

MUNICIPAL POWER NEWS

Peru Utilities



IMPA
INDIANA MUNICIPAL POWER AGENCY

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The IMPA Peru Solar Park is a three megawatt solar facility located on 36 acres of land at the end of East Jackson Avenue. This solar park has been generating electricity for almost one year.

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IMPA Peru Solar Park Now Generating Electricity

Representatives from the Indiana Municipal Power Agency (IMPA) and Peru Utilities welcomed a new solar electric generating facility to the community on October 26, 2015. The IMPA Peru Solar Park is a three megawatt (MW) solar facility located on 36 acres of land at the end of East Jackson Avenue.

“IMPA has long been a proponent of a diverse power supply,” stated Raj Rao, President and CEO of IMPA. “The solar park that we have built in Peru, as well as solar parks throughout other

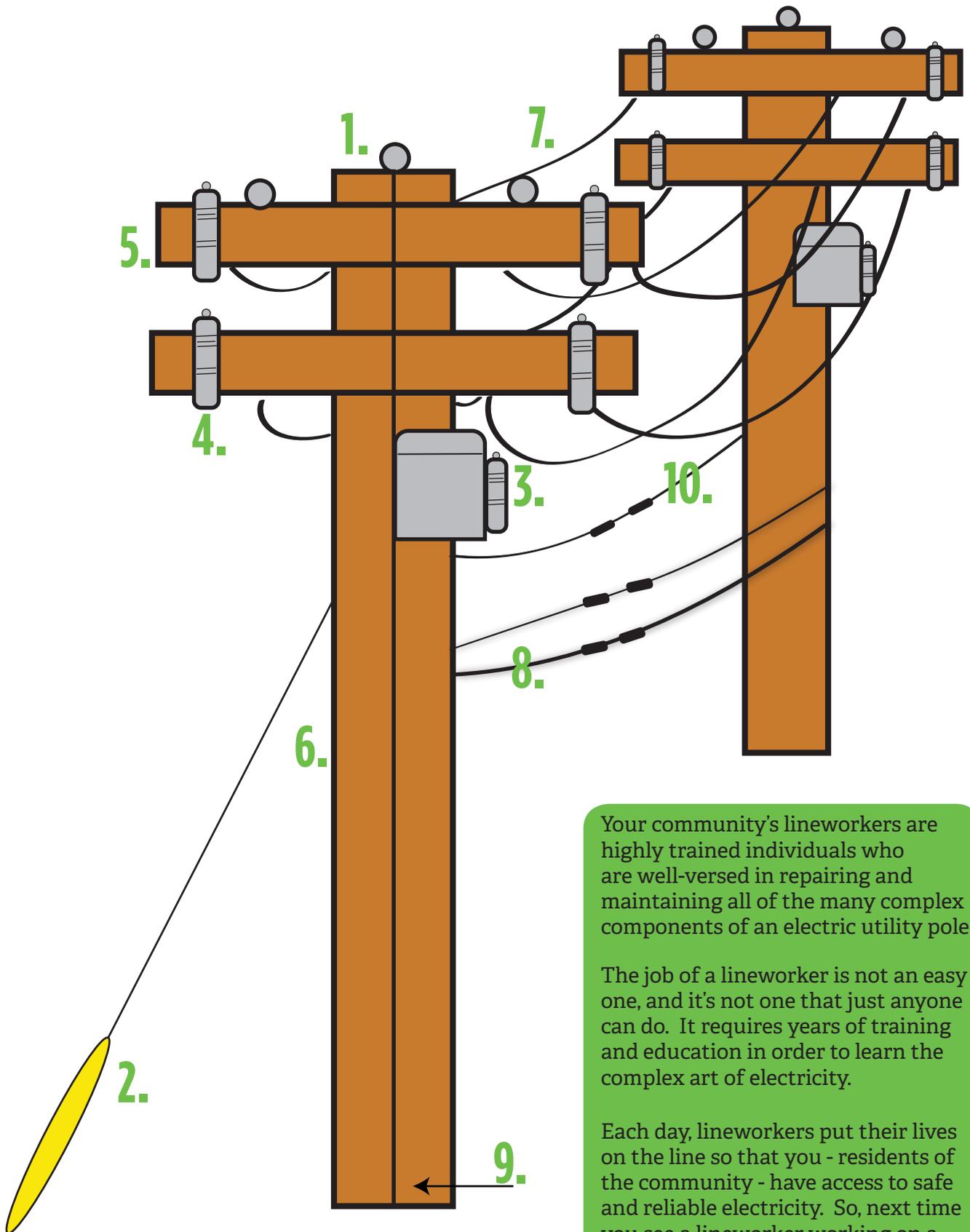
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Anatomy of an Electric Utility Pole

Utility poles are a common sight throughout the United States, as they are located adjacent to many roadways that are visible while driving. While you see these poles every day, have you ever thought about the function of the poles and the lines and attachments that hang onto them?

Utility poles play an important role in electrical distribution, which is a fancy term for how electricity travels to your home or business. All of the lines and attachments that sit on the utility pole play an essential role in this process. Read on to learn more about the different parts that make up your everyday electric power pole.

- 1. Insulator:** The insulator prevents wires from coming into contact with each other on the utility pole, which could cause fires, outages and other dangerous conditions.
- 2. Guy wire:** The guy wire is a tensioned wire that helps to stabilize the utility pole to the ground.
- 3. Transformer:** An electrical device, typically in a metallic enclosure, that converts high voltage electricity to a lower voltage for use in homes and businesses.
- 4. Fuse cutout:** A combination of a fuse and a switch, the fuse cutout is used to protect power lines and other equipment from surges or overloads by disconnecting the power line from a transformer.
- 5. Crossarm:** This horizontal piece of the utility pole is typically made of high-quality wood and holds power lines and other equipment, such as transformers, onto the pole.
- 6. Utility pole:** The utility pole is typically made of wood or steel, and can range in height from 30 feet to more than 100 feet. The pole serves as the backbone for the electric line and holds all of the components and equipment.
- 7. Primary wire:** These wires are on the very top of the utility pole, and usually carry high voltage electricity from a substation.
- 8. Lowest wires:** Utility poles don't just hold electric wires; other wires, such as telephone or cable wires, are also attached to these poles. Typically, these wires are found closest to the ground and are the lowest wire on the utility pole.
- 9. Ground wire:** This wire runs the entire length of the utility pole, directing any electricity on the pole safely into the ground.
- 10. Secondary wire:** Once the high voltage electricity has been converted to a lower voltage, the secondary wire carries that electricity to homes and businesses.



Your community's lineworkers are highly trained individuals who are well-versed in repairing and maintaining all of the many complex components of an electric utility pole.

The job of a lineworker is not an easy one, and it's not one that just anyone can do. It requires years of training and education in order to learn the complex art of electricity.

Each day, lineworkers put their lives on the line so that you - residents of the community - have access to safe and reliable electricity. So, next time you see a lineworker working on a utility pole, stop and thank them for their service to the community.

Introduction to the Indiana Municipal Power Agency and the Municipal Power News

Welcome to the Municipal Power News, a periodic publication brought to you by Peru Utilities and the Indiana Municipal Power Agency (IMPA). The Municipal Power News was created to inform readers about the activities of IMPA, Peru's wholesale power provider, as well as important happenings in the world of electricity, reports from the community and a variety of special columns with valuable energy savings, efficiency and safety information.

Peru is part of a large, nationwide family of municipalities that own and operate their community's electric utility, otherwise known as public power communities or municipal electric utilities. In addition to this nationwide group, your community is part of another family: the IMPA family. Peru has been a member of IMPA since 1983, and as an early member, has been a part of directing the organization since the beginning.

What is IMPA?

IMPA is the wholesale power provider to 59 communities throughout the State of Indiana as well as one Ohio community. In 1980, IMPA was created by a group of public power utilities that wanted to share their power resources instead of finding their own individual sources. Ultimately, the utilities felt that by working together and pooling their resources, they would be able to provide a lower cost, more reliable and more environmentally responsible power supply to their customers.

IMPA member utilities deliver electric service to more than 330,000 individuals. Municipal utilities purchase their power through IMPA and then supply that power to the residents of their communities.

What's a municipal utility?

A municipal utility has many distinct characteristics that benefit the community it serves. One of the most important benefits is local control. Every customer of Peru's electric utility is a utility owner who also has a direct say in the policies that affect rates and service.

Other benefits of a municipal utility include:

- Lower rates
- Public accountability
- Local response to outages
- Community involvement
- Not-for-profit designation
- Local decision making

Look for future issues of the Municipal Power News to bring you information about your local utility and community happenings. IMPA is proud to provide power to the City of Peru, and looks forward to continuing its involvement within the community.●

Solar Park

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IMPA member communities, serves as the foundation of our expanding solar generation plan. We appreciate the confidence that Peru has placed in us to provide this renewable source of power. IMPA looks forward to working with additional member communities as we expand solar parks to other towns and cities throughout the state.”

The IMPA Peru Solar Park contains approximately 11,000 solar panels that can generate up to 3 MW of electricity. The solar park features fixed-tilt panels, which maximize output while balancing installation and maintenance costs. Currently, IMPA has installed a total of 13 MW of solar power, and plans for another 10 MW to come online within 2016 in the communities of Anderson, Huntingburg, Washington and Waynetown. In addition to Peru, IMPA also has solar parks in Argos, Bainbridge, Crawfordsville, Frankton, Pendleton, Rensselaer, Richmond and Tell City. These solar parks build upon IMPA’s mission to provide low-cost, reliable and environmentally responsible power to the communities that it serves.

IMPA provides real-time data on each of its solar parks on its website, allowing website visitors to see how much power the solar parks are generating at any given time. To view the IMPA Peru Solar Park generating stats, visit www.impa.com, click on the “Spotlight IMPA Solar Parks” on the homepage, and choose IMPA Peru. ●

Tidbits & Trivia

Question: Which type of wire on a utility pole carries the high voltage electricity from a substation?

- a) Secondary wire
- b) Primary wire
- c) Ground wire
- d) None of the above

Send your answer to the question to IMPA, and we will randomly select winners from all of the correct entries to receive an energy efficiency prize pack. Please send your name, e-mail address and address with your answer to:

newsletter@impa.com

OR

MPN Energy Efficiency Quiz
11610 North College Avenue
Carmel, IN 46032

The **Indiana Municipal Power Agency (IMPA)** is a not-for-profit organization that provides a low cost, reliable and environmentally-responsible power supply to its members.

IMPA member utilities purchase their power from IMPA and deliver that power to the residents and companies within the community.

Substation

noun.

A facility used for switching and/or changing or regulating the voltage of electric energy. A substation may tie generating stations to transmission systems or transmission systems to distribution systems.

IMPA Continues Building Solar Parks in Local Communities

Throughout the last two years, the Indiana Municipal Power Agency (IMPA) has constructed nine solar parks in large and small IMPA communities throughout Indiana. This year, the Agency is in the midst of constructing four additional solar parks in the communities of Anderson, Huntingburg, Waynetown and Washington. These solar parks are all aimed at adding more renewable and economical energy resources to IMPA's power portfolio.

When energy is created by the solar parks, it is then placed onto the local distribution system in whichever town or city the solar park is located in. As the solar power is produced, it becomes a part of all of the electric generation that is supplying the system, which is typically a mixture of power produced via coal, natural gas, solar, wind and nuclear.

The process of generating electricity from the sun may seem to be a complex one, but in reality, is really quite simple. When sunlight

hits the solar panels, the panels convert that energy into direct current electricity. That electricity is transferred to an inverter, located within the solar park. The inverter then takes the direct current electricity and converts it into alternating current (AC) electricity. Once converted to AC, the transformer steps-up the voltage to the proper level, and is then transferred to the interconnection point on the distribution system. The AC meter measures the energy from the solar park prior to its connection to the distribution system and ultimately the customer.

IMPA plans to add approximately 10 megawatts of solar capacity into its overall power portfolio each year, meaning more and more IMPA member communities will have solar parks within the coming years. For more information on IMPA's solar parks, visit www.impa.com.

How does solar generate electricity?



Cooking Corner

For a chance to be featured in the newsletter and win a prize, send your recipe to:

MPN Recipes
11610 N. College Ave.
Carmel, IN 46032

or
newsletter@impa.com

The **MUNICIPAL POWER NEWS** is a periodic publication of the Indiana Municipal Power Agency and the 60 communities that it serves with wholesale power.

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Brookston	Flora	Lawrenceburg	Richmond	Washington
Centerville	Frankfort	Lebanon	Rising Sun	Waynetown
Chalmers	Frankton	Lewisville	Rockville	Williamsport
Coatesville	Gas City	Linton	Scottsburg	Winamac

Chicken and Dumpling Casserole

Recipe submitted by Vicky Hicks-Spear of Tell City, Indiana.

- 1 pound chicken breasts
- 2 cups chicken broth
- 1/4 cup butter
- 2 cups Bisquick
- 2 cups whole milk
- 1 can cream of chicken soup
- 3 tsp. chicken bouillon
- 1/2 tsp. sage
- 1 tsp. black pepper
- 1/2 stick butter

Preheat oven to 350 degrees. In a 9x13 baking pan, melt 1/2 stick butter. Shred chicken and spread over butter. Sprinkle black pepper and sage over the chicken. Do not stir. In a small bowl, mix milk and Bisquick. Slowly pour over chicken. In another medium bowl, whisk together 2 cups of chicken broth, chicken bouillon and soup. Once blended, slowly pour over the Bisquick layer. Bake casserole for 30 to 40 minutes, or until golden brown.

Strawberry Delight

Recipe submitted by Burdett Parsons of Washington, Indiana.

- 1 pre-made angel food cake
- 8 oz. cream cheese
- 16 oz. strawberry glaze
- 16 oz. tub whipped cream
- 1 ^{1/3} cup sugar
- 1 qt. fresh strawberries

Tear angel food cake into pieces and mix with 1/3 of the tub of whipped cream. Put whipped cream mixture into the bottom of a serving dish. Mix the rest of the whipped cream with the cream cheese and the sugar and place on top of the cake. Slice strawberries into quarters and mix with the strawberry glaze. Then, spread the strawberry mixture over the top of the cake.



The Municipal Power News is published by the
Indiana Municipal Power Agency and Peru Utilities.

IMPA Commissioner: Joe Pandey

Peru Utilities and the Indiana Municipal Power Agency Offer Energy Efficiency Program

One of the benefits of Peru Utilities being a member of the Indiana Municipal Power Agency (IMPA) is the opportunity to participate in programs such as IMPA's Energy Efficiency Program. This program offers residential, commercial and industrial energy efficiency incentives for those who choose to participate and receive pre-approval of their projects.

IMPA's residential energy efficiency program offers residential customers of IMPA member communities, including Peru, the opportunity to earn rebates on qualifying heating, ventilation and air conditioning installations. Heat pumps with ratings of 16 SEER or greater are eligible for a \$150 rebate, central air with 16 SEER or greater is eligible for a \$125 rebate and geothermal units are eligible for a \$175 rebate. If the SEER is not indicated on the side of the unit, it can be found in the operating manual or obtained from the dealer.

The commercial and industrial energy efficiency program provides a variety of incentives for energy efficient lighting aimed at replacing incandescent lighting with either compact fluorescent lamps (CFLs) or light emitting diodes (LED). The program also offers incentives for HVAC systems, variable frequency drives and refrigeration, and food service and controls services.

Those interested can learn more, view an entire menu of incentives and apply for IMPA's Energy Efficiency Program online at www.impa.com/energyefficiency.