



What are capacity charges on electricity bills?

Capacity rates increased on June 1, 2014, and will increase again on June 1, 2015, for many electricity customers in the PJM Interconnection region

Do you understand the “capacity charge” line item on your electricity bill? Consumers can greatly benefit from learning more about this charge, which can be reduced and managed through best practices. The capacity charge is comprised of two separate components: 1) peak load contribution, and 2) capacity rate. Peak load contribution (PLC) is a controllable factor, meaning electricity customers potentially can reduce it. Capacity rates, on the other hand, are non-negotiable and are decided in advance. For example, in the PJM Interconnection region, which transmits electricity to 13 states, capacity rates are decided three years prior to taking effect.

What is peak load contribution?

Electric utilities measure and average each customer’s energy usage in kilowatts on the five highest demand days of each year, and then provide that average, known as peak load contribution (PLC) or “installed capacity tag,” to electricity suppliers. Suppliers use each customer’s PLC from the prior year to calculate monthly capacity costs/obligations. Each utility bill is different, and each utility may call the PLC something else, such as “demand charge” or “billed load KW.” In any case, customers should be able to review their bills and identify their PLCs at a glance.

Electricity consumers can reduce their PLC by reducing energy consumption on the five days of the year when they suspect peak electricity demand on the grid could occur.

Electric utilities measure and average each customer’s energy usage in kilowatts on the five highest demand days of each year.

Electric utilities will use the customer’s energy consumption on these five days to calculate their average PLC for the following year. Although utilities and customers can’t predict on which five days the highest demand will occur, peak demand typically arises in afternoon hours during summer months. In the case of polar vortex weather events, exceptionally high peak demand was recorded in January 2014 in the PJM region.

Many utilities notify local news outlets when peak demand is likely to occur, prompting the media to encourage consumers to reduce usage during peak demand hours. In some regions, customers can subscribe to alerts that notify them to reduce consumption during specific peak demand timeframes. Utility websites and local news websites, as well as grid system websites, such as PJM’s webpage, www.pjm.com/about-pjm/notifications.aspx, are good resources to check for notifications.

Additionally, consumers can enroll in Demand Response programs to receive payments for agreeing to voluntarily reduce consumption when notified. Demand Response programs are beneficial because customers are alerted when the five peak demand days each year are likely to occur, enabling them to potentially reduce their PLC. Plus, participants receive payments. Usage can be reduced by dimming lighting, adjusting thermostat settings, shutting down equipment, using onsite power generators, or scheduling operations during nighttime hours.

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What is a capacity rate?

To ensure sufficient energy is always available to meet demand, electricity suppliers purchase adequate capacity to cover their total customer peak load. Capacity auctions in the PJM Interconnection region are held three years in advance, and take effect each year in June. Capacity rates are passed through to consumers.

Capacity rates increased drastically on June 1, 2014, from \$28.45 to \$128.17 per megawatt day (MW-day), for many electricity customers in the PJM Interconnection region. For many of these customers, capacity rates will increase again on June 1, 2015.

What is a capacity charge?

The total monthly capacity charge on an electricity bill is the peak load contribution in kilowatt hours multiplied by the capacity rate in dollars. This charge appears as a percentage or line item on electricity bills. All suppliers must pay identical capacity charges to the utility, but whether those charges are passed through to customers depends on the supply contract conditions. If a supplier passes through capacity charges to customers each month, electricity bills are directly impacted. If a supply contract stipulates that adders, such as capacity charges and non-energy costs, are fixed, then bills are not affected.

PJM Capacity Auction Results

Utility	RPM Rate			
	2013/14*	2014/15**	2015/16***	2016/17***
American Electric Power (AEP)	\$28.45	\$128.17	\$134.62	\$59.37
Duke Energy Ohio (Duke)	\$28.45	\$128.17	\$134.62	\$59.37
Dayton Power & Light (DPL)	\$28.45	\$128.17	\$134.62	\$59.37
FE-OH	\$28.45	\$128.17	\$294.03	\$90.54
Atlantic Electric	\$248.30	\$137.61	\$165.78	\$118.89
BGE	\$231.58	\$137.60	\$165.78	\$118.89
ComEd	\$28.45	\$128.17	\$134.62	\$59.37
DLCO	\$28.45	\$128.17	\$134.62	\$59.37
Delmarva	\$248.30	\$145.32	\$165.78	\$118.89
JCP&L	\$248.30	\$137.61	\$165.78	\$118.89
Met-Ed	\$232.55	\$137.60	\$165.78	\$118.89
PECO	\$248.30	\$137.61	\$165.78	\$118.89
Penelec	\$232.55	\$137.60	\$165.78	\$118.89
Penn Power	\$28.45	\$128.17	\$294.03	\$90.54
PEPCO	\$244.94	\$137.60	\$165.78	\$118.89
Potomac Edison/West Penn Power	\$28.45	\$128.17	\$134.62	\$59.37
PPL	\$232.55	\$137.60	\$165.78	\$118.89
PSEG	\$248.30	\$170.24	\$165.78	\$177.61

* Based on RPM Third Incremental Auction Results

** Based on RPM First Incremental Auction Results

*** Based on RPM Base Incremental Auction Results

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Although each supplier contract is different, many suppliers omit capacity charges and non-energy costs from their fixed-price offers. Contract terms are also important. For customers currently locked into a supplier contract that expires in 2014 or 2015, capacity charges will likely increase after their contract expires, and future supply contracts may be impacted, as well.

To reduce your PLC, reduce energy consumption on the five days of the year when you suspect peak electricity demand will occur.

Historical Data

Because capacity rates are determined three years in advance in PJM, past market trends influence today's rates. Capacity rates were low throughout the PJM Interconnection during fiscal year 2013-2014 because those rates were decided in 2010 when the U.S. economy was beginning to recover from a recession. Power demand was low, which led to lower capacity rates. Also in 2010, demand response programs became more prevalent, helping consumers to lower PLCs that are an important component of capacity charges.

Today's capacity rate increases are partly because energy experts are cognizant of U.S. Environmental Protection Agency rules and regulations coming into play, forcing the retirement of many coal-fired power plants. The U.S. Energy Information Administration forecasts that 16% of coal-fired capacity available at the end of 2012 will be retired by 2020. Adequate capacity is a concern, causing capacity rates to increase.

Outlook

In fiscal year 2016-2017, all capacity rates in the PJM Interconnection region will decrease, most notably in First Energy Ohio and Penn Power regions, where prices per MW-day will decrease from \$294.03 to \$90.54. As capacity rates for fiscal year 2017-2018 will be established in 2014, today's market conditions are driving factors. Aging infrastructure concerns, such as the prevalent need to upgrade the nation's grid, generators, and



How to reduce capacity charge



Reduce energy consumption on the five days of the year when peak electricity demand could occur.



Subscribe to media alerts, or check local news resources, for peak demand notifications.



Enroll in Demand Response program.



Negotiate an electricity supplier contract with fixed adders.

transmission systems, are major influencers. Planned coal-fired generation retirements are another primary driver. Two dozen coal-burning generators in the U.S. are scheduled for decommissioning beginning in 2015. Natural gas storage capacity, coupled with increased demand for natural gas-fired generation, will also influence future PJM capacity auction results.

RESOURCES

Beat the Peak notices:

<http://www.pjm.com/about-pjm/notifications.aspx>

<http://www.directenergybusiness.com/energy-insights/pjm-peak-demand-alert.php>

<http://www.delmarva.com/peak-energy-savings-credit.aspx>

Resources are available by request. For more information about electricity prices or the Energy Research Council, please contact 410-749-5519 or www.energyresearchcouncil.com/.

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