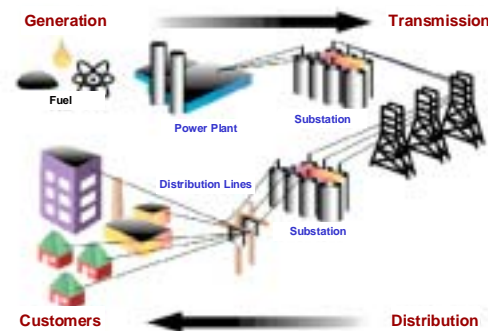


In our homes, electricity runs the lights, television, toaster, and more. It's hard to even imagine what your life would be like without it.

It's easy to see what electricity does for us. When you want to use electricity, you plug an electrical appliance, toy, or tool into the tiny holes in an outlet. Does electricity come from these tiny holes?

Well, yes and no.

Electricity travels in a circuit that begins at a power plant.



The POWER PLANT.

Electricity is generated/produced in a **power plant** through large power generators. The power plant burns a fossil fuel, such as coal, natural gas or oil, to produce a lot of heat. The heat is used to boil water to run the steam turbine that drives the electric generator.



Do you know that ... ?



18 - watt CFL for 6 hours (0.11 kWh)



14" desk fan (55 watts) for 4 hours (0.22 kWh)



16" colored TV (85 watts) for 3.5 hours (0.30 kWh)



1 L rice cooker (450 watts) for 30min (0.225 kWh)

using all of these at the same time costs only P7.51 which is just equivalent to a one-min. call on your cellphones?



for running a 7 cu ft refrigerator (120 watts) for 24 hours (2.02 kWh) only cost



P17.80 almost equivalent to a can of softdrink?

Note:

1 kWh of electricity costs P8.83 (average)

1 kW = 1,000 watts
1 kWh = 1000 watts/hour



you spend only P8.83 for an hour use of a 1000-watt flat iron (1.5 kWh)...

as compared to a 350 ml of bottled mineral water at P11.00?



watching your favorite movie in your living room (TV and VCD player, 305 watts) for 2 hours will only cost you P5.39 which is less than a small pack of potato chips at P6.00?



for doing your laundry in an automatic washing machine (585 watts) for 3 hours, you're spending

only P15.50 an amount less than the cost of a bottle of beer?



surfing the net for 12 hours (PC at 225 watts) will consume 2.7kWh amounting to only P23.84 which is cheaper than what you're paying for to the service provider at approx. P50 for 12 hours?



using your 0.75 hp room air conditioner (727 watts) for 24 hours (12.21 kWh) costs less than a cup of your favorite Starbucks coffee at P107.85?

The **TRANSMISSION SUBSTATION**.

From generators to consumers, electricity must travel long distances. To travel efficiently, its voltage is increased to very high levels through step-up power transformer in the **transmission substation**.



The **TRANSMISSION LINES**.

From the transmission substation, electricity is brought to different towns through high voltage **transmission lines**.



The **DISTRIBUTION SUBSTATION**.



At the end of the high-voltage transmission line in town or city, bulk power or delivery point substation is connected. The power transformer in this substation lowers the voltage to subtransmission level.

The **DISTRIBUTION LINES**.

From the distribution substation, distribution lines go out to the streets to carry the electricity to different places where the consumers are located.



Have you ever wondered how electricity gets to your homes?



DEPARTMENT OF ENERGY
Consumer Welfare and Promotion Office
Energy Center, Fort Bonifacio,
Taguig, MM
Hotline: (02)840-2267
Trunkline: (02) 840-1401 to 21 loc. 329

You may also text in your suggestions, comments, queries and complaints.
Just type: DOE <space> <message>
and then send to 2920
(for Globe and Smart subscribers only)

check our website at:
www.doe.gov.ph

June 2005

" we are now enjoying
the benefits
of the economical servant,
ELECTRICITY ..."