Additional resources include:

Alliance to Save Energy – Green Schools
www.ase.org/section/program/greenschl

Arizona Department of Commerce, Energy Office
http://www.azcommerce.com/Energy/

Energy Star - www.energystar.gov/index.cfm?c=business.bus_index

USGBC - www.usgbc.org/

CEFPI - www.cefpi.org/

EPA – Healthy Schools Environment Resources
http://cfpub.epa.gov/schools/index.cfm

EPA- Design, Construction and Renovation -
http://cfpub.epa.gov/schools/top_sub.cfm?t_id=45

EPA - IAQ Design Tools for Schools (DTfs)
www.epa.gov/iaq/schooldesign/index.html

National School IPM Information Source
http://schoolipm.ifas.ufl.edu/

DOE Building Technologies Program – buildings database
www.eere.energy.gov/buildings/energysmartschools/

Energy Star Building Manager
www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager

CFL R-lamp savings calculator
www.pnl.gov/rlamps/calculator.asp

Software tools for energy conservation
www.landofsky.org/wrp/Other_Resources_files/resources_softwaretools.htm
www.eere.energy.gov/buildings/tools_directory/
www.energydesignresources.com/category/schools/

Contacts for Further Information

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ADEQ Green Schools Web page:
http://www.azdeq.gov/function/about/green1.html

Main Office

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For more information about ADEQ, please visit our Web site at: azdeq.gov

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20 Things You Can Do To Green Your School Building At No Or Low Cost

Building a green school on a tight budget can seem overwhelming. However, there are features and construction methods that can be used at no or little cost. Many times these features also help decrease operating costs. Since building green is a relatively new concept, many methods are simply not yet built into our standard way of thinking. When planned correctly, LEED (Leadership in Energy and Environmental Design) projects cost less than you may expect. You can use this list as items to discuss with your design team. You can even use these ideas for renovations.

Building green also provides a healthier environment for your students, teachers, and staff. Student learning improves and building green protects the environment. Here are some recommendations:

GETTING STARTED

1. Start green from the get-go. Being green from the start saves the cost of design changes. Write contracts and RFPs (Request for Proposal) that clearly describe your green building requirements.
2. Set up a cross-disciplinary design team. Include your architects (challenge them to incorporate as many of these ideas as possible - and within your budget), district, energy manager, teaching, maintenance and other school staff. A team concept generates creative solutions.
3. Include your construction contractor in your initial design team, using CMR (Construction Management at Risk) concepts. Working together from the start results in a better building, less change orders and shorter completion time.
4. Apply for demand reduction equipment rebates from your power company.

ENERGY EFFICIENCY

5. Careful selection of windows and insulation along with using high efficiency Heating, Ventilating, and Air Conditioning (HVAC) equipment can reduce HVAC purchase and operating costs.
6. Reduce lighting load by using more efficient premium lighting and compact florescent light bulbs (CFLs). Consider occupant-and photo-sensitive switching so you aren't lighting unoccupied or bright spaces.
7. Orient your building on an east-west axis for effective use of day lighting. Avoid east and west facing windows.
8. Use transformers that meet your demand curve.
9. Incorporate a proper maintenance system into your operations.

WATER EFFICIENCY

10. Use hardy, native vegetation.
11. Use automatic sensor controls and low-flow showerheads.

INDOOR AIR QUALITY (IAQ)

12. Include an effective ventilation system with filters meeting a Minimum Efficiency Rating Value (MERV) of between 8 and 13.
13. Keep outdoor pollutants out. Use permanent entry way systems (grills, grates, etc.) to capture dirt, particulates, etc.
14. Use low emitting materials (adhesives/sealants, carpets, and paints with low Volatile Organic Compounds (VOC) content and composite wood and agrifiber with no urea-formaldehyde).

MATERIALS AND RESOURCES

15. Recycle/reuse construction waste.
16. Include places for storage and collection of recyclables.
17. Purchase items with recycled content and locally manufactured items.

SUSTAINABLE SITE

18. Incorporate erosion and sedimentation control during the construction and completion phases, reduce grading, excavating and other site disturbances.
19. Reduce light pollution. Shield exterior lights to keep light within property boundaries and preserve our dark nighttime skies for Arizona's nationally recognized Astronomy Industry.
20. Support and promote community use of facilities.

Schools that have used these ideas include:

Desert Edge High School in Goodyear
Davidson Elementary in Tucson
First Mesa Elementary in Polacca

See the ADEQ Web site:
azdeq.gov/function/about/green2.html
for additional information on these schools.