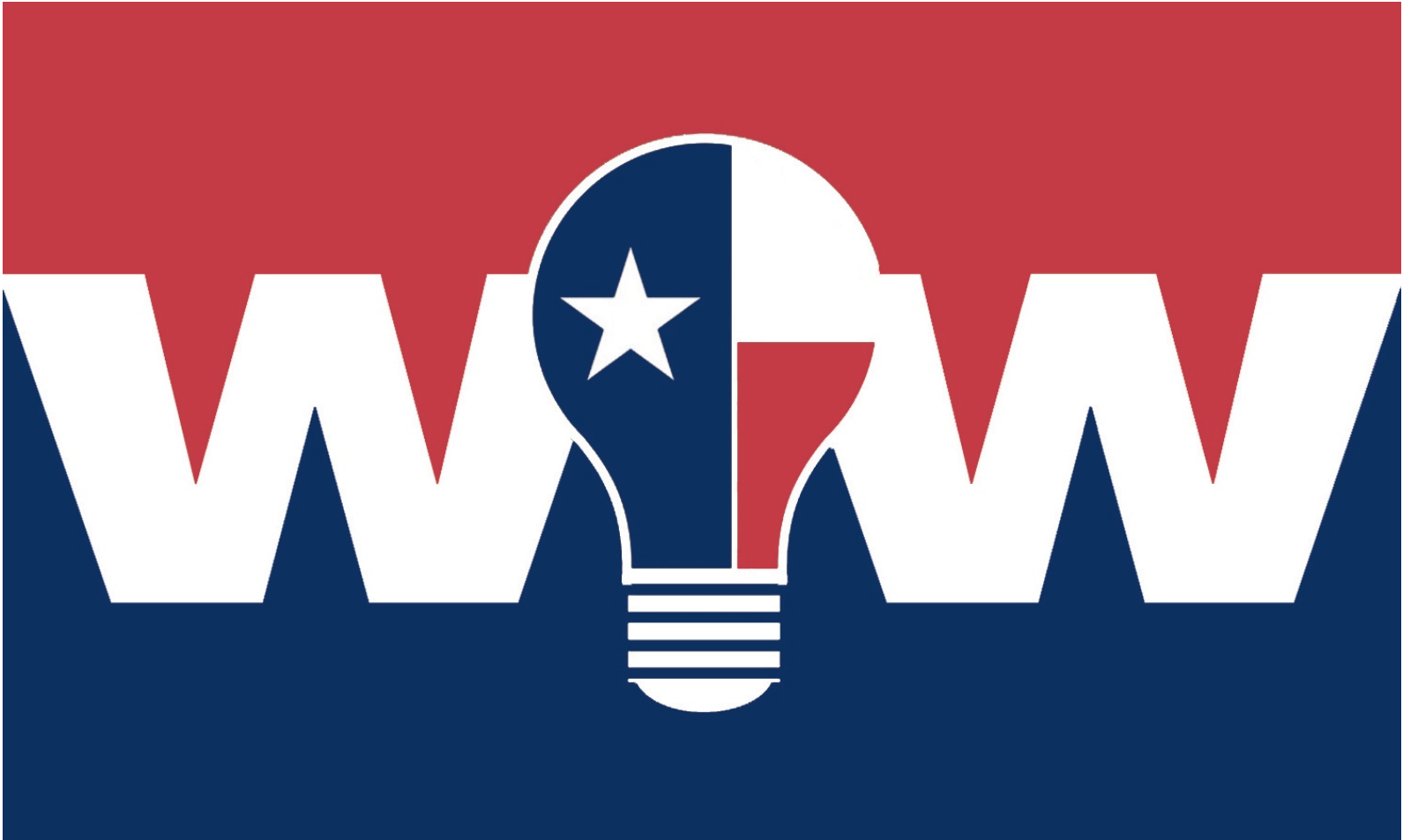


District Wide Watt Watchers



DRAFT

Information to assist school districts in starting a successful student involved energy awareness program.



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Introduction to Watt Watchers

Watt Watchers is sponsored by the State Energy Conservation Office (SECO), the Texas Comptroller of Public Accounts, and the US Department of Energy and is available to Texas schools at no cost. We believe Watt Watchers is the largest school energy awareness program in the U.S. Here are our numbers: As of January 2008, 4,249 classrooms are signed up to do Watt Watchers at 2,827 schools in 641 school districts and 207 Texas counties. Many thousands of students directly participate in Watt Watchers and a much larger number are impacted by the program. The University of Texas at El Paso - Energy Center has been funded by SECO to provide the Watt Watchers of Texas program to Texas schools for over 12 years. In 2007, we surpassed 1,000 sponsors who have received a 5 year service pin. Watt Watchers is an endorsed project for Student Council as sanctioned through the Texas Association of Student Councils. Approximately, 752 high school programs are enrolled in Watt Watchers.

There are other programs we are aware of that involve students but their focus is on curriculum or very specific projects on a few campuses. Some programs do include energy patrols but we know of none that attempt to involve students in becoming the energy awareness ambassadors for the school district in the way Watt Watchers does. The original concept for student energy patrols came from Connecticut and was a proprietary program commercially offered to schools. We are not aware if this approach is still being offered. (see attached article from the WATTS NEWS – Spring 2001)

Watt Watchers is actively seeking to work with school districts to implement the program in all of their schools with administrative support. Most current Watt Watcher sponsors were recruited at the grassroots level, one at a time, in workshops or at educational conferences. When teachers enroll voluntarily because they believe in the concept, they make excellent energy awareness advocates. However, they must function as independent operators without any direct local support or coordination with district policies.

Watt Watchers believes that the strongest approach for energy efficiency and awareness is a team approach. Combining the strengths of teachers and students with those of administration creates a higher potential for success. There is no substitute for a strong signal of the commitment to energy efficiency from the highest levels of the district. The power of having dedicated assistants on every campus, every day is also a tremendous asset.

Make Watt Watchers a part of your Energy Policy!

Watt Watchers is pleased to announce that the list of Texas School Districts participating in District wide Watt Watchers grows each month. We are working hard to develop tools that will help you through the process of getting your district signed up and your students watching watts!

One very important place to start with your top down approach to Watt Watchers is to add Watt Watchers to your energy policy. Student Energy Patrols can be just as important to your energy plan as set points for your HVAC system and shut down times.

Why add Energy Awareness?

Energy Awareness is priceless. You can perfect the controls to your buildings but if you don't educate the occupants about the energy that is used in their building and how to be efficient with their lighting, computers and other equipment you will miss some significant savings.

Every district implements Watt Watchers differently with the same goals in mind. Here are some ideas for additions to your district policy:

1. Every school must implement a student involved energy awareness program, like Watt Watchers of Texas.
2. Schools must monitor energy waste daily. You may have specific guidelines for each type of campus, ie., elementary schools are to patrol twice daily, middle schools should patrol at least once a day and high schools should patrol daily for at least a month and then continue to work on other means of making teachers and students aware of energy use.

Once you have updated it make sure that every employee in your district has a copy of the energy policy. Everyone needs to be "aware" that their school district is working hard to save energy and every student, teacher, administrator and staff member has a responsibility in making that happen.

Sign a District Watt Watchers of Texas Agreement

Energy Managers across the state received an Introduction to Watt Watchers Folder packet this summer. This packet was designed to help you get the big picture of the Watt Watchers program. In the last issue of the Watts News newspaper we provided you with all the information you need on how to become a Watt Watchers District. The first step was to contact us for the Introduction Packet. This was an easy step for you and for us. The next few steps require a commitment from you the Energy Manager, and from your district administration.

The second step is to add Watt Watchers to your Energy Policy or create an Energy Policy if your district does not already have one. If you need some tools to assist you in creating that policy, please contact us and we will send you an Energy Managers CD-Rom that includes all the policy information that we have gathered through the Great Energy Policy Exchange.

The third step to setting up a district Watt Watchers program is to sign a District Watt Watchers Agreement. Just like we ask the students to sign when they join the energy patrol, we ask that you sign an agreement that simply states that your district will: Actively implement a Watt Watchers of Texas Energy Awareness Program in your district; find and encourage the energy champion teacher on each campus to facilitate the Watt Watchers student energy patrols on that campus; work with the IT department to implement energy saving measures such as computer monitor management; follow the progress of each enrolled school to monitor for energy savings; reward schools that are doing a good job; encourage those that are not progressing as much; and take responsibility for the Watt Watcher sponsors in the district and pledge to do what you can to conserve natural resources while saving energy and money for the district.

By signing this District Agreement, Watt Watchers of Texas is signing up to assist you in making this happen. Watt Watchers will work with you to identify sponsors for each campus, train the sponsors on how to make their program successful, assist you in celebrating the success of your students and teachers and much more. Also by signing your District Agreement you will receive a Watt Watchers of Texas Flag to be used in your district. Fly it at your newest Watt Watchers school or create a competition for Energy School of the Month--healthy competition is great for students and teachers!

Your commitment to an Energy Awareness Program will make a difference in your district. The energy that you put into this campaign for your district will provide 10 times the benefit to your district. Watt Watchers of Texas is a fun and easy program for all grade levels. Every program is a little different and that is what makes Watt Watchers the best Energy Awareness Program for Texas Schools!

How to be a Watt Watchers of Texas District

It is the responsibility of Energy Managers across the state to reduce energy waste in each and every classroom. Unfortunately, they can't be in every classroom every day to make that happen. So districts from across the state have made the decision to start a Watt Watchers program to help reduce energy waste in the classroom. Watt Watchers is a fun and easy program for Texas schools to participate in. It's as easy as turning off a light! Basically, students patrol the halls of the school to see where energy is being wasted. If they find energy being wasted they turn it off and leave a ticket for the teacher. The students are also encouraged to leave thank you notes for those teachers that consistently remember to turn off the lights when their classrooms are not in use.

Here is how your district can be a Watt Watchers district:

Contact Watt Watchers. We need to know about you and you need to know all about us. We will send you a District Watt Watchers Enrollment Packet that includes a sample Watt Watchers kit, a folder describing all of our programs, and a list of the schools currently enrolled in Watt Watchers in your district once you contact us. The sample kit will give you an overview of the program and tips on how to get started.

District Energy Policy. If you have a district energy policy, Watt Watchers should be added to that policy. The Watt Watchers of Texas program is an effective way to reduce energy consumption and costs. We will be happy to provide statistics showing how school districts across the state have saved money and energy with Watt Watchers. If you don't have a district energy policy, and you need to begin the process of creating one, Watt Watchers has tools to assist you with writing the policy. Take a look at the sample energy policies on the Energy Manager CD-Rom included in your district packet.

Sign a District Watt Watchers of Texas Agreement and as you enroll your campuses in Watt Watchers they will receive a Watt Watchers kit and you will receive a Watt Watchers of Texas Flag. (See "Create a Competition," below.)

Start Your District Energy Awareness Campaign. It's important to add this section to your energy management department. If you educate people about why you are turning lights off or setting thermostats back they will be more compliant than if you just turn things off without providing information to support the action. It is proven that by educating your building occupants about your actions you will have a more effective program. Through this Energy Awareness campaign you can educate them and provide district offices with shut-down and operating checklists.

Make Connections. Contact the current sponsors on the list we provided. Find out if they are interested in being a part of the district-wide Watt Watchers

program. Recruit sponsors at schools not represented on our list. Your goal is to get a Watt Watchers Sponsor at each and every campus in your district. Keep Watt Watchers updated with your sponsors list so that we can support them all and keep them informed of all the new materials we have to offer.

Host a Watt Watchers Sponsors meeting to introduce the materials and procedures for your district (for example, the number of patrols you expect each campus to have daily and how they will provide feedback from their record sheets). Let us know the date and time that this meeting is scheduled, and we will make arrangements to be present, or send materials to assist you in the presentation. Watt Watchers recently attended a Watt Watchers sponsors meeting for Mansfield ISD where we presented the program to the sponsors and answered questions they had about the implementation process.

Secret Mission. Before your campuses start patrolling they need to get into stealth mode and complete the Secret Mission activity. The information that they collect should be reported to you and a summary sent to the Watt Watchers program. (What's "stealth mode"? See the Watt Watchers manual on the "Publications" page at www.wattwatchers.org .)

Create a competition using the Watt Watchers of Texas flag. Schools like to compete against each other. Establish guidelines that work for your district and host a healthy competition. The winning school gets to fly the Watt Watchers flag from their flag pole.

We have received lots of feedback from the districts that are currently using the Watt Watchers flag and they all say that the schools are loving the competition and energy waste is going down!

Provide Feedback to Your Schools. Students need to know how their program is doing. In the materials they receive they are asked to let others in the school know about the energy usage. If possible, provide them with a copy of the school's monthly utility bill.

If you are already providing that information to the school principal just let the Watt Watchers group know and they can meet with the principal to review the information. Working as a team will make this process much easier for all!

Keep Communication Lines Open. It's important that the sponsors have a way to contact you for support and information. Make yourself known to them – they are your eyes and ears on the campuses! Encourage the schools to put up posters, make light switch reminders, and display charts to show energy savings as part of their Watt Watchers Energy Awareness Program. Communicating with these sponsors can be as easy as sending out a mass email to them all with information on the program or when you are at the campus doing audits stop by or leave them a note. You don't have to chat with them daily or weekly just make yourself known!

Most Important – Celebrate their Success! Watt Watchers will provide your district with the Watt Watchers Flag – it's a great celebration to have the flag flying over your school – spread the word and get some attention drawn to the campus of the month through your school, local community, and the Watts News Newspaper. Award the students with the Certificate of Achievement after they have participated in Watt Watchers. Give out a Zero Hero award at each campus – there is always someone who deserves it! Celebrate with us when we award 5-year service pins – help us make the presentation special by presenting the pin to the teachers in your district. Make it a photo opportunity! You can celebrate big or little. Carrollton Farmers Branch ISD's Energy Manager, Victor Melton, hosts a Green Team (Watt Watchers & Recycling) Rally every year as a thank you to the students who participate. The students are awarded a certificate and are given a goodie bag. This is a big event but it creates lots of excitement in the program.

Identify Your Energy Champions!

Make Connections

Watt Watchers of Texas maintains a list of approximately 4200 sponsors across the state that participate in the Watt Watchers program. Some of those sponsors are in your district. You need them and they need you. Together you can make a huge impact on reducing energy waste in your district. Watt Watchers will supply you with the list. Your job is to contact the current sponsors on the list and assist them in sponsoring the Watt Watchers program at their campus. Find out if they are interested in being a part of the district-wide Watt Watchers program. Recruit sponsors at schools not represented on our list. Your goal is to get a Watt Watchers Sponsor at each and every campus in your district.

How Does Watt Watchers Work In ...

Elementary – Watt Watchers is great for elementary schools because it is so flexible in its design. The most successful Watt Watchers Energy Teams patrol the school 3 times a day – at lunch, recess, and after school. Classrooms become empty or populated throughout the day, so the more you patrol the more you can reduce the amount of energy wasted in the school. Watt Watchers Teams also patrol the whole school – don't leave out the work rooms, teacher's lounge, or office area. There is a lot of equipment in those areas of the school; often people are in and out and don't remember to turn off the lights.

Middle Schools – Watt Watchers is a little different in middle school than elementary school because the daily schedule is quite different. Middle school students move from class to class and they are on their own during that rotation. A great time to conduct energy patrols in middle school is during science class – assign four to eight students to quickly do a patrol of the campus during the beginning or end of your class time, and also allow students to sign up for a rotation after school. Turning off the lights at the end of the day saves the district thousands of dollars! Another idea is to get the science club or student council to put up light switch reminders – put up new ones from time to time so they continue to grab the attention of the room occupants.

High Schools – We often hear people saying that Watt Watchers is not a high school program – and we firmly disagree with that statement. Watt Watchers is perfect for high schools. High school energy patrols don't typically patrol every day for the entire school year. These groups tend to do blitzes where they patrol once a week or month and when they notice that there is increased energy waste occurring they will intensify their patrols. High schools tend to get good responses to the Watt Watchers program which quickly reduces the number of lights being left on in unoccupied areas. This allows high school students to move on to other Real Projects with Real Results. They will continue their spot checking of classroom lights while they start energy audits and an energy

awareness campaign for the school. All these project ideas are found in our Real Projects with Real Results in the Real World Handbook.

Where Do I Start When Looking for Sponsors?

Often the sponsor of an elementary Watt Watchers program is a 4th or 5th grade teacher or a science teacher. We even have Vice Principals that sponsor the program in elementary schools!

Middle schools tend to have departmentalized science teachers which allows them to use the Watt Watchers materials more in depth by collecting data about their energy patrols and using that data to do analysis. They also tend to use the lesson plans and other educational pieces that Watt Watchers publishes.

An excellent place to find middle school and high school sponsors is through the Student Council. In 2007 Watt Watchers became formally endorsed by the TASC Board of Directors as partner/project for 2007-2008. This means that Student Councils across the state will be looking to Watt Watchers for assistance in energy and environment projects. I can't think of a better fit for a district-wide Watt Watchers program!

Finding sponsors is sometimes the most difficult step in getting your district-wide program up and going. The good news is that Watt Watchers is here to help you. We will provide you with the list of sponsors already identified in your district and continue to assist you in identifying sponsors at the remaining schools. We will also make ourselves available to you for training the sponsors in your district. More information will be provided about that training in the Winter 2007 Watts News Newspaper.

Keep Watt Watchers updated with your sponsors list so that we can support them all and keep them informed of all the new materials we have to offer. If you have questions or need some assistance with your district-wide program, please contact us – we are here to serve you!

Establish Guidelines for Your District Wide Watt Watchers Program

In a program as large as your district Watt Watchers program, energy managers will want to set up guidelines for the schools to participate in the program. Watt Watchers does not set up these guidelines for schools because every school in Texas is different, by size, location, schedule, etc. We always suggest that the sponsors set up the guidelines for their program because they know their schools better than we do. Our suggestion is always: The more you patrol, the more you will save. Here are some suggestions for you to set up guidelines for your district program.

Start Stealth & Report Results

You have heard us talk a lot about Stealth Watt Watchers this year. Stealth is probably the most important patrol that your students will go on, especially when looking at it from an Energy Manager's standpoint. Stealth gives you a benchmark for where you were when you started your Watt Watchers program. Basically, you secretly patrol the school for a week (or longer if you would like) to see what the energy behavior of your school is before announcing and starting your student energy patrol program. The students will read the school's electricity meter (if located in an easily accessible and safe location) before they start the stealth patrol. They will patrol two to three times a day observing the energy waste and making comments on the Watt Watchers check sheet. They continue this routine for one week. At the end of the week they read the electricity meter again and summarize the information found on their check sheets. They send that information to the energy manager so that they have a benchmark for that campus. We encourage schools to RE-stealth after a month of patrolling, and then again after six months. This will show you how the habits in your school are improving.

Set Minimum Patrol Requirements

Watt Watchers can be implemented in many ways. That has been the message that we presented for over a decade. Teachers can do it during their energy unit, or every day at lunch, or 3 times a day. No matter how they participate it will change the habits of the building occupants. When participating in a District Wide Watt Watchers program, it will be more successful if at the district level you set minimum patrol requirements for each school level.

Elementary Schools

Most elementary schools can patrol 3 times a day: before school (have the students that arrive early for breakfast patrol the school); during lunch or recess (pick a grade level to patrol before or after each of these events); after school (most schools still have a group of students that are selected each month for safety patrols. Add a few students to that group to do energy patrols at the end of the day so that lights are not left on at night.)

Middle Schools

Middle schools can operate much like elementary schools or high schools — they are truly in the middle. Many middle schools have a student council or science club that would love to take on the project and have the time to patrol every day. You could also set up the program through a science class. The science teacher could then let students from 3 of his or her classes patrol daily so that the school is being monitored throughout the day. We suggest setting your minimum patrol requirements based on who is sponsoring the program. If it is a student group sponsor, then they may patrol once a day, but will be able to patrol every day and also be capable of a small energy awareness campaign. If the sponsor is a science teacher, he or she will be able to select students from several classes to patrol two to three times throughout the day.

High Schools

Most high schools have a student group that does energy or environmental projects, like a student council or science club, that can take on the role as the campus Watt Watchers. These student groups are going to implement a Watt Watchers program just like the elementary school except for the number of times they will patrol. They will most likely patrol every day for a month or two because they will quickly get to a point where they are not giving out tickets anymore — habits can change faster in a high school setting. At that point the student group needs to move on to other aspects of the Watt Watchers program, for example, they can monitor computer power management, reminding people to turn off their monitors when they are not using them. And they can take on the energy awareness campaign for their school.

The most important part of setting minimum requirements is that they are doable within the school schedule. Don't set guidelines that can't be met because that hinders the success of your program now and in years to come.

Check Sheet Reporting

Once you have these guidelines for patrolling in place, it will be important to you to measure the progress. We encourage you to get a monthly summary from each school on the status of their program. The summary should include: number of times patrolled during the month, number of classrooms patrolled each month, number of x's, number of √'s, number of 0's. Compare these monthly summaries to the data collected during the first stealth patrol and you can measure how successful your program has become. Watt Watchers also requests that you send us a monthly or quarterly summary of those programs. There are several ways to report the information to Watt Watchers. You can have your schools complete the form on the Watt Watchers website, www.wattwatchers.org click on Student Energy Patrols then navigate to the Reporting tab or download the database from the website and enter the information for your school district – keep a copy for yourself and email Watt Watchers a copy or summarize the information and fax or mail it to Watt Watchers. We just want you to share the data with us so that we can help

monitor your program results. It also helps us show other districts how successful the program can be.

Energy Awareness Campaign

What is energy awareness and why do I need a campaign?

Energy awareness is simply making people aware of energy performance goals and initiatives, as well as their responsibility in carrying out the program. If you were to ask most principals, teachers and school staff how much energy their school uses in a month, they could not tell you. They can tell you how much their home energy bill is. It is important that people understand how much it takes to run these facilities. When you attach a dollar amount to a statement it makes people understand a little better. In most Texas school districts energy is the second highest expense for the district. By reducing those costs more money can go into the classroom whether that be higher teacher pay or more supplies for the classrooms. When energy is wasted, no one gains — when energy is saved, the savings can be shared. Your energy awareness campaign will help raise the knowledge of energy use in your school and district, and will cause savings to occur.

How do I implement an Energy Awareness Campaign?

There are many ways to make people aware of energy: through posters in the schools, made by your Watt Watchers patrols; or announcements from the school administration or Watt Watchers patrols. Your school district is unique in many ways — put that uniqueness to work in your campaign.

Watt Watchers is here to assist you with implementing your Watt Watchers program. We would love to brainstorm with you to assist in establishing your district Watt Watchers guidelines. We have lots of tools available for your schools to make their programs a huge success — everything from PowerPoint presentations to graphics for posters to sample announcements and letters to teachers. If we don't have what you are looking for, let us know and we will get to work on it — other districts might just be looking for it too!

How do we know how much we have saved using Watt Watchers of Texas?

Energy Managers often hear one important question after they implement the Watt Watchers program in their school district, "How much energy is it saving us?" That is a very difficult question for many of you to answer. In an effort to support and assist you through the process of implementing and maintaining a successful program, we offer you some suggestions.

Stealth makes wealth

You hear us talk a lot about the Stealth Patrol. Some may think we talk about it too much but we don't think so because we know how much power lies in this simple step. You have to know where you started in order to see how much progress you are making. The Stealth Patrol gives you a real life picture of the energy behavior in your school prior to starting an energy awareness program. Completing the Stealth Patrol will give you the priceless data that you need to measure the success of your Watt Watchers program. How can this patrol be so powerful? It's simple.

The Stealth Patrol is the very first patrol that your students will complete. This patrol will be done without giving out reminder tickets or thank you notes. It should be done over a one week or one month time period (depends on how much data you want/need and how much time you have). The students will patrol the entire school and mark their patrol records just like they were going on a regular patrol. At the end of the stealth period they should complete the stealth summary report. This will provide you with your baseline data (the percentage of teachers/classrooms with lights on/off).

Summarize and get a prize

As the students patrol the halls they will complete the patrol check sheet. These check sheets are gold! They give you all the information on how the school is using/wasting energy. Have the students complete the feedback form each month, each six weeks or each quarter (whatever time period you would like to receive the information). The feedback form will provide you with information to compare to the Stealth Patrol. Remember we said "stealth makes wealth"...this is where the wealth comes in. Compare the forms to determine the number of classroom lights left on before the start of your energy awareness program and how many lights are still being left on after one month, three months, and a year of patrolling. Use the summary forms to identify areas of the school that need extra education and encouragement. This would allow you to do a few extra awareness efforts in the areas that are still getting reminder tickets.

How do you get the prize? Great question, we are so glad you asked! Send Watt Watchers of Texas your results from the Stealth Patrol and your feedback forms. We will give you a choice of prizes for the students participating in the program at the schools that you send information about.

How much did you save? Now you have an answer.

So, if you are asked how much Watt Watchers is saving your school, take a look at your school's electric bill once your program is established, and compare it to last year's bill.

You will see the savings in your school's electric bill (and so will the administrators and teachers who asked you how much is being saved). And, you have the summaries to prove it. Now you know the answer to the bottom-line question. All based on a very important Stealth Patrol and the patrol records of your Watt Watchers. These are not difficult answers to come up with. It will just take some planning on your part to make sure it happens. If you don't have time to do all the summarizing – just send us the information that the schools report to you and we will be happy to assist you. Not only will you have the proof you are looking for, but Watt Watchers will have data to share with other districts in the state that want to know how much Texas schools are saving.

Energy Awareness Campaign – It's Priceless!

This is the campaign season and we all have been hearing a lot about who is running for offices. Lots of money and time are spent on those clever campaigns to get your vote. And they do get your attention – some make you mad and some win your vote. The key is that they get your attention, they make you aware of issues that affect your daily life. Energy Awareness campaigns do the same thing. They grab your attention and get you thinking about something that does affect your daily life. You can't make it without energy. Making people aware of energy issues, use, waste, sources etc., gets them thinking. Every energy-saving act is a vote for energy efficiency and saving money.

There are many levels of an Energy Awareness Campaign for Texas schools. Watt Watchers is an everyday Energy Awareness Campaign. It is our job to make everyone in Texas Schools aware of energy use and waste. That awareness turns into energy savings at the meter, which in turn means more money for Texas schools and less pollution in our air. Below are some key campaign items that can be done at different levels of the district.

Administration

- Hang posters in the administration buildings that catch the eye of passers by. Watt Watchers has a series of posters that can help you – two posters are printed in every issue of the Watts News quarterly newspaper. Take them out of the newspaper, laminate them and hang them up for people to see. If you need additional posters just let us know, we would be glad to send them to you.
- Send out weekly/monthly emails that educate the administration about energy use for the district, what you are doing to reduce the amount of energy used in the district, or send them an energy tip.
- Create an office checklist. This will remind people to turn off the power and turn on savings when they leave for the day.
- Share your Energy Policy with everyone. Let them know what the district's policy is for energy use, your temperature set points, etc. If they know about the policy they are more likely to follow it. Like any campaign, it's a team effort. Will your district put the Energy Saver Party into their offices? If you don't have an energy policy for your district, contact Watt Watchers. We have tools to share with you so that you can create an energy policy.

Campuses

- Find out what your school spends each month on energy, how many kilowatt-hours it takes to run your school, and how much water your campus uses each month. Graph that information and hang it in the foyer of the school for everyone to see.

- Start a Watt Watchers program. Students patrolling and teaching teachers and other students to turn off the lights is the best campaign a school can have.
- Put light switch reminders up on all the switches in the school. That last minute reminder can save schools thousands of dollars.
- Hang posters around the school.
- Make announcements that give the teachers and students energy tips.

Classroom

- Teachers should not hesitate to send these tips and ideas home with students. The information that students learn in the classroom about energy efficiency can drastically reduce their home energy bills. Knowledge is Power contains lesson plans that deal with home energy use – send those lessons home. Let the students teach their parents!

There is lots of information out there about energy awareness campaigns. Pick what works best for you and do it. The U.S Department of Energy Efficiency and Renewable Energy Office has the Federal Energy Management Program (FEMP). They produce materials that are free to everyone to help with an Energy Awareness Campaign.

October is Energy Awareness Month. Plan something. Do something. Make a difference in your district. Energy waste is unnecessarily expensive. Saving energy and preventing pollution by educating your building occupants is priceless! Who wouldn't vote for that?

We are not alone. The truth is out there. There are other programs that are doing the same thing as Watt Watchers. We don't know about other planets in our universe but quite a bit of watt watching is happening right here on Mother Earth. Whether the name is Watt Watchers, Watteam, Energy Patrol, STEM, Energy Team, Green Schools, Energy Flash Patrol or something else, the idea is to get students involved in saving energy, preventing pollution, and learning about the environment. You just can't hold back a good idea and we need all the help we can get. Every school should be a Watt Watchers school.

It all probably started in Wallingford, Connecticut in 1979 when a teacher named Carol Wilson formed the Wallingford Auditing Technical Team (WATT) composed of students, teachers, and custodians. This program was a model for four other states and was such a success that other schools nation wide demanded information and implementation of the program. Later, Wilson formed a private company and called the program Savings Through Energy Management (STEM).

Texas

Texas is an early innovator and piloted a Watt Watchers in 1985 through the Region IV Education Service Center in Houston. The Galveston ISD reduced their

"In Texas, Watt Watchers dates back to a pilot program in 1985. Today, Watteam and Watt Watchers have enrolled over 2,000 teachers to sponsor the program at their schools. Students are learning the value of energy efficiency while actively helping to save money for their school districts." Glenda Baldwin, Program Manager, State Energy Conservation Office

electric bill by \$25,000 a year. The next year, through a contract with U.T. Permian Basin, a Watt Watcher program was implemented for West Texas and was expanded to include over 160 school districts throughout Texas by 1993. Support for the program was not available for a time in Texas. In 1997 Texas expanded the program to cover the entire state and divided the 254 counties between Watteam and Watt Watchers. About 2,000 teachers have enrolled so far in the two programs, representing about 25% of the 7500 schools in Texas. Watteam and Watt Watchers students patrol their schools looking for lights left on in empty classrooms and get involved in other projects to stop energy waste, save money and prevent pollution.

Texas also has the Texas Energy Education Development project that focuses on energy activities and curriculum. TEED sponsors an annual week-long Summer Energy Leadership Conference for high school students and also has a long history in Texas.

Other State & Regional Programs

Watt Watchers of New Mexico is a spin-off of the Texas Watt Watchers program and has been funded by the Public Service Company of New Mexico for three years. About 200 schools have enrolled in the program.

Watt Watchers of America is another spin-off of the Texas Watt Watchers program. The Environmental Protection Agency – Region 6 sponsored an expansion of Watt Watchers into Oklahoma, Arkansas, and Louisiana during the 2000-2001 school year to complete the five states of EPA Region 6 (with Texas & New Mexico). The program is also serving as a pilot for national expansion.

California is also an early innovator in establishing Watt Watchers programs. California Energy Patrols are one of the most popular and effective energy action programs to be developed in California. Students on energy patrols monitor classrooms to ensure that lights are turned off when rooms are vacant, which reduces school electrical costs considerably. By getting kids actively involved, the program makes the school a more exciting learning environment, and at the same time can reduce the school's energy costs by roughly 1/3 or \$1,000 a month in DeVargas Elementary School's case. That money can be used for

other school programs.

District of Columbia Energy Office administers the Energy Patrol Program that covers 145 public schools. Students are taught to identify energy waste in their schools and homes. Students monitor school facilities, assisting where possible in the reduction of energy usage and report where additional assistance may be needed. Certificates are awarded to students at the completion of each year.

Mississippi provides the Energy Patrol Program free to grades 3 through 7. The Mississippi Development Authority/Energy Division developed the Energy Patrol Program which can help a school save money and energy by implementing a few simple efficiency measures throughout the school. Students are trained to check for energy waste, such as building lights left on in unoccupied areas, broken or cracked windows, or leaky faucets in bathrooms.

Arizona Department of Commerce Energy Office offers assistance in starting the Energy Patrol program including start-up kit and video for teachers organizing school energy patrols.

EnergyNet is a classroom project in Illinois that integrates technology, standards-based learning and workplace skills. Created and managed by Educational Dividends in conjunction with Illinois teachers, EnergyNet helps prepare students for today's workplace. Students in grades 3-5 participate in Energy Detectives. Students in grades 6-12 participate in Energy Auditing.

The Green Schools program from the Alliance to Save Energy (ASE) helps schools use energy efficiently through building retrofits, changes in operational and maintenance routines, and changes in the behavior of building users. Students, teachers, custodians, administrators, and community partners all work together toward a common goal—saving energy and money. <http://www.ase.org/greenschools/index.htm>

Utah Office of Energy Services offers an Energy Patrol program that shows students how they can cut energy use in their own schools.

For Profit

Savings Through Energy Management (STEM) is for 7th - 12th grades. STEM teaches students and their teachers how to view their school as an energy consumer and find ways to help the school save energy and money. The program includes five full days of training in which participants learn to identify energy problems in the school, to recognize appropriate, cost-effective solutions and to quantify the savings. The program culminates in a written report which the participants present to the School Board. STEM has been provided to more than 150 schools throughout New England and Canada's Province of Ontario. STEM teams report savings of \$ 10,000 to \$40,000. a year in energy costs. Wilson Educational Services, Inc. offers STEM for a fee.

Arizona Public Service has an Energy Patrol program. As a member of the APS Energy Patrol, students make sure that people turn off the lights when they leave the room. If they find a room with no one in it and the lights on, they issue a reminder about turning off the lights. http://www.aps.com/my_community/LearningCenter/LearningCenter_2.html

National Energy Foundation's Energy Action Patrol, grades 5-7, is an enhanced version of NEF's national award winning Energy Patrol program. Students wear patrol arm bands while conducting regularly scheduled energy audits of their school. A program binder contains guidelines and instructions, three different reminder notices gently prompt forgetful energy wasters, and an instructional video in-services teachers and students. A 14 page Energy Saver's Guide, is included for each student. The Energy Action Activities guide contains activities that help students learn by doing and a full color poster effectively teaches Energy



"E - QUOTE"

"We need to realize that the efficient use of energy is every bit as valuable an energy resource as the traditional resources, such as coal, oil and gas, because not wasting a barrel of oil is just as valuable as producing or importing a barrel. The amount of energy saved in the U.S. this year through energy efficiency is greater than the amount of energy that will be supplied by coal, natural gas, nuclear or hydropower. It is second only to oil, over half of which is imported." (nearly 25 percent of U.S. energy consumption)

David M. Nemtzow, President, Alliance To Save Energy (www.aceee.org)



Q: How many Do-It-Yourselfer buffs does it take to change a light bulb?

A: One. But it takes two weekends and three trips to the hardware store.



THE PSYCHOLOGY OF WATCHING WATTS

Watt Watchers is a very good idea. It is simple to implement and easy to run. Watt Watchers saves energy and dollars for school districts. It is free – schools get a free kit of materials worth over \$25 – and free support. Students learn the value of energy efficiency. And saving energy prevents pollution. So why isn't every school a Watt Watchers school?

Getting the word out is the biggest hurdle. That is, once teachers and students know about the program they readily participate. But beyond that, some

people are not immediately sold on the idea of saving energy. There may be as many reasons as there are individuals but some patterns of behavior become apparent.

It seems that energy use is a very personal matter. We all use lots of energy everyday and we have been using it all our lives. Over the years we have developed a way of using energy and many attitudes about it. You could say we have developed a psy-

chology of energy use.

In our experience, here are the most common "psychological problems" encountered when people are asked to use energy efficiently:

Not thinking about it – not paying attention. Virtually no one among us thinks about energy. It is our silent butler, serving our every need but working quietly in the background like wallpaper. It's just there. Only when we don't have the energy we rely on do we give it any thought. Sometimes it can be hard to get people's attention. Watt Watchers can really help to make everyone more aware of energy use.

Bad Habits. Some people automatically turn out the lights when leaving a room. Every time. It's a reflex, they even forget and turn out the lights when someone else is still occupying the space. Others rarely turn anything off. We are creatures of habit, we tend to do what we have always done. Habits can be changed and changing habits is the major work of Watt Watchers.

Myths. People have bad information about energy. They may have gotten it from a favorite uncle or another respected source. They strongly believe the source over all others. When there is a "rebellion" from teachers about turning off the lights, energy myths are usually the source. Watt Watchers has developed an arsenal of information to present to the teachers questioning the program. Contact us if you encounter problems. Getting the correct information to energy users is extremely important.

Personalize or Minimize it. A small minority of teachers are quick to take offense at "more rules." They see Watt Watchers as a program that focuses directly on them personally or at least creates extraordinary problems for them. There may be no resolution for this group. The principal is the proper arbiter for this situation, let this be resolved by professional administrators. Minimizers think classroom lights and usually all of their energy use is trivial. It's the energy use in factories or by bus fleets or someone else that merits our concern. Usually, giving them more information gets them into the program. For example, hearing that leaving their classroom lights on two unneeded hours each day costs the school district \$50 is effective.

Hard Cases. Some among us are extra difficult to reach. Included in this group are "Scatterbrains" and "Curmudgeons." Scatterbrains are simply not focusing. They may be highly intelligent or creative individuals but they just can't seem to remember to turn out the lights. Students in their classes can help this group by regularly reminding them. A Curmudgeon is an "irascible old man," in other words, a grouch. There are a few out there and there is not much you can do about it. Once again, this is a job for professional administrators.

Looking back over each of these psychological profiles of energy users and the Watt Watchers goal for them, a plan for implementing Watt Watchers emerges.

- 1.) Watt Watchers need to increase awareness and get people thinking about energy. If no one is thinking about energy, no one is saving energy.
- 2.) Changing habits may be the most important step in improving long-term energy efficiency. Preventing the propagation of energy myths by providing good scientific facts will also have a long-term positive impact on energy efficiency.
- 3.) Another important goal of Watt Watchers is changing people's attitudes about energy. When energy users realize that energy saving programs are not directed at individuals and that even their small action adds up in a large way
- 4.) Keep working on the hard cases. Keep working on everyone. It takes time to create awareness, change habits, and shift attitudes.

continued from page 7 -- We Are Not Alone

Management In and Around Your School. Students will be proud to wear the Energy Action Patrol T-shirt (Note: T-shirts are not included in the Streamlined Energy Action Patrol) and display their Certificate of Merit. The School Energy Doctor software is a perfect complement to this active program. The Energy Action Challenge gives students the opportunity to put into action at home what they have learned at school.

Isolated sitings

Marion County Public Schools in Florida has the ENERGY FLASH Patrol, a form of energy auditing designed for students in the middle grades (3 - 5). Students participate by going to designated areas on the school campus to observe and record examples of energy waste or energy savings.

At Galvin Middle School in Canton, Massachusetts some of Ms. Shaw's 6th grade class are involved in the Watt Watcher's Program. This program involved 20 of Ms. Shaw's students for two full days.

The Energy Patrol at Richland School District Two in Columbia, South Carolina is part of our Environmental Club. Ms. Marie Bloise is the sponsor of this club. To be a member of this club you must be a member of our after school program called Players. Our primary goal is to help our school save energy. We do this by going around to all of the classrooms to see if the water is off. We also check to see if the water is dripping and the lights have been turned off when the class is not in the room. A tag is left on the door to tell the class what the Energy Patrol has found.

It's nice to know we are not alone. Lots of other people recognize a really good idea and they don't hesitate to apply it. If every school that has a "Watt Watchers" program recruited one more school to participate, think how many schools would be saving money, stopping energy waste, and preventing pollution. Maybe one day every school really will be a Watt Watchers school.

Yes, I see and how long have you felt that your appliances talk and play and run around the house when you are not at home?



"E - QUOTE"

"Climate policy has been held hostage to a tacit presumption that if saving a lot more energy were possible at an affordable price, it would already have been implemented. That's like not picking up a \$100 bill from the sidewalk because if it were real, someone would previously have picked it up; or like an entrepreneur who abandons a good business idea because if it were sound, it would have been done earlier." –Amory B. and L. Hunter Lovins, "CLIMATE: Making Sense and Making Money"



Q: How many conservatives does it take to change a light bulb?

A: One; after reflecting in the twilight on the merit of the previous bulb.

Energy Management in Administrative Offices

Do your Watt Watchers patrol the administration buildings in your district? In some school districts that is possible but in large school districts the schools may be too far from the district offices for the students to do periodic patrols. Watt Watchers does not want you to forget about those buildings. They use energy just like schools. They have lots of computers, printers, copy machines, coffee pots, vending machines, refrigerators and many other items that use energy and are often forgotten about.

It's important to educate the staff in your district just like we educate the teachers and students. Do they know that if they activate the power management features on their computers they can save \$20 per computer? Will they buy fewer sodas because the vending machine lamps are turned off? Probably not – as long as you make the effort to educate them.

Here are a few ways that you can help them help you:

1. Communicate with the building occupants. Send out emails with tips on how to reduce energy waste in their office space. Give energy tips in the district newspaper. Air public service-type ads on the closed circuit TV.
2. Make sure all district employees have a copy of the energy policy. They should know that your district is concerned about energy waste and want to reduce that waste and put those dollars back into the classroom.
3. Provide them with a simple checklist of energy conservation and efficiency measures to use at work like the one from the US Department of Energy FEMP program. Don't stop with just a checklist. Lists often get hung up in offices and soon become invisible.
4. Give them ownership in the program. Solicit input from employees to develop program content via surveys, focus groups and personal interviews. Put a suggestion box up in each building. Give them a fax back form to let you know when something needs your attention – doors left open during the day, water leaks in the bathroom, etc.
5. Celebrate their success. Tell them what your building use is now and update them monthly on the savings since you have started the program. If possible give them a pay back. Have a pizza party or send everyone a cookie. It does not have to be grand and it does not have to be cash – a simple thanks for helping the district save energy and money.

Do what works for your district in the administrative buildings and let us know what you are doing. Other school districts can gain a great amount of knowledge from hearing your story. Do something and let us spread the word!

Additional Resources

Memorandum

DRAFT

Date:

To: All Faculty, Staff, and Administrators

From: , Superintendent

Subject: Implementation of the Watt Watchers of Texas program

(School District Name) ISD is a large school district serving over (Number of Students) students. Along with our large size comes a large energy budget. Our energy costs are the second largest line item in our budget after payroll. We spend more for energy than for computers and books combined. Energy experts agree that up to 25% of all energy used in schools is wasted. (ISD) is working hard to change these statistics. You can help.

We have an excellent Energy Management Department that has already implemented an array of projects that have resulted in significant savings for our district. (One or 2 short sentences: HVAC, Lighting upgrades? \$1.5M savings, etc.)

Much more is possible but only with your help and cooperation. The faculty, staff, students, and administrators that occupy our buildings are in a unique position to contribute to the success of our energy reduction efforts. Your fingertips operate thousands of switches that help determine our energy budget. Everyone can contribute to energy management.

To help you participate in our energy management plan (ISD) will implement the Watt Watchers program in all of our schools. Watt Watchers is a program provided through the State Energy Conservation Office to help schools save energy and resources by getting students involved. It is simple and effective. The basic program gets your students to patrol the school looking for empty classrooms with the lights on. They turn out the lights and leave a reminder ticket for the teacher (or a thank you note if the lights are consistently out). It may sound trivial but when a teacher forgets to turn out the lights at lunch and after school those two extra hours a day cost our district \$50 every year. Students can also expand their energy saving efforts to additional projects.

Each principal will identify a campus coordinator to work with a group of students that will lead the Watt Watchers program on each campus. If you are interested in being the Watt Watchers sponsor talk to your principal. Please do your part to minimize energy waste. Turn off lights when leaving your classroom, shut down unused equipment, report energy waste, and help apply district energy policy on your campus. Working together we can realize significant energy savings, reduce operating costs, and prevent pollution.

(SCHOOL DISTRICT) Principals:

The (ISD) Energy Management Department needs your assistance in implementing the Watt Watchers program in all of our schools. Watt Watchers is a program provided through the State Energy Conservation Office to help schools save energy and resources by getting students involved. It is simple and effective. The basic program gets your students to patrol the school looking for empty classrooms with the lights on. They turn out the lights and leave a reminder ticket for the teacher (or a thank you note if the lights are consistently out). It may sound trivial but when a teacher forgets to turn out the lights at lunch and after school those two extra hours a day cost our district \$50 every year. Students can also expand their energy saving efforts to additional projects.

The Superintendent has requested that this program be implemented in all schools by (project completion date). You have a very important role in making this happen. We need for you to announce the program at to your staff. We would like for you to share the information about the program with them and then ask for a volunteer. Some schools have teachers that have signed up for the program in the past and those teachers may be interested in sponsoring the District Wide program as well. Attached is a list provided by the Watt Watchers program for you to review.

The Watt Watchers Staff will be here on (DATE of INSERVICE) to train your coordinator. Please make sure that you have a representative from your campus at this training. (Insert Time & Location)

The implementation of this program district wide will not only reduce our energy waste but it will change the mind set of students, teachers, staff and parents about how we use energy.

We are very excited about the launch of this program in (ISD) and look forward to working with your campus coordinator on (DATE OF INSERVICE).

The Pay Me Game – School Version

Nine questions + one bonus question
5 \$20 bills and 4 \$50 bills = \$300

1.) Does your district have an Energy Policy?
Yes: Pay Me \$20 No: Pay Utility \$20

2.) Does Your Computer Go to Sleep?
Yes: Pay Me \$20 No: Pay Utility \$20

3.) Do you know the temperature set points for your school?
Yes: Pay Me \$50 No: Pay Utility \$50

4.) Do you have a Watt Watchers program that patrols at least once a day?
Yes: Pay Me \$50 No: Pay Utility \$50

5.) Do you have refrigerators in your classrooms? OR
Do the vending machines in your school light up?
Yes: Pay Utility \$20 No: Pay Me \$20

6.) Do you know what your monthly utility bill is for your school?
Yes: Pay Me \$50 No: Pay Utility \$50

7.) Have you told your faculty and staff?
(Do you actively promote energy awareness on your campus?)
Yes: Pay Me \$20 No: Pay Utility \$20

8.) What is the goal for energy use at your school?
a.) \$1 per sqft b.) \$2 per sqft c.) \$3 per sqft
Correct Answer: Pay Me \$50 Wrong Answer: Pay Utility \$50

9.) Are your portable classrooms shut down (or set-back) on weekends?
Yes: Pay Me \$20 No: \$20

10.) Bonus Question: Do you know your energy managers name?
Yes: Congratulations, he can help you keep putting money in your ME envelope.
No: Keep paying the Utility.

**“Your” Independent School District
Watt Watchers Energy Waste Report**

Please fax this report to:

Mr./Ms. _____
Energy Manager
FAX: _____

School: _____ Date: _____

Person reporting energy waste: _____

Problem:

Exterior Door left open

Stuck flush valve

Exterior light on in daytime

Vending machine lights

Portable classroom heating/cooling after hours

Exit sign burned out

Water Leak

Other (specify) _____

**“Your” Independent School District
Watt Watchers Energy Waste Report**

Please fax this report to:

Mr./Ms. _____
Energy Manager
FAX: _____

School: _____ Date: _____

Person reporting energy waste: _____

Problem:

Exterior Door left open

Stuck flush valve

Exterior light on in daytime

Vending machine lights

Portable classroom heating/cooling after hours

Exit sign burned out

Water Leak

Other (specify) _____

For more information contact Watt Watchers of Texas:

The Energy Center
The University of Texas at El Paso
PO Box 68660
El Paso TX 79968

Toll Free Phone or Fax:
1-888-USWATTS

Email:
info@wattwatchers.org

