ENERGY CONSERVATION POLICY

PURPOSE

To ensure that **Nogales Unified School District** pursues energy and resource conservation efforts and practices in keeping with our vision to be good stewards of all of our resources and promoting sustainable practices in all aspects of energy, water, and waste. To accomplish this leadership will develop a realistic energy and resource use ethic and increase awareness of energy and resource needs and their associated costs in the operation of its facilities. The aim is to conserve energy and resources, and maintain a comfortable environment in which to learn and work.

STATEMENT OF PRACTICE

Every employee and student in the district is expected to contribute to energy and resource efficiency and to be environmental stewards. The program will be modeled by the leaders with implementation of this practice as the joint responsibility of the executive team, District and site administration, teachers, students, staff and volunteers. Cooperation on all levels is expected for the success of this practice. The executive team will assist the District's energy and resource managers in implementing, directing, monitoring, evaluating and reporting District conservation and efficiency. The goals of the energy and resource conservation program will be kept in the forefront.

DESIRED OUTCOME

An energy and resource conservation manager will be identified and will be used as the resource manager at each school facility. An energy and resource conservation manager will assist in creating a healthy and comfortable learning environment while managing energy and resource consumption efficiently. This will be a collaborative effort by the site administration, teachers, students, staff and volunteers.

REVIEW AND REPORTING

The District shall maintain accurate records of energy and resource consumption and associated costs, and shall provide information on the goals and progress of the District's Energy and Resource Conservation Program to the energy and resource managers and various stakeholders.

Nogales Unified School District will develop the necessary short and long range administrative guidelines to implement energy and resource awareness and conservation programs. Information will be furnished to the community on the goals and progress of the Energy and Resource Conservation Program.

GENERAL PRACTICES

The District will attain their energy goals by:

- Minimizing its use of electricity, natural gas, water and other energy resources.

- Promoting an understanding of the importance of environmentally appropriate practices.

- Using best practices in the purchase, use, and disposal of materials.

District staff will implement the following strategies where feasible:

- Reduce the waste of energy, water, paper, food and other resources by maintaining an energy conservation program.

- Use resources efficiently, recycle and work to reduce the demand for materials and resources like paper, energy and water.

- Consider environmental impact and societal costs in decision-making.

- Purchase products based on long-term environmental and operating costs.

- Purchase products that are durable, reusable, made of recycled materials and non-toxic.

- Enlist schools, the community and business partners to participate in energy conservation strategies and measures.

- Encourage activities that will reduce air pollution such as public transportation, carpooling, and bike riding.

- Promote curriculum on energy conservation, sustainable principles, and the environment.

IT-SPECIFIC POLICY

Sustainable, Efficient, and Green Computing at Nogales Unified School District

Over the last decade, the growing use of computers at NUSD has caused a noticeable increase in energy consumption, putting negative pressure on the district's budget and the environment. The more electricity used, the more fossil fuels burned. Each year, more and more computers are

purchased and put to use, but it's not just the number of computers that is driving energy consumption upward. The way that we use computers also adds to the increasing energy burden.

Many desktop computers are not being used most of the time they are running. Every time we leave computers, projectors, and lights on we waste electricity.

COMPUTER OPERATING COSTS

How Much Energy Does A Computer System Use?

A typical desktop computer in our district draws about 72 watts of electrical power. Add 28 watts for a 17-inch LCD monitor, for a total of 100 watts.

How a user operates the computer also affects energy cost. First, let's take the worst case scenario, continuous operation. If you operate a 100-watt PC system, 24 hours a day over the course of a school year, the electrical costs would be about $56 (at $0.088/kWh). (And this is for just one PC. Think about all of the PCs we have across the district!) In contrast, if you operate your system just during normal business hours, say 8 hours per day, the energy cost over the same period would be about $15.

So, just setting the computer in standby mode when you aren't using it would save about $41 per computer per year. We have about 1,100 desktop computers in our district - that's a potential savings of over $45,000. If we were to assume that the almost 1,900 laptops in our district were drawing power for the same amount of time, that would increase our savings to almost a quarter million dollars.

ENERGY EFFICIENT COMPUTING

Here are the new energy-savings policies that may make it possible for you to reduce computer energy consumption by up to 80 percent, while still retaining productivity and other benefits of your computer system, including network connectivity. These policies should be used for all computers in our district, from those used for personal use, to the computer labs, to the mobile laptop carts.

Turn off the screen saver - it doesn't save energy

Screen savers were originally developed for older CRT monitors to prevent static images from being burned into the screen. Modern LCD monitors (like the ones we have at NUSD) don't have that problem. Screen savers in use today are simply decorative.

A screen saver that displays moving images causes your monitor to consume as much as electricity as it does when in active use. A blank screen saver is slightly better, but even that only reduces monitor energy consumption by a few percentage points.

Some screen savers can also prevent a computer from going into low energy standby mode.

An analysis by the University of New Hampshire indicated that if an organization has 5,000 PCs that run screen savers 20 hours a week, the annual power consumed by those screen savers "accounts for emissions of 750,000 pounds of carbon dioxide, 5,858 pounds of sulfur oxide, and

1,544 pounds of nitrogen oxide."

So, when you're not using your computer, be sure to turn the screen saver off, and put the computer directly into sleep mode or, better yet, off completely.

Enable power management features

The U.S. Environment Protection Agency (EPA) estimates that computers with "sleep mode" enabled reduces their energy use by 60 to 70 percent – and ultimately could save enough electricity each year to power Vermont, New Hampshire, and Maine, cut electric bills by $2 billion, and reduce carbon dioxide emissions by the equivalent of 5 million cars.

The recommended settings are 10 minutes for monitor sleep and 20 minutes for system standby. Remember that to save energy with your monitor's built-in power management system, your monitor must go to sleep (shut itself down).

When not in use, turn off the juice

This is the most basic energy conservation strategy for any type of equipment. Consider the following:

• Turn off your computer and/or peripherals when they are not in use. Turning on and off will not harm the equipment.

• Don't run computers continuously unless they are in use continuously.

• Turn off computers and lights at night and on weekends.

You won't wear your computer out by turning it on and off!

Mobile Laptop Carts

As we work to save energy by being more energy efficient with our PCs and laptops, let's not forget the mobile laptop carts. On average, each of our elementary schools has 2-3 carts, each middle school has 4-5 carts, and Nogales High School has 8-10 carts. It is estimated that it takes approximately two hours for a laptop to become fully charged, thus, once a mobile laptop cart has had all of its computers returned, and they have been given about two hours to charge, you can unplug the carts from the wall. This will create significant phantom/vampire energy savings.

Making Your Computer Greener

Use these directions to make your computer greener by turning off your screen saver and turning on power management.

Turning Off the Screen Saver

Using the mouse, right click on a blank section of the computer desktop.

On the menu that appears, click on the **Properties** command.

First, click on the **Screen Saver** tab.

Click in the **Screen saver** drop down box and select **None** from the list.

To access Power Management options, click on the **Power** button.

Enabling Power Management

This step is not necessary for laptops as they already have power management enabled.

When the Power Options dialog box appears, click on the **Power Schemes** tab if it isn't showing.

Click on the drop down menus in the **Settings** area to enable power management.

Suggested settings are 10 minutes for turning off the monitor and 20 minutes for system standby. But use your own judgment. Any settings in this area are much better than none.

Turning off the hard disk has a negligible effect on power usage according to the EPA. You can ignore it.

Click on the **Advanced** tab next.

The **Options** area allows you to decide if you want to password protect your computer when it goes into standby mode.

Put a check in the box if you value security and want to protect your computer from passing snoops. When you need to wake your computer up, it only takes a moment to enter your password.

Leave the box blank if you value convenience over security.

Click on the **OK** button to finish.

Waking the Computer from Standby

To wake your computer from standby mode, just tap the spacebar.

Don't forget to turn your computer off on nights and weekends!

Adopted:

LEGAL REF.:

CROSS REF.: