify those utility management practices that correlated with efficient utility consumption and recommended for widespread adoption. We have aligned our continuous improvement efforts for further improvements by not only comparing previous performance to current but benchmarking ourselves against other public school districts with similar demographics and building types. As the first Arizona school district to participate in the Arizona Quality Alliance Showcase in Excellence Program, we have increased our effectiveness with the excellent feedback from examiners.”*

Cindy Rudrud, Superintendent of Deer Valley Unified School District

**Highlights of Organizational Process: Performance Results**

- Improved levels were demonstrated in all three Key Performance Indicators: Annual Kwh/square foot, Annual Energy Star Rating, and Utilities Cost over a three year period.
  
- Energy Star Ratings were provided for each school site on the Quarterly Report. For example, Mirage Elementary improved from 41(2007/08) to 81 (2010), achieving their target of 75 or above. Similar results are seen across most sites.

- The district reduced its electrical usage from 69.2 (2007/08) to 65.4 (2008/09) to 60.4 million kilowatt hours (kWh) (2009/10), a positive trend that has offset the ever increasing energy rates.
- Energy usage per square foot for the district's segmented elementary, middle and high schools decreased (improved) over the three year period for 14 of 16 schools. For example, the kilowatt usage per square foot at Las Brisas Elementary School reduced from 20 (2007/08) to 12 (2008/09) to 11 (2009/10), a striking trend.
- DVUSD has been recognized for their Utility Process outcomes by external organizations.
  - Arizona Public Service awarded DVUSD over \$1 million dollars in rebates in September 2010 for conservation of utilities.
  - DVUSD schools have been awarded the Building Owners and Managers Association (BOMA) Killowatt Crackdown Award. Mirage Elementary School received this award in 2010 and Sunrise Elementary in 2011. This award represents the most improved electrical usage K-12 facility in the Phoenix metropolitan area.

## **Process**

- DVUSD identified the need for the Utility Management Process in response to increasing utility rates and strict budget limitations stemming from state and federal deficits. This process enables the organization to reduce energy usage and operating costs and redistribute money back to its main business, educating children (\$1.2 million).
- The Facilities Maintenance Department uses a complete internal and external communication strategy in various forums to spread information throughout the district system. For example, they use weekly management reviews with scorecard, annual school plan foreman presentations, and quarterly school principal energy reports to distribute information. Externally, they participate in the Annual Green Summit and highlight achievement through media releases.
- The Department uses multiple channels to gather, respond, and report data to key stakeholders. For example, they use their online Energy Management System (EMS) with its distributive control system to monitor building and classroom temperatures in real time. When issues arise, they often foresee the issue and either remotely fix it or prepare the maintenance staff with the proper equipment to address the issue. They can then synthesize a report at the customer-specified timeframe, a prime example of management by fact.
- Operationally, they use the Plan-Do-Study-Act method in conjunction with their weekly scorecards to identify root causes, act upon them and, at times, perform predictive action in their Utility Management System. For example, in their weekly meetings, they discuss causes of peak loads, anticipate probable occurrences, and identify actions to mitigate future peak loads by adjusting schedules and taking other appropriate actions. Such actions result in lower utility bills.

