

# Clean Green Power Patch

## Steps to Take to Complete the

# *ACT*

## Requirement

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## Act

**Act**

**For all Girl Scout Levels**

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Now that you have learned something about clean energy and interviewed a clean energy site host or hostess, it is time to complete the "Act" requirements of the Clean Green Power Patch. This is where your patch work can make a difference to help more people learn about clean, green power. You will make a difference as you complete both of the Act requirements:

1. Complete an art, science, or communications project of your choice in the spirit of clean, green power. (See below for a list of ideas.)
2. Spread the word on clean energy by displaying your project in a public setting and contacting the media about your project. (See page 32 for helpful ideas.)

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## Create a Project

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Here you will find many examples of project ideas to get your creative ideas flowing, but the opportunities are open to your imagination! Choose one science, communication or art project from the following list or come up with your own idea to complete this patch requirement. The finished product should be of a quality high enough that you would be proud to display it in your local library, environmental center, kids' museum, youth hall, house of faith, school, or other public setting.

Below we have included project ideas, (1) adaptable to a variety of ages, (starting on this page), and (2) suitable for middle school and older Girl Scouts (starting on page 28). Some of the suggested projects have web links that could be helpful to your project. Be sure to check the Clean Energy Glossary on the Girl Scout's Clean Energy for a Clean Environment web site as well, since it has more web sites and useful definitions.

### **Project Ideas Adaptable to a Variety of Ages**

#### **Cozy Nature Saving Quilt**

The squares could each be made by a different child and symbolize the things we love and are protecting as we conserve energy and protect our environment from acid rain and ozone pollution: a brook trout, a white pine, clear blue sky, a mountain view, etc. An information sheet or booklet could explain the squares.

#### **A Breath of Fresh Air**

Illustrate the story "*A Breath of Fresh Air*". It could be broken up into parts with each troop member getting a frame to illustrate and then mount on a story mural.

The next chapter or a sequel could be written to this story and also illustrated. How do the children accomplish their mission? What adventures do they embark on in the process? What surprises do they encounter?

#### **Tell Your Site Visit Story**

Tell the story of the place you visited and the person you interviewed in some form of presentation. Be sure it is ok with your host or hostess before you proceed with this project! As you do this, make sure that your story comes out so that you would be proud about the way someone else told your story; double check for accurate details. Most hosts will be happy to answer

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questions. Be sure to send them a copy of your final product or photographs if applicable!

## **A Few Tips:**

- Expect to make a few drafts before your presentation draft.
- Include credits and thank you notices as appropriate.

## **Here are a few suggested ways to produce your story.**

- **Comic Strips:** Start with a page of mini-sketches (thumbnails) telling the whole story before starting in one section. Make several copies of blank comic strips to work in with neat boundaries -use rulers and shapes.
- **Books:** Use interesting borders. Make borders around photos and drawings. Laminate the front and back. Bind your book for a quality presentation.
- **Power Point or Video:** Think about the most interesting pictures and messages then set out the order and plan your frames. Be sure to open and close well.

## **Clean Energy is Here Now Display**

One way to spread the message is through a set of dioramas, tiles or a mural showing many examples of uses of clean and renewable energy technology such as wind turbines, solar panels, solar hot water on a roof, earth sheltered homes, or others you have learned about. Each girl in a troop can find out why an energy source or way of using energy is clean and green, imagine a picture to represent it, and then construct a 3-D model in a diorama. With the help of a carpenter, older girls can design a mural they paint on a board and hang it on a wall. Box dioramas can also be stacked to create a wall art piece. Short descriptions of each clean energy example should be available to interested viewers.

## **Re-Use It Gifts**

Re-using saves energy because it takes energy to make anything, not to mention the land space used up by trash and pollution from the materials. With this in mind, identify commonly discarded items that you could use to make reusable gifts with pictures or slogans that remind people to recycle. Paper towels, napkins, plastic dishware, and lunch containers are common, and cloth alternatives with stenciled suns, trees, or other clean and green images. Some craft places offer time and space to paint ones own tiles and dishes at a cost.

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## **Grow Organic or**

### **Compare Locally Organic Grown vs. Supermarket Food**

Girls who have visited an organic farm can make a set of posters showing clean green benefits of buying local organic food: energy saved in transportation and the health of the soil and water as well. You could also research how to grow organic plants and plan an organic vegetable garden or an organic family lawn this summer.

## **Compost or Vermicompost**

Get some red wiggler worms and have fun as you learn to transform nutrients from your food scraps into great fertilizer for your plants, and help keep your food local. Make a booklet describing how someone else can do the same thing and the energy benefits of eating locally grown food.

## **Composting Toilets**

Sewer treatment requires energy, even septic systems in rural back yards, as sewage may need to be pumped up hill or taken away in trucks. Composting toilets are an interesting topic to explore and they keep lots of good nutrients local. Visit someone with a composting toilet, learn how it works, make a model or diagram, research a good site for a composting toilet (perhaps a Girl Scout camp) and campaign for the toilets.

## **Recyclables Art and Programs**

Start or rejuvenate a recycling program in your community, school, town or even in your home. Collect interesting recyclables, visit a re-use or recyclables store and construct sculptures with your finds. Beautiful new designs can be created in mosaic tiles from broken pottery pieces set in mortar.

## **Meaningful Message Postcards**

Write helpful reminders and tips on pollution prevention and send them out printed on postcard size copies of your artwork- pen line with color, water color, or pastel all work well. Illustrate the beauty of the nature we are protecting. Save photographs of your postcards as proof of your patch work. As a tip, a digital photograph is easier to share with the media.

## **Green Buildings**

Make a model of a green building technology, either one you saw during your site visit or one you are interested in. Some examples include a straw bale house (straw bales make the sides of these homes) or an earth sheltered house where some of the sides of the structure are partly underground.

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Write up the benefits and display these with your creation, or a photograph of it, in a public place.

## **Make the NO a YES**

Take fresh look at the Easy Energy Survey. Turn some of those NOs on the quick energy survey into YESes and make a system of rewards for doing so. Expand on this survey and create an energy survey for your community. Provide rewards for people who record a change. You might do this through a school, class, library or within your own troop. You could even calculate the pollution avoided.

## **Minimize the Miles**

Figure out how many miles families in the troop are currently driving and then brainstorm ways to trim the weekly average. Be supportive of one another and agree on no criticism, only praise. Invite parents' input. Graph your progress in minimizing the miles your troop members drive.

## **Conduct a Poetry Slam, Contest or a Tea**

Write poetry about environmental conservation, environmental stewardship, damage of mining, air pollution, clean energy, or related topics. Plan the event with food and a microphone. Get others involved through advertising and invitations.

## **Weigh the Waste**

A great camp activity, where kids get to choose what they eat and how much is left, is to weigh the food waste at the end of the meal (not counting inedible, fatty parts), and to graph it. Food takes a lot of energy to produce and transport (and don't forget the energy in getting the fuel itself). Mapping out all the sources of energy that go into getting a meal for a troop on the table makes a great project.

## **Sample Projects Suitable for Middle School and Older Girl Scouts**

### **Build a Model Solar Electric Car**

Or for the oldest girls, mentor a team of builders. There's a whole program called Junior Solar Sprint for kids up through 8th grade-teams can enter their car in race and design events. Adults or even older girls could serve as mentors and organizers for a team of middle school age girls. The Northeast Sustainable Energy Association provides fun workshops for anyone interested

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in helping middle school age teens take on this project. See [www.nesea.org/education/jss](http://www.nesea.org/education/jss) for workshop dates and locations.

## **OZONE: Good Up High, Bad Near By**

Learn about ozone pollution at ground level and how it harms plants and animals including people. A totally different problem is that some of our human made pollutants are thinning our ozone layer high in the atmosphere, where we need it to protect us from dangerous radiation. Create a public project to help people get clear about this common confusion and help correct the human caused ozone problems. Here are some helpful web sites:

For a quick picture:

[www.nationalgeographic.com/eye/ozone/science.html](http://www.nationalgeographic.com/eye/ozone/science.html)

For learning about the importance of the good ozone layer:

[www.epa.gov/sunwise/kids/kids\\_ozone.html](http://www.epa.gov/sunwise/kids/kids_ozone.html)

For everything you wanted to know about ozone:

<http://science.howstuffworks.com/ozone-pollution.htm>

To explore NASA's ozone mapping, navigate the site of the Total Ozone Mapping Spectrometer (TOMS):

<http://toms.gsfc.nasa.gov/>

You can do science experiments testing for ozone pollution in areas around where you live by using ozone sensitive papers you can buy through:

[www.o3zone.com/ozoneser/](http://www.o3zone.com/ozoneser/)

Or check out some amazing work that New Hampshire scientists are doing with students, where they study the pine needles of white pines all over (including Massachusetts) for evidence of ozone damage that you can see using sophisticated equipment. Visit:

[www.forestwatch.sr.unh.edu](http://www.forestwatch.sr.unh.edu)

## **Test for Carbon Dioxide**

With plastic bags, big syringes, and a liquid acid indicator (red cabbage juice works fine), you can go around collecting samples from different locations such as car exhaust, breath, air near a bus terminal, or even straight carbon dioxide made by mixing vinegar and baking soda in a bag or an alka-seltzer in water. Bubble these gases with the syringe through the acid indicator and check for acid levels. The more carbon dioxide in the gas, the higher the acid

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reading will be in an acid indicator. (In red cabbage juice, this is indicated by how dark pink the juice turns.)

## **Build and Cook Meals on a Solar Oven**

To help you get started, here's a great site to learn about cooking with solar ovens and a lot of global culture around the topic. The Solar Cooking Archive, Solar Cookers International. [www.solarcooking.org](http://www.solarcooking.org)

## **Solar and Wind Kinetic Sculpture**

Once you know how electric circuits, solar panels, and motors work, you can play around and create some sculptures with parts that move from the power of the sun. Solar fountains are fun and you can start with a kit and work from there.

## **Create a Model Wind Turbine**

The web site [www.KidWind.org](http://www.KidWind.org) has many great instructions on how to build model wind turbines that actually produce power when placed in a strong breeze or in front of a large fan. Write up the benefits of wind power and display these with your creation, or a photograph of it, in a public place.

## **Home Energy Audit**

Learn about energy conservation and save your family money while you are at it by helping your family investigate your home's energy use with the Home Energy Audit calculator at this Lawrence Berkeley National Laboratory site: <http://hes.lbl.gov/hes/vh.shtml>.

## **Create a Web Site on an Energy Issue**

You and your troop can become experts on a specific topic and help make all the important connections for other kids. For instance, if you chose global warming you might include information on the carbon cycle, how burning fossil fuels creates carbon dioxide, and how carbon dioxide traps the sun's energy in the atmosphere. You could review other web sites that talk about how global warming may affect our planet's ecosystems, make links, and recommend the best.

## **Start, Moderate or Join an Energy Issues Discussion Forum**

Organize an energy issues forum in your town or participate and support an existing one by taking an active role in discussions, raising questions, agenda items, and logistics.

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## **Energy Information Exhibits**

You've been to fairs and you know what attracts people to a booth. Can you make a booth fun, interactive, and informative? Develop some demonstrations and models, interactive if possible, and make handouts for visitors. Join an earth day event, or have each individual become an expert on their own topic and run a section of booths or your own fair. Make it a traveling exhibit for classrooms, school assemblies, or other groups.

## **Model Fuel Cell Car**

Learn about the exciting technology of hydrogen fuel cells. Kits are available to make and conduct experiments and races with model cars. To get started, visit [www.h2help.org](http://www.h2help.org) and [www.fuelcellstore.com](http://www.fuelcellstore.com).

## **Public Access TV**

Get show time. Many adults would likely be eager to help you create an energy panel discussing important issues on air.

## **A Cause and Effect Map or "1 + 1 = 2"**

The idea here is that lots, perhaps most voting adults don't understand the connections between our current energy use and its effects on our society and planet, as well as the effects of making wiser energy choices.

Try to list each problem and each effect on a piece of paper. Write "causes" or "may cause" or "can lead to" on several little strips of paper and attach them to several separate strings. Use the strings to connect the problems and effects in every way that makes sense based on your research. Use a large area. A large wall poster can be created when you feel satisfied you have identified many problems, effects and what may cause what.

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## Spread the Word

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Below are ideas on places and ways you can display your project and tips on how to reach out to the media. Ask people you know for ideas on places or events in your neighborhood where you can display your project. Most likely, you will have several people share good ideas with you. Then reach out to the media. Two simple ideas are to submit a news release or a letter to the editor to your local paper.

Publicizing your experience with clean energy is an important requirement of your patch work. It can be done in many ways. Choose at least one way to publicize the things you have done and learned through the Clean Green Power Patch. You can come up with your own ideas or use one or more of these examples:

1. Create press releases for your site visit and interview, or for your project if it is an event or if it will be displayed. Do be sure it is OK with the site owner to have the press involved in your visit prior to inviting them. For press release tips, see, "Make Yourself a Star" on page 34.
2. Make the focus of your project spreading the word about clean energy. Teach other people about what you have learned by displaying your project at your local school, library, city or town hall, or other commonly visited places. Have an opening reception just prior to a meeting (such as PTO meeting in the building where you display your project) and advertise with good looking photocopied fliers in advance.
3. If your project is geared toward teaching kids of a certain age group, you might get permission from a teacher to make a special class visit or from the principal to offer a special assembly. The school library is also a great place to spread the word.
4. Prepare a 10 to 15 minute presentation with your project and get yourself on the agenda at a local adult meeting of the Rotary Club, or another group. Here's a simple outline. Tell:
  - a. About the patch program and what clean green power means.
  - b. Where you went, why, and what you learned.
  - c. What project you created and describe it or show it if you can.
  - d. About the most important things you learned, changes you hope for, and what you think are most important things adults can do.

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5. Write a letter to the editor of your newspaper describing a position on clean energy, energy alternatives, energy conservation, or problems associated with energy use. You may also respond to an energy related article you find in the newspaper.

**Tip:** Look at the length of the letters the paper publishes. Usually it is about two or three paragraphs. That's the space you have to get across your point. Respectfully share your point of view and give a clear reason for it.

6. Look for a small newspaper, e-zine, or newsletter where you can write about your project and include some photos. You could even create your own publication and have each troop member's project set up in article form.

For a sample, check out The Green Schools Gazette at [www.ase.org/section/program/greenschl/gazette](http://www.ase.org/section/program/greenschl/gazette). At this site you can look through previous editions of this newsletter for students and by students. You could get ideas for a project and maybe publicity. Articles are wanted!

Asking around among parents or checking with your Chamber of Commerce can lead to some good ideas for places where you can share your project and spread the word. Here are additional ideas for places to share projects and experiences:

- Earth Day Events
- Environmental Centers
- Town Energy Committees
- Energy Study Groups
- Green Car Clubs
- County or Agricultural Fair (Maybe you can win an award!)
- Conferences
- National Honor Society
- Nature and Hiking Clubs
- After School Clubs
- After School Care for Younger Kids
- Historical Societies
- Science Fairs and Expositions
- Open Mikes
- Key Club
- Public Access Television
- Faith Organizations such as Churches or Interfaith Councils
- Other Girl Scout Troops
- Rotary Club

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## **Make Yourself a Star!**

Alerting the local press about your activities and achievements associated with the Clean Green Power Patch is an important way to spread the word about clean renewable energy! In the process, you get a sparkling image of yourself out in your community as well. Follow these steps and make the news!

1. Find media outlets to cover your event or project. Besides the well-read area newspapers, try getting an article in the elementary, middle, high school and college papers. Also consider publicity on the local television and radio stations.
2. Call your local media organization or check their web sites to find a contact person in education or local interest reporting. Be sure to get a full name, phone and fax numbers.
3. Prepare yourself to speak directly to your contact person and tell them briefly about the Clean Green Power Patch, what you've done that is newsworthy, and what you want them to do (such as an article, an interview, or to accompany you on your visit to a clean energy site). In addition, be prepared to send (usually by fax with a call to check that they got it) them a press release if they request it.

## **How to Write a Press Release**

1. Type it, and if possible, have the Girl Scout logo at the top with your council's name, troop name, and troop address at the top. This part is called the letterhead and it helps makes it look sharp and important.
2. Underneath, type in a heading. This format works well:  
FOR IMMEDIATE RELEASE CONTACT: -type in your name-  
-date-  
Phone: -your phone number-  
Cell: -your cell phone number-
3. Type in a title in all capital letters that describes your achievement or event. The newspaper or radio may use this as the headline.  
For example: LOCAL GIRL SCOUTS BRING ENERGY EXPO TO TOWN  
COMMON ON EARTH DAY
4. On the next line, type in your town and state in parentheses.  
For example: (Shutesbury, MA) -

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5. Write an article about your event as if you are the newspaper writer - saving the reporter all the work. Include in your article who what when where and why. Include a few quotes from yourself and others and name the projects sponsors and volunteers.
6. **Follow Up!** This is very important! Call the reporters who received your press release and ask if they have any questions, would they like a digital photo (if you can offer one), and if they are planning to write an article? Be prepared to re-fax them your news release if need be.
7. Keep your eyes and ears open for your name in the news!