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APPLICATION OF ENTERGY TEXAS, INC. FOR AUTHORITY TO CHANGE RATES	§ § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

REBUTTAL TESTIMONY

OF

STUART BARRETT

ON BEHALF OF

ENTERGY TEXAS, INC.

NOVEMBER 2022

ENTERGY TEXAS, INC.
REBUTTAL TESTIMONY OF STUART BARRETT
SOAH DOCKET NO. 473-22-04394
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EXHIBITS

I. INTRODUCTION AND PURPOSE

Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.

A. My name is Stuart Barrett. My business address is 2107 Research Forest Dr., The Woodlands, Texas 77380. My position is Vice President, Customer Service.

Q2. ARE YOU THE SAME STUART BARRETT WHO FILED DIRECT TESTIMONY IN THIS CASE ON BEHALF OF ENTERGY TEXAS, INC. ("ETI")?

A. Yes.

Q3. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I respond to certain issues raised by Texas Industrial Energy Consumers ("TIEC") witnesses Jeffry Pollock and Charles S. Griffey and Office of Public Utility Counsel ("OPUC") witness Evan D. Evans.

II. RESPONSE TO INTERVENORS

A. AMS Deployment

Q4. OPUC WITNESS EVAN D. EVANS CRITICIZES VARIOUS ASPECTS OF ETI'S AMS DEPLOYMENT, ULTIMATELY RECOMMENDING THAT THE PURPORTED COST IMPACT OF THE ADVANCED METERING SYSTEM ("AMS") DEPLOYMENT "BE CONSIDERED IN THE DISTRIBUTION OF THE APPROVED REVENUE INCREASE AMONG CUSTOMER CLASSES"

AND THAT THE COMMISSION INVESTIGATE WHETHER AMS BENEFITS ARE BEING REALIZED.[1] PLEASE EXPLAIN THIS ISSUE.

A. Mr. Evans appears to conflate what he believes are deficiencies with the AMS deployment with ETI's proposed increase to the customer charges for residential and small commercial customers. Company witness Melanie Taylor and I address Mr. Evans's criticisms of the AMS deployment, and Company witness Allison P. Lofton explains that the drivers underlying the proposed increase to the customer charges are not related to AMS cost and benefits.

Q5. WHAT ARE MR. EVANS'S CLAIMED DEFICIENCIES WITH THE AMS DEPLOYMENT?

A. Mr. Evans claims that (1) the estimated operational benefits, e.g., reduced meter reading costs, are not being realized; (2) ETI is not using AMS features to help customers lower bills; (3) ETI has not implemented any new AMS-enabled programs or tariffs; and (4) ETI's reliability has declined since AMS was deployed. Ms. Taylor responds to Mr. Evans's claims regarding reliability trends.

Q6. HOW DO YOU RESPOND TO MR. EVANS'S FIRST CLAIM REGARDING OPERATIONAL BENEFITS?

A. Mr. Evans's claims are misplaced. First, as described by Jay Lewis and Mr. Lain in the AMS deployment proceeding, Docket No. 47416, the "operational benefits,"

[1] Direct Testimony of Evan Evans ("Evans Direct") at 19.

described as routine meter reading, meter services, reduced customer receivable write-offs, and field data collection system, were estimated in 2017 and, importantly, are netted against the estimated post-AMS deployment operational costs to calculate the resulting AMS surcharge.[2] In other words, the AMS surcharge currently being charged to ETI's customers, including the residential and small commercial customers, *includes* the estimated operational benefits, notwithstanding that the actual benefits have been delayed.[3] As ETI witness William Phillips, Jr. noted in his direct testimony in this proceeding, the Company is not requesting to revise the AMS surcharge, so customers will continue to receive the estimated operational benefits reflected as a reduction to the AMS surcharge notwithstanding the level of actual savings.[4]

Second, as explained in Mr. Phillips's direct testimony, the operational benefits are merely delayed.[5] Mass meter deployment was completed in 2021, and final optimization of the communications network is ongoing and projected to conclude by the end of 2022.[6] Ms. Taylor describes in her direct testimony that, while manual meter reading trended down during the AMS deployment, some

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2 *See Application of Entergy Texas, Inc. for Approval of Advanced Metering System (AMS) Deployment Plan, AMS Surcharge, and Non-Standard Metering Service Fees,* Docket No. 47416, Direct Testimony of Jay Lewis at 9 and Direct Testimony of Richard Lain at 5, 9-10 (Jul. 18, 2017).

3 I am also advised by Counsel that the Commission's Substantive Rule, 16 Tex. Admin. Code ("TAC") § 25.130, does not require that an AMS deployment produce operational benefits; rather, only that the "actual or expected net operating cost savings from AMS deployment, to the extent that operating costs are not reflected in base rates, may be considered in setting the surcharge." 16 TAC § 25.130(k)(6).

4 Direct Testimony of William Phillips, Jr. ("Phillips Direct") at 6.

5 Phillips Direct at 49-54.

6 Phillips Direct at 8, 13.

manual meter reading has and is expected to continue on a limited basis as full maturation of the technology is achieved.[7] Further, Mr. Phillips explained that all the contract meter readers have been released as of January 2022.[8] Thus, as more fully explained by Mr. Phillips in his direct testimony, although actual meter deployment did not track the initial projections from 2017, now that mass meter deployment has ended, optimization is concluding this year, the effect of the disconnect moratorium associated with COVID-19 is diminishing, and all contract meter readers have been released, it is expected that the operational benefits will more closely track projections going forward.

Q7. HOW DO YOU RESPOND TO MR. EVANS'S SECOND CLAIM ABOUT AMS FEATURES ASSISTING CUSTOMERS MANAGE THEIR BILLS?

A. I disagree that customers are not using the AMS-enabled features to manage their electric bills. The AMS web portal, otherwise known as the Customer Engagement Portal ("CEP") was available for customer use beginning in September 2019. The CEP provides a number of features to help customers manage their bills, including customer-set alerts, bill comparisons, bill projections, customer support tools, customizable dashboards, energy tips, an energy action plan, Green Button Download My Data, home utility reports, goals, a rebate marketplace, on-demand reads, monthly billing and usage data, personalized email, IVR, paper, and

[7] Direct Testimony of Melanie Taylor at 106.

[8] Phillips Direct at 50.

SMS/phone selections, usage and cost presentment, and weather services. In addition, the Commission recently approved adding Green Button Connect My Data functionality to the CEP, which provides a streamlined process for customers to authorize sharing their usage data with third party service providers.[9]

Q8. IS THE CEP AVAILABLE IN A MOBILE APPLICATION?

A. Yes.

Q9. DO YOU HAVE EVIDENCE THAT CUSTOMERS ARE USING THE CEP?

A. Yes. ETI's overall web-based customer interface, MyEntergy, where customers can, for example, pay bills and see the outage map, had over 296,000 active accounts through October 2022, which is approximately 61% of ETI's total customers. In addition, there were over 92,000 active users of the mobile MyEntergy platform in October 2022. More specific to AMS functionality, as shown in the monthly AMS reports filed in Docket No. 53957, there were over 43,000 active users on the CEP, and over 27,000 active users accessing the interval and costs data portions of the CEP in September 2022. There were also approximately 1,400 on-demand reads during that same period.

[9] *Compliance Filing of Entergy Texas, Inc. Relating to Participation in Smart Meter Texas and Changes to Its Advanced Metering System,* Docket No. 48745 (Sept. 15, 2022).

Q10. HOW DO YOU RESPOND TO MR. EVANS'S THIRD CLAIM ABOUT AMS-ENABLED PROGRAMS AND TARIFFS?

A. Mr. Evans's claims are premature. Mass meter deployment just ended last year, and network optimization is continuing through the end of this year. In Docket No. 47416, Company witness Vernon H. Pierce described some of the *future* capabilities that AMS could support, including explaining that the "availability of customer usage data at a more detailed level could also allow for specifically-designed offerings for and better assistance to customers."[10] Mr. Pierce went on to explain that "[s]ome of these functionalities and programs would require additional investments in infrastructure and technology at a later date in order to deploy and achieve the desired functionality."[11]

Accordingly, as the Company finishes network optimization and begins analyzing the vast amount of granular AMS data, ETI is evaluating new AMS-enabled offerings. For example, a prepay program is in development. With respect to more dynamic pricing options, the Company is in the initial stages of studying how those types of options can be designed and implemented considering, again, that mass deployment only recently ended.

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[10] Docket No. 47416, Direct Testimony of Hugh Vernon Pierce ("Pierce Direct") at 17 (Jul. 18, 2017).

[11] Docket No. 47416, Pierce Direct at 18.

Q11. IS IT NECESSARY FOR THE COMMISSION TO OPEN AN INVESTIGATION INTO WHETHER THE AMS BENEFITS DISCUSSED IN DOCKET NO. 47416 ARE BEING REALIZED, AS MR. EVANS SUGGESTS?

A. No. As I explained above, the operational benefits are only delayed relative to the estimates made in 2017. The Company has implemented the web portal (CEP), and customers are using it to manage their electricity usage. Moreover, the Company reports annually on any variance between the AMS estimated costs and benefits versus the actual costs and benefits in Docket No. 49233, and ETI provides additional reporting on the web portal functionality and usage as well as the development of Green Button Connect My Data in Docket Nos. 53957 and 53958, respectively. Finally, considering that mass meter deployment only ended last year and that optimization of the network remains ongoing, it is reasonable that the Company is just now transitioning into examining how to utilize the AMS technology for new programs and tariffs. Finally, I understand that ETI is required under 16 TAC § 25.130(k)(6) to periodically reconcile the costs recovered through the surcharge, which proceeding provides the Commission an opportunity to review the Company's AMS deployment costs. Accordingly, there are already ample opportunities for parties and the Commission to monitor the AMS deployment.

B. HEB Backup Generators

Q12. OPUC WITNESS EVANS AND TIEC WITNESS POLLOCK BOTH RECOMMEND THAT THE COMMISSION REJECT RECOVERY OF THE

COMPANY'S INVESTMENT (AND ASSOCIATED REVENUES) IN TWO HEB BACKUP GENERATOR PILOT PROJECTS.[12] PLEASE EXPLAIN THE BACKGROUND OF THE BACKUP GENERATOR PILOTS.

A. In 2019, ETI executed its first successful installation of an experimental 1.2 megawatt ("MW") natural gas-fired distributed generation ("DG") resource at an HEB grocery store in The Woodlands, Texas. A second 1.2 MW installation was commissioned in late 2021 at a separate HEB store in Beaumont. Those two DG resources were deployed under ETI's existing Schedule AFC (Additional Facilities Charge Rider), which collects revenues from the host customer (HEB) for the backup power available by those DG resources during an outage. At all other times those resources are available to and have provided capacity, energy, and ancillary services to support to the broader electric grid or to otherwise help manage demand, which benefits all customers. As such, those DG resources provide a unique and economic solution stemming from the ability of a single resource to serve the needs of both host customers and the broader customer base.

Q13. PLEASE ELABORATE ON THE DUAL NEEDS SUPPORTED BY THE DG PILOTS.

A. Utilities have a need and obligation to serve all of their customers reliably and economically, and utilities have the technical and operational ability to maintain and operate these types of resources. ETI's ability to dispatch and fully control the

[12] Evans Direct at 13; Direct Testimony of Jeffry Pollock at 22-23.

DG resources connected to its distribution system provides benefits for all its customers by offering those units in the energy market and utilizing their capacity to satisfy resource adequacy requirements. That is, ETI's ownership, control and dispatch of DG resources allows the Company to mitigate exposure to the Midcontinent Independent System Operator, Inc. ("MISO") markets for the benefit of all its customers.

Businesses today (such as gas stations, grocery stores, first responders, and medical facilities), on the other hand, desire highly reliable, high-quality power, and they also desire to mitigate the costly effects of outages, particularly longer-duration outages caused by severe weather events. These customers often consider installing backup generators to meet their needs during grid outages. However, there are significant barriers to doing so, such as the time-consuming process required to research, identify, contract, procure, operate, and maintain backup generation, and the up-front purchase price and ongoing ownership responsibilities related to an asset that is infrequently deployed in that backup role. As the owner of the asset, the customer is also then responsible for arrangements for monitoring, fueling, maintaining, and repairing the generator.

When DG is owned by the customer for their own backup power supply during a grid outage, the utility has little, if any, ability to leverage the resource at other times for the benefit of its system. For example, customer-owned backup generation is typically not synchronized to the grid or remotely dispatchable, may not be adequately maintained, and may be dependent upon a relatively limited

amount of stored diesel fuel that cannot provide backup service for the full duration of sustained outages. Also, the customer-owner may not be able to offset its investment or mitigate the challenges of ownership by making that often idle resource available to serve the needs of other customers. Company-owned DG made available to supply backup power solves these issues and provides value to both ETI's broader customer base and the host customer by leveraging the availability of these peaking and reserve resources in an economic manner.

Q14. WHAT IS THE PURPOSE OF THE HEB PILOTS?

A. The purpose of the experimental pilots was to serve as a platform for potential broader deployment of customer-hosted "microgrids" across ETI's service territory using a different, new Rate Schedule Utility-Owned Distribution Generation ("UODG") to supply backup electric service. That broader offering would further modernize and enhance the resiliency of the Company's electric system, offer backup electric service to host customers who require enhanced reliability, and, at the same time, address the long-term resource needs of ETI's broader customer base. Indeed, that broader offering is currently pending in Docket No. 53992, *Entergy Texas, Inc.'s Statement of Intent and Application for Approval of Rate Schedule UODG (Utility-Owned Distributed Generation)*. In sum, the purpose of the HEB pilots is to test the DG resources' ability to: (a) meet a critical and demonstrated host customer need for enhanced reliability and resiliency, and (b) expand the breadth of available ETI resources for use in meeting incremental

capacity and energy needs while diversifying the grid's operational flexibility and resiliency for the broader customer base.

Q15. HOW DO YOU RESPOND TO MR. POLLOCK'S ASSERTION THAT ETI SHOULD NOT BE PROVIDING BACKUP GENERATION SERVICE?

A. That is a mischaracterization of the how the DG is owned and operated. As I mentioned above, the host customer (HEB in this case) is paying for backup electric service provided by an ETI-owed DG resource sited on the customer's property. The customer (HEB) has no ownership interest or control over the DG. Instead, ETI owns and operates the DG for the benefit of all customers except during an outage, when the output is supplied to the host customer. In other words, the DG resource is available to be remotely dispatched to provide benefits to all customers over 99.95% of the time.[13]

Q16. PLEASE ELABORATE ON THE BENEFITS OF THE DG RESOURCES.

A. Operating utility-owned DG resources in the manner used for the two pilots as well as the pending broader offering provides the following benefits for ETI's customers:

- economic, incremental capacity that will satisfy a portion of ETI's reliability requirements and mitigate exposure to peaking energy prices;

[13] Schedule H-13.3.

- a more resilient grid to facilitate restoration efforts following severe weather events or other major outages;
- highly flexible and reliable resources that can be used to support integration of intermittent resources (e.g., solar photovoltaic) and rapidly respond to changing market conditions;
- capability to reduce distribution infrastructure costs and manage transmission constraints; and
- a reliable, cost-effective supply of backup electric service for host customers, which will allow them to continue providing valuable products and services to their customers and communities during an outage event, thus mitigating harm and disruption to communities in southeast Texas in the aftermath of such an event.

Q17. PLEASE ELABORATE ON THE CAPACITY BENEFIT.

A. As discussed in Section III. of Anastasia R. Meyer's rebuttal testimony, these DG resources meet a portion of ETI's long-term resource need.

Q18. DO YOU AGREE WITH TIEC WITNESS POLLOCK THAT THE MISO PLANNING RESOURCE AUCTION ("PRA") CAPACITY PRICE IS THE

APPROPRIATE AVOIDED COST PROXY FOR EVALUATING THE VALUE OF THE DG CAPACITY?

A. No. ETI witness Meyer addresses why using a short-term capacity price as a proxy for the DG capacity value is inappropriate.

Q19. PLEASE ELABORATE ON THE RESILIENCY BENEFITS.

A. There are community resiliency benefits from facilities like gas stations, grocery stores, first responders, and medical facilities having the capability to operate during an outage, especially during an outage that lasts for more than a few hours to several days. Particularly, during extended outages, a grocery store that can provide supplies like water, ice, medicine, and food are of tremendous assistance both in circumstances requiring evacuations as well as circumstances where customers may shelter in place. In fact, the performance of the HEB DG in The Woodlands during a past hurricane event and Winter Storm Uri demonstrates this benefit. Moreover, an important feature of the DG's contribution to grid resiliency, in comparison to many other types of distributed resources, is that DG can provide power requirements continuously for an extended period.

Q20. PLEASE DISCUSS ETI'S EXPERIENCE WITH THE TWO HEB PILOTS.

A. ETI partnered with Enchanted Rock to install the two natural gas-fired DG resources on its system at the two HEB grocery stores. During grid outages, the grocery stores operate as usual, avoid spoilage costs, and provide the surrounding

community access to food, medicine, water, and other essential supplies. ETI also offers the generation into the MISO market for the benefit of all customers when it is economic to do so, and MISO has called on those resources to serve the needs of customers in southeast Texas.

For example, during Hurricane Laura, the HEB DG in The Woodlands ran for approximately [redacted] hours—[redacted] hours during a grid outage and [redacted] hours for overall grid support. Even more significantly, the HEB DG in The Woodlands ran for approximately [redacted] hours—[redacted] hours for a grid outage and [redacted] hours for overall grid support—over the duration of Winter Storm Uri. On an economic basis, offers for these resources have been selected by MISO on numerous occasions, demonstrating that natural gas-fired DG can provide energy-related benefits in the MISO markets. MISO has selected these units to operate for over [redacted] hours during the period November 2019 through December 2021. A summary of operating hours and market revenue is provided in Confidential Exhibit SB-R-1. Post-2021 ETI has noted a trend of these resources being called on more frequently to provide ancillary services. In my view, this trend highlights the fact that these resources are an economic option to support the dynamic reliability needs of the larger grid, more so than traditional supply-side resources that have minimum run time requirements and longer start times that can affect their availability and cost to operate. Accordingly, these units have successfully demonstrated the unique value of leveraging a single resource to address multiple customer and resource planning

needs, and ETI has received substantial customer interest and support for a broader DG offering.[14]

Q21. PLEASE SUMMARIZE WHY IT IS APPROPRIATE FOR ETI TO RECOVER ITS INVESTMENTS (AND CREDIT THE ASSOCIATED REVENUES) IN THE TWO HEB PILOTS AT ISSUE IN THIS PROCEEDING.

A. The two experimental HEB DG pilots have overwhelmingly proven the concept that utility-owned DG can serve dual roles of providing capacity, energy, and ancillary services benefits to the broader customer base while providing a host customer with a reliable source of backup power during outages, which enables the HEB stores in this instance to continue serving the community during emergencies. As I described above, the DG resources provided critical support during Hurricane Laura and Winter Storm Uri, and they have been run by MISO during normal grid conditions to support the overall grid on numerous occasions. As such, they are useful both to the overall grid as well as the community and host customers where the DG is sited, and the DG has been and is being used during emergencies as well as meeting a portion of ETI's long-term capacity needs. The DG resources are also being called upon by MISO for demand response, plus an increasing trend in providing ancillary services. It is therefore appropriate for ETI to recover the costs of these investments in rates.

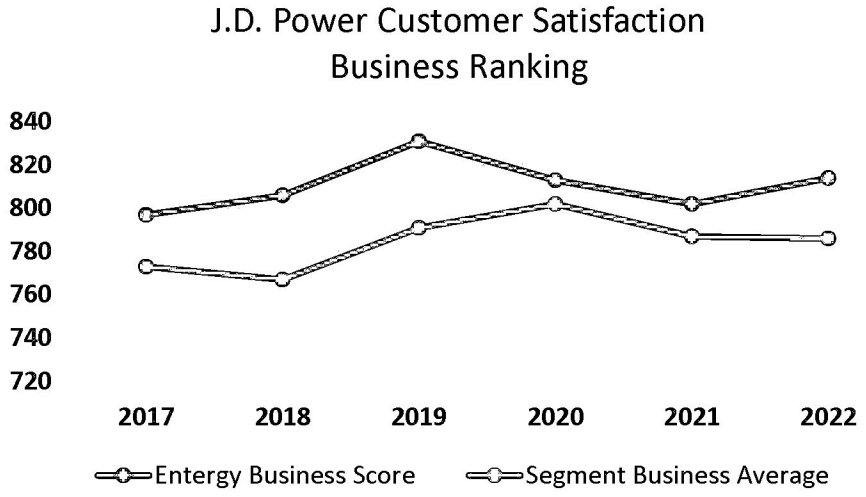
[14] *See Entergy Texas, Inc.'s Statement of Intent for Rate Schedule UODG*, Docket No. 53992, Direct Testimony of Stuart Barret at Exhibit SB-1 (Aug. 31, 2022).

C. Management Performance

Q22. DISCUSSING THE QUALITY OF ETI'S MANAGEMENT, TIEC WITNESS CHARLES S. GRIFFEY CLAIMS THAT ETI IS BELOW AVERAGE FOR CUSTOMER SATISFACTION BASED ON A 2021 JD POWERS SURVEY.[15] HOW DO YOU RESPOND?

A. In a review of five years of prior data, ETI performed above average in both residential and business segments every year until 2021.[16] See Figure 1 and Figure 2, below.[17] In fact, in 2018, 2019, and 2022 ETI was the top-ranking utility in the business customer satisfaction index in the South Region: Midsize Segment.[18]

Figure 1



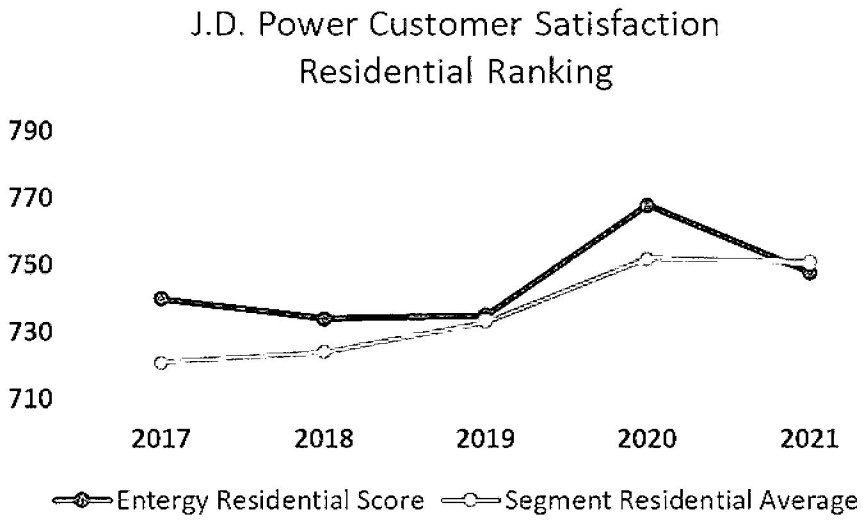
[15] Direct Testimony of Charles S. Griffey at 14.

[16] *See* Exhibit SB-R-2, South Region: Midsize Segment.

[17] Results for the residential segment for 2022 are not yet available.

[18] *See* Exhibit SB-R-2, South Region: Midsize Segment.

Figure 2

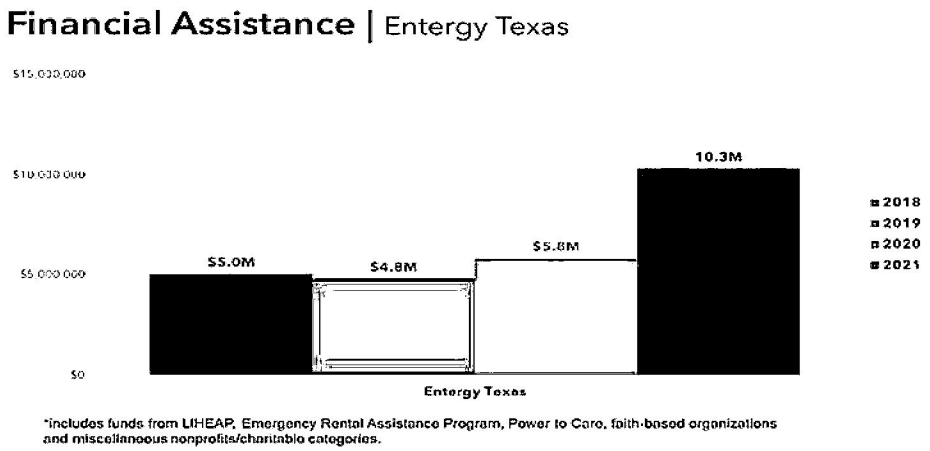


More importantly, ETI is aware that its customers experienced difficult times in 2021 following multiple extreme weather events, including Hurricanes Laura and Delta, Winter Storm Uri, extended heat waves, plus the COVID-19 pandemic and the associated post-pandemic credit and collections activities associated with lifting the disconnect moratorium. In response, ETI has increased its efforts to obtain additional bill assistance for customers while increasing its charitable contributions to benefit customers. For example, in addition to the low-income programs administered by ETI that I addressed in my Direct Testimony,[19] I also explained that ETI has a team that looks for opportunities to provide information to customers regarding financial assistance programs, including external programs. In particular, following Winter Storm Uri and the COVID-19

[19] Barrett Direct at 6-11.

pandemic above, ETI ramped up its outreach to customers with information on its website to inform customers of financial assistance programs that may be available to them. Another example of the team's efforts was the use of an automated phone call to eligible customers with useful and relevant information for financial assistance programs that may be available to them. The results of those increased efforts are demonstrated in Figure 3, below, which shows the level of financial assistance, including external programs, provided to our eligible low-income customers compared to prior years. The ETI customer service team is proud to have helped our customers during the stressful times of the pandemic.

Figure 3



Q23. TIEC WITNESS GRIFFEY ALSO CLAIMS THAT FUNDING LOW INCOME HOME ENERGY ASSISTANCE PROGRAM ("LIHEAP") PROGRAMS IS NOT AN INDICATOR OF QUALITY MANAGEMENT BECAUSE THE UTILITY

CAN REALIZE SOME BENEFITS FROM LIHEAP CONTRIBUTIONS AS WELL. HOW DO YOU RESPOND?

A. The LIHEAP utility assistance program provides relief to low-income households by providing financial assistance to those most in need. To clarify, LIHEAP is a federally-funded program for utility customers across the nation. ETI's efforts to assist its customers in obtaining that financial assistance helps provide an essential service and improves quality of life for ETI's customers. The program not only makes payments directly for vulnerable households, but also provides energy education to help control energy costs. Mr. Griffey should not discount these incremental efforts simply because LIHEAP pays utility bills.

III. CONCLUSION

Q24. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

AFFIDAVIT OF STUART BARRETT

THE STATE OF TEXAS)
)
COUNTY OF Montgomery)

This day, Stuart Barrett the affiant, appeared in person before me, a notary public, who knows the affiant to be the person whose signature appears below. The affiant stated under oath:

My name is Stuart Barrett. I am of legal age and a resident of the State of Texas. The foregoing testimony and exhibits offered by me are true and correct, and the opinions stated therein are, to the best of my knowledge and belief, accurate, true and correct.

Stuart Barrett

SUBSCRIBED AND SWORN TO BEFORE ME, notary public, on this the 16th day of November 2022.

NANCY MAXWELL
Notary ID #129702124
My Commission Expires
January 12, 2026

Nancy Maxwell
Notary Public, State of Texas

My Commission expires:
1-12-2026

This exhibit contains information that is confidential and will be provided under the terms of the Protective Order (Confidentiality Disclosure Agreement) entered in this case.

J.D. POWER

Press Release

Overall Residential Electric Utility Customer Satisfaction Increases for Sixth Consecutive Year, J.D. Power Finds

COSTA MESA, Calif.: 12 July 2017 — An increase in power outage information along with higher price satisfaction are the top drivers of the sixth consecutive year of improved customer satisfaction with residential electric utility companies, according to the J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study,SM released today.

"The utility industry has begun to fully understand the importance of customer satisfaction over the past several years, and now many have dedicated leaders and teams focused on improving the customer experience," said **John Hazen, senior director of the energy practice at J.D. Power**. "A challenge we continue to see, however, is that the pace of implementing satisfaction improvements at utilities can be slower than in other industries."

Overall satisfaction averages 719 (on a 1,000-point scale) in 2017, a 39-point improvement from 2016. A 39-point increase in the power quality & reliability factor (767) and a 48-point increase in the price factor (659) are key contributors to the year-over-year improvement in overall satisfaction. Price satisfaction increases, as customers provide their utility with higher ratings for ease of understanding pricing, total monthly cost and fairness of pricing.

The study finds that more utility customers (66% vs. 59% in 2016) are getting critical information during a power outage, such as the cause of the outage, number of customers affected and estimates on when power will be restored. Overall satisfaction among customers who receive outage information is much higher than among those who do not receive such information (716 vs. 683, respectively).

Following are some of the key findings of the study:

- **Customers believe their utility infrastructure is being updated:** A larger percentage of customers in 2017 believe their utility is focused on improving the infrastructure to improve safety and reliability, compared with 2016 (68% vs. 63%, respectively).
- **Electronic bill-pay is increasing:** Utility messaging to encourage customers to move away from paying their bill with a check by mail has helped reduce mail payments by 3 percentage points year over year (17% vs. 20%, respectively).
- **Paperless communications on the rise:** Less than half (43%) of customers recall communications from their utility; however, the source of communications is changing across the industry. Year over year, paper bill insert recall has decreased to 33% from 36%, while there has been an increase in the number of customers going directly to the utility website (15% vs. 12% in 2016) and those who receive emails from their utility (25% vs. 21% in 2016).
- **Website access is going mobile:** More than one-third (35%) of customers are now accessing their utility's website either by a mobile phone or by a tablet, which is a 15% increase from 2016.

Study Rankings
The Electric Utility Residential Customer Satisfaction Study ranks midsize, large and cooperative utility companies in four geographic regions: East, Midwest, South and West. Companies in the midsize utility

segment serve between 100,000 and 499,999 residential customers, while companies in the large utility segment serve 500,000 or more residential customers.

East Region
PPL Electric Utilities ranks highest among large utilities in the East region for the sixth consecutive year, with a score of 739. **Con Edison** (735) ranks second, followed by **PSE&G** (727) and **Central Maine Power** (720).

Among midsize utilities in the East region, **Penn Power** ranks highest with a score of 709. **Green Mountain Power** (707) ranks second, while **Rochester Gas & Electric** (704) ranks third and **Met-Ed** (701) ranks fourth.

Midwest Region
MidAmerican Energy ranks highest in the large utility segment in the Midwest region for the 10th consecutive year, with a score of 742. **DTE Energy** and **Ohio Edison** tie for second (728 each), while **Xcel Energy-Midwest** (723) ranks fourth.

In the midsize utility segment in the Midwest region, **Kentucky Utilities** ranks highest for the second consecutive year, with a score of 761. **Louisville Gas & Electric** (743) ranks second, followed by **Otter Tail Power Company** (734) in third and **Lincoln Electric System** (725) in fourth.

South Region
Georgia Power ranks highest in the large utility segment in the South region with a score of 761. **Florida Power & Light** (757) ranks second, followed by **Alabama Power** (749) in third and **Entergy Louisiana** (745) in fourth.

EPB ranks highest in the midsize utility segment in the South region for the second consecutive year, with a score of 761. **Entergy Mississippi** (757) ranks second, followed by **Gulf Power** (749) in third and **JEA** (747) in fourth.

West Region
Salt River Project (SRP) ranks highest in the large utility segment in the West region for the 16th consecutive year, with a score of 775. **SMUD** (750) ranks second, followed by **Portland General Electric** (746) in third and **Southern California Edison** (727) in fourth.

Clark Public Utilities ranks highest in the midsize utility segment in the West region for the 10th consecutive year, with a score of 776. **Idaho Power** (743) ranks second, followed **Seattle City Light** (741) in third and **Colorado Springs Utilities** (740) in fourth.

Cooperatives Segment
SECO Energy ranks highest in the cooperatives segment with a score of 789. **NOVEC** (788) ranks second, followed by **Sawnee EMC** (786) in third and **Southern Maryland Electric Cooperative** (SMECO) and **Walton EMC** rank fourth in a tie (783 each).

The Electric Utility Residential Customer Satisfaction Study, now in its 19th year, measures customer satisfaction with electric utility companies by examining six factors: power quality & reliability; price; billing & payment; corporate citizenship; communications; and customer service. The study is based on responses from 99,145 online interviews conducted from July 2016 through May 2017 among residential customers of the 138 largest electric utility brands across the United States, which collectively represent more than 98 million households.

For more information about the Electric Utility Residential Customer Satisfaction Study, visit http://www.jdpower.com/resource/us-electric-utility-residential-customer-satisfaction-study.

See the online press release at http://www.jdpower.com/pr-id/2017098.

J.D. Power is a global leader in consumer insights, advisory services and data and analytics. These capabilities enable J.D. Power to help its clients drive customer satisfaction, growth and profitability. Established in 1968, J.D. Power is headquartered in Costa Mesa, Calif., and has offices serving North/South America, Asia Pacific and Europe. J.D. Power is a portfolio company of XIO Group, a global alternative investments and private equity firm headquartered in London, and is led by its four founders: Athene Li, Joseph Pacini, Murphy Qiao and Carsten Geyer.

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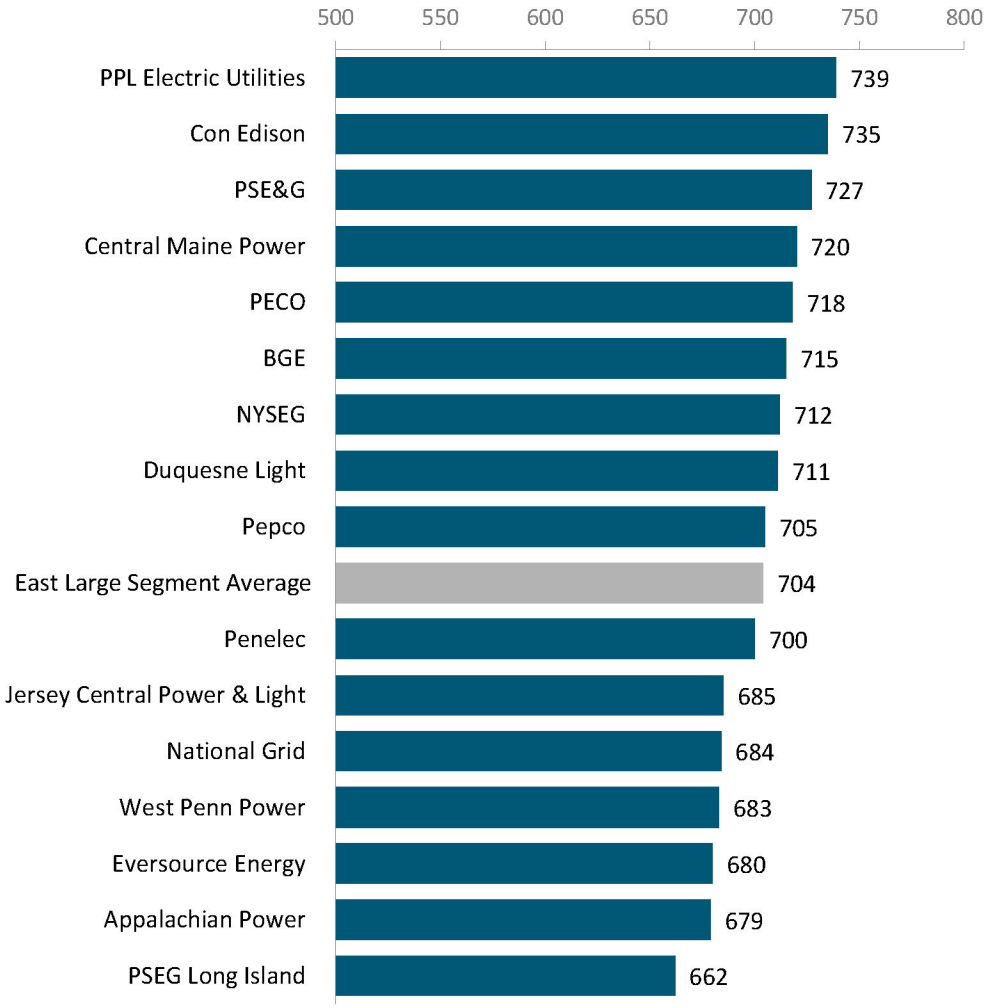
About J.D. Power and Advertising/Promotional Rules www.jdpower.com/about-us/press-release-info

# # #
Note: Nine charts follow.

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study℠

East Region: Large Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

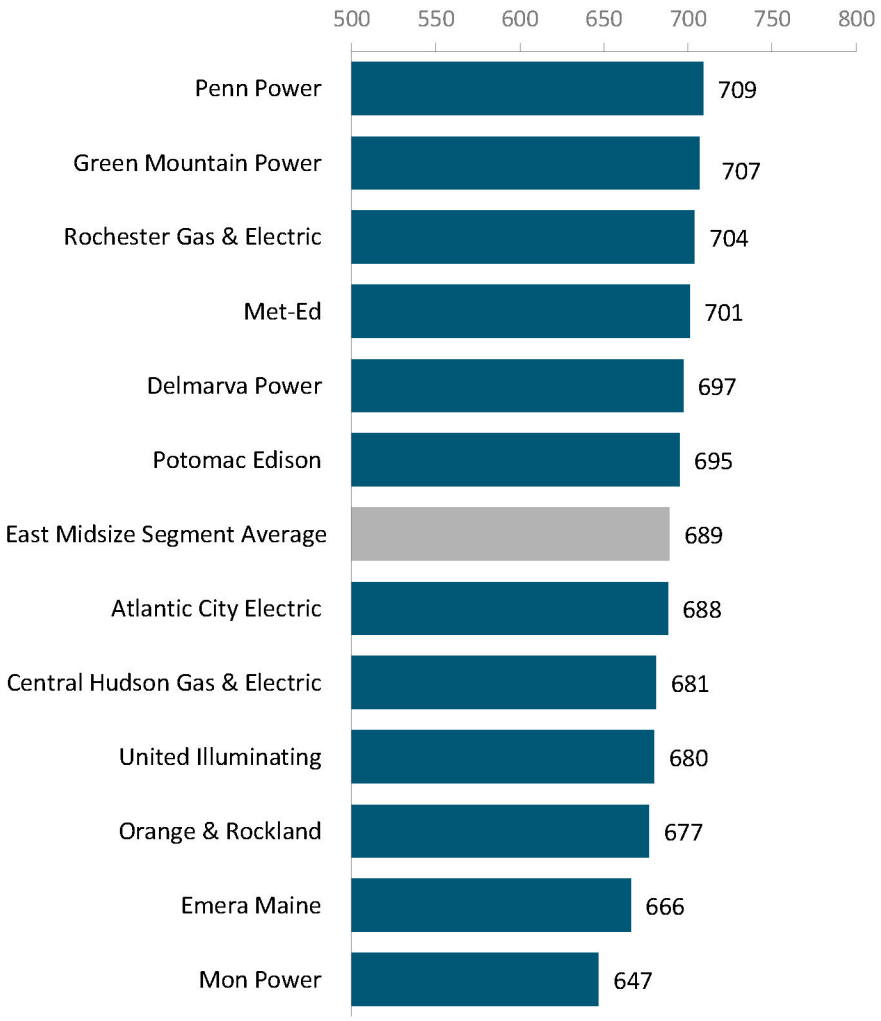


Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study℠

East Region: Midsize Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

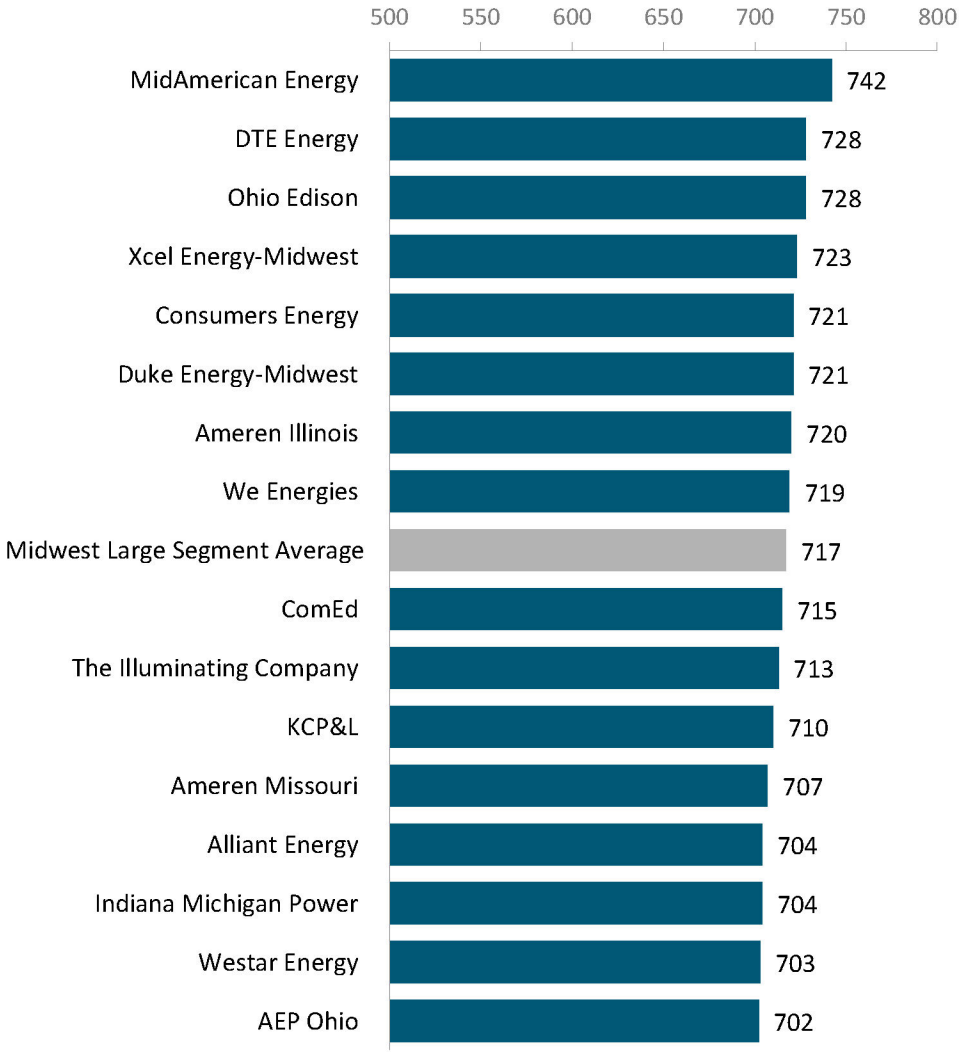


Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study℠

Midwest Region: Large Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

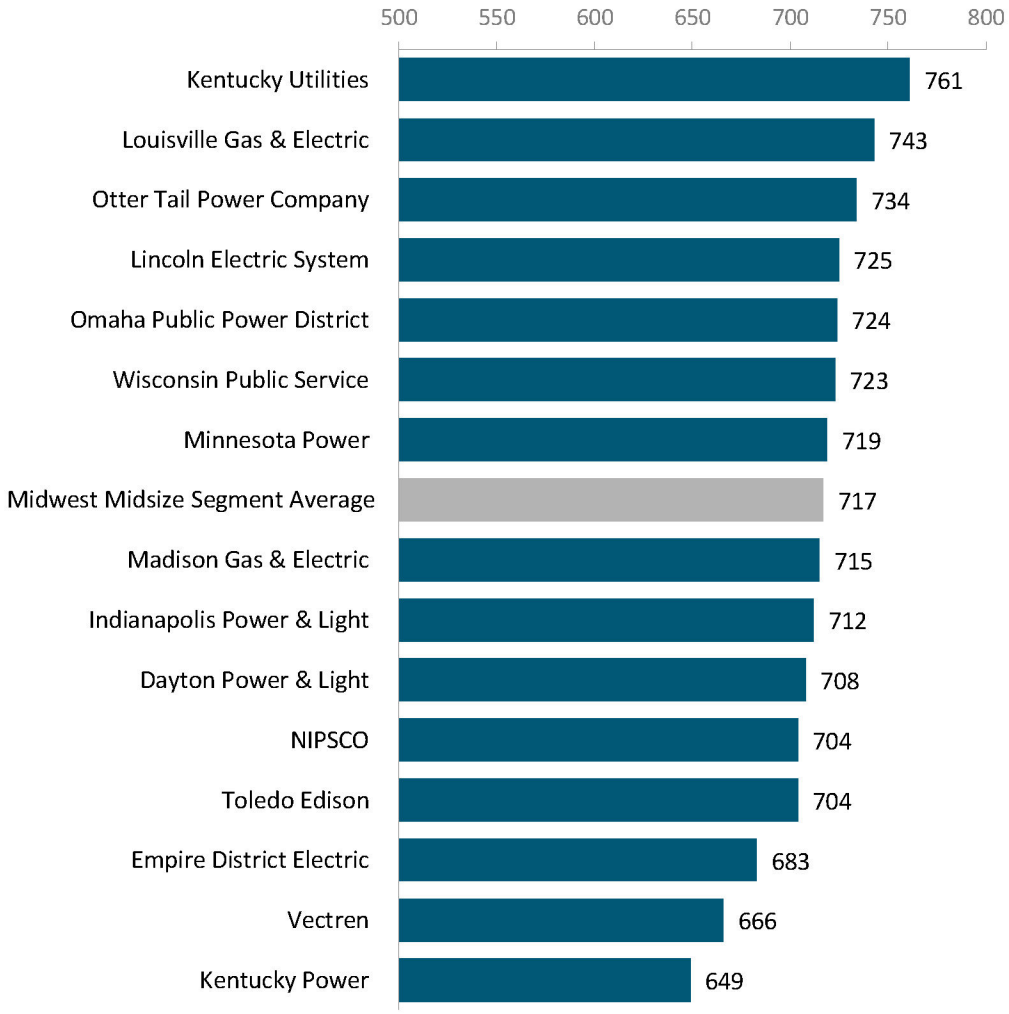


Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study℠

Midwest Region: Midsize Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

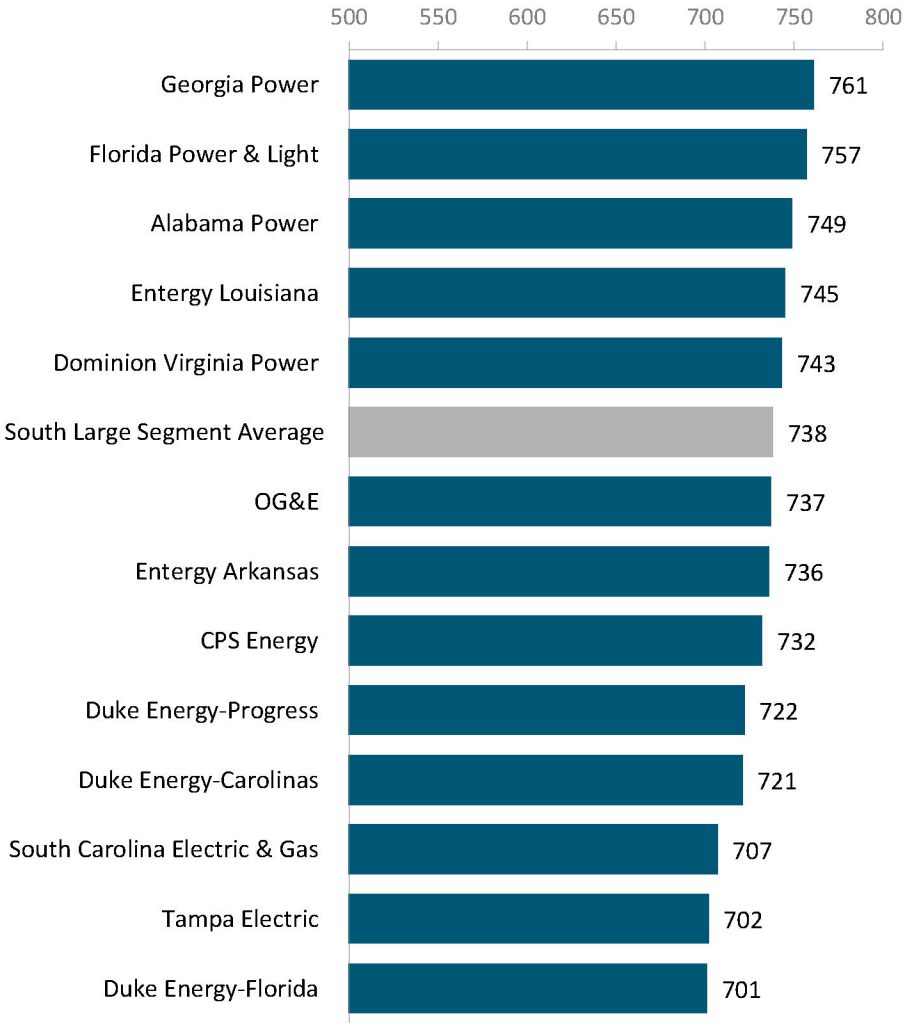


Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study℠

South Region: Large Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

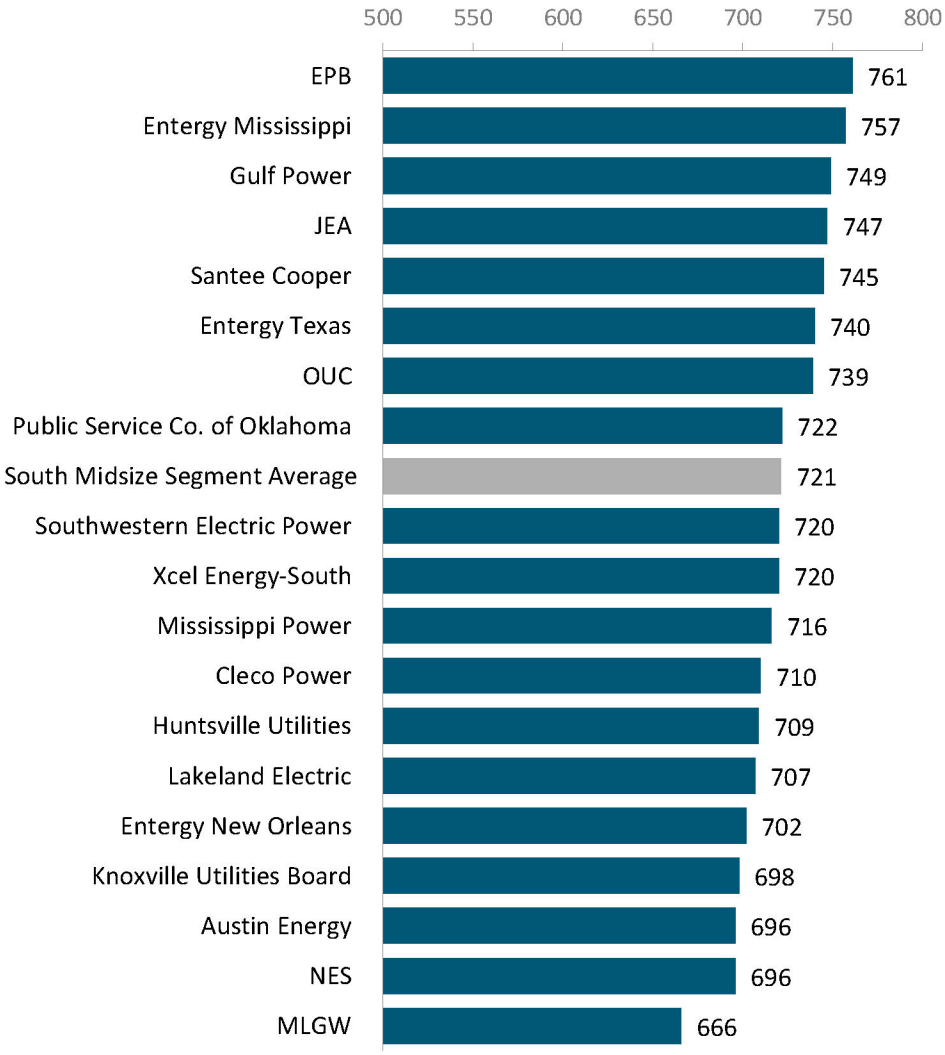


Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study[SM]

South Region: Midsize Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

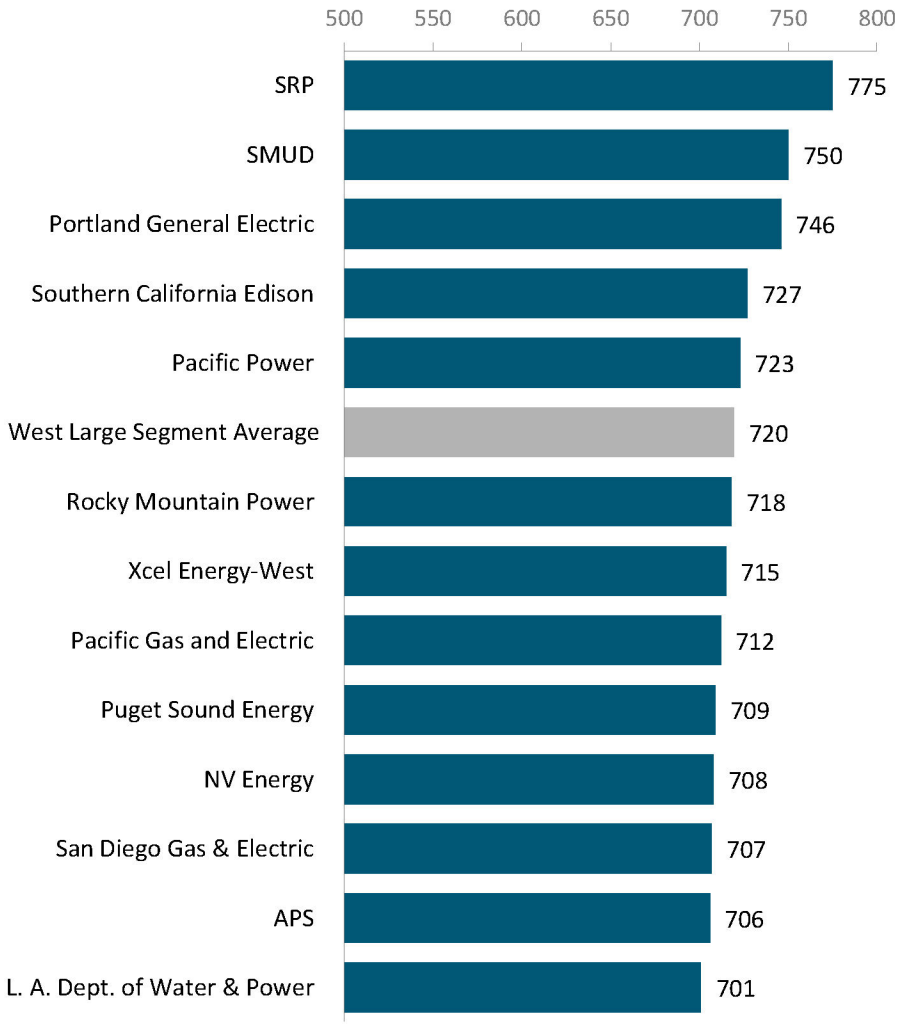


Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study℠

West Region: Large Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

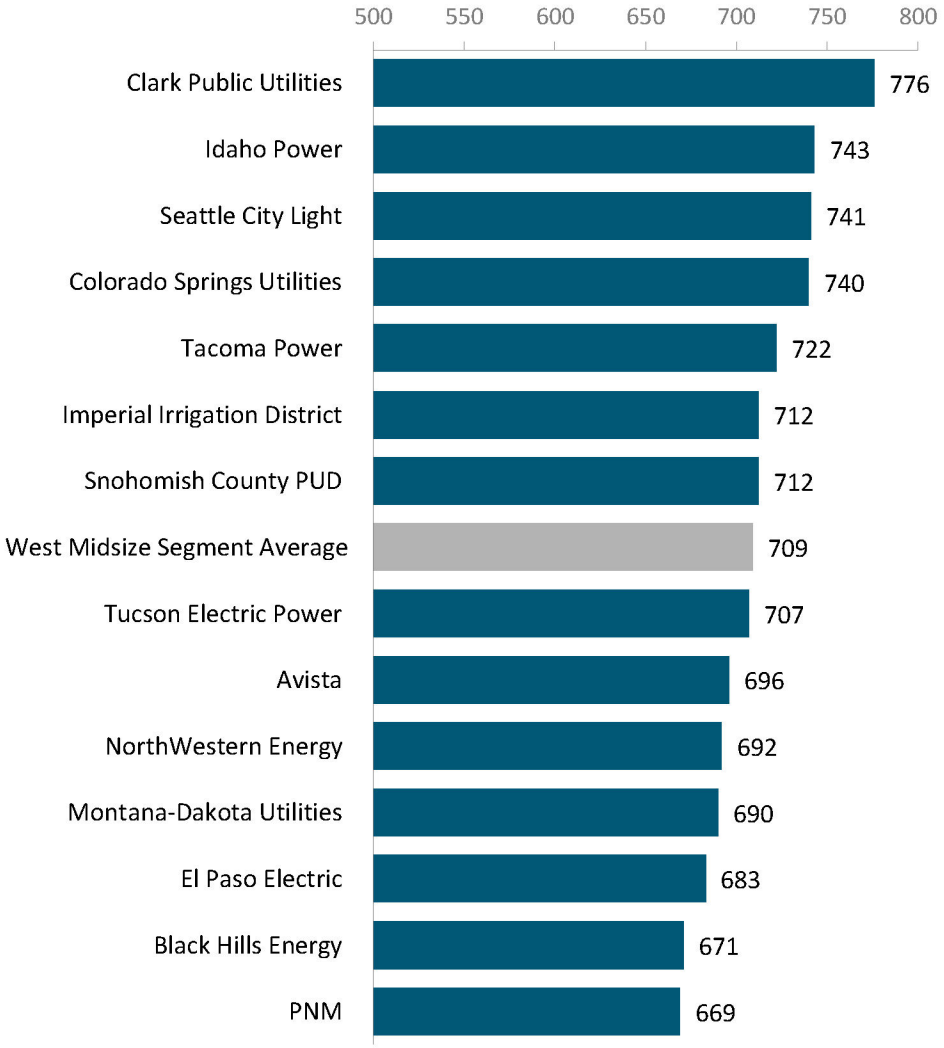


Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study[SM]

West Region: Midsize Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

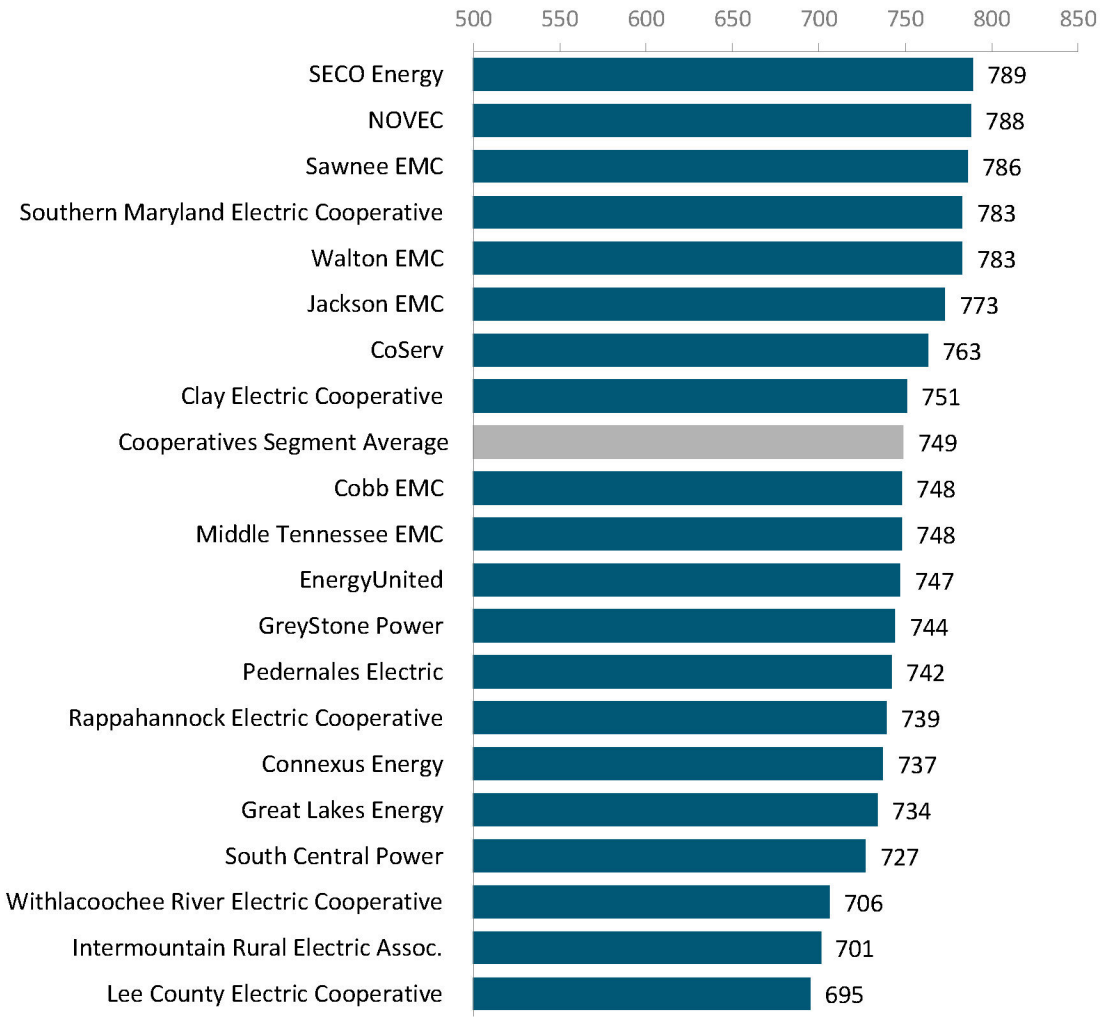


Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Residential Customer Satisfaction Study℠

Cooperatives Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)



Source: J.D. Power 2017 Electric Utility Residential Customer Satisfaction Study℠

J.D. POWER

Press Release

Electric Utilities Set New Benchmark for Business Customer Satisfaction, J.D. Power Finds

Industry-Wide Focus on Improved, Multi-Channel Communications Drives Highest-Ever Satisfaction Scores

COSTA MESA, Calif.: 13 Dec. 2017 — Electric utility providers have found the ideal combination in customer communications, ramping up engagement efforts through a multi-channel mix of phone, website, mobile, and even face-to-face visits, driving record high levels of satisfaction among business customers, according to the J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM], released today.

"Electric utilities are rapidly upping the ante on customer communications, setting an example for other service industries by demonstrating that it is possible to dramatically improve customer satisfaction by actively engaging across a number of channels," said **John Hazen, Director of Utility Practice at J.D. Power**. "While there is no one-size-fits-all formula for success, electric utility leaders are finding that a steady combination of proactive outreach through a mix of digital, mobile, community events, and dedicated account representative touch points can drive a strong positive perception of their brands."

Following are some key findings of the study:

- **Record high customer satisfaction scores:** Overall customer satisfaction among electric utility business customers improves for the fifth consecutive year to a record high of 765 (on a 1,000 point scale), a 10 point increase over last year's results. Satisfaction improved in each of the six factors, with the largest year-over-year increases in billing & payment (+13), communications (+13).

- **Customer satisfaction improving industry-wide:** The top 5 brands in the study all earn overall customer satisfaction scores in the 800s, compared to only one brand in the previous year results. Moreover, the gap between the top performer and bottom performer in the study has narrowed to just 111 points, down from 118 last year.

- **Fewer power outages and more proactive alerts:** The average number of brief power outage (five minutes or less) falls from 1.9 in calendar year 2016 to 1.7 this year. The average number of lengthy outages (longer than five minutes) is unchanged at 1.2. Utilities are doing a better job of communicating planned outages with 82% of customers being notified ahead of time, versus 78% last year.

- **More customers interacting with utilities via mobile device:** Business customers are increasingly relying on mobile devices to access their electric utility's website, with 26% of respondents indicating that they accessed the utility via mobile in 2017, up from 18% the previous year.

- **Dedicated account representatives play a key role in satisfaction equation:** The average overall satisfaction score for business customers who have a dedicated account representative is 824, 9 points higher than 2016 (815) and 85 points higher than those without a dedicated account representative (739).

Study Rankings

Within each of the four geographic regions included in the study, utility providers are classified into one of two segments: large (serving 85,000 or more business customers) and midsize (serving 40,000-84,999 business customers).

Among the eight providers that rank highest in their respective regions in this study, none were ranked highest in the previous study.

The following utilities rank highest in business customer satisfaction in their respective regions:

- East Large: **BGE**
- East Midsize: **Duquesne Light**
- Midwest Large: **DTE Energy**
- Midwest Midsize: **WPS**
- South Large: **Alabama Power**
- South Midsize: **Entergy Mississippi**
- West Large: **Portland General Electric**
- West Midsize: **SMUD**

The 2017 Electric Utility Business Customer Satisfaction Study, now in its 19th year, measures satisfaction among business customers of 87 targeted U.S. electric utilities, each of which serves more than 40,000 business customers. In aggregate, these utilities provide electricity to more than 12 million customers. Overall satisfaction is examined across six factors (listed in order of importance): power quality and reliability; corporate citizenship; price; billing and payment; communications; and customer service. Satisfaction is calculated on a 1,000-point scale.

The study is based on responses from more 19,000 online interviews with business customers who spend at least $200 a month on electricity. The study was fielded from February through June 2017 and July through October 2017.

See the online press release at http://www.jdpower.com/pr-id/2017225.

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About J.D. Power and Advertising/Promotional Rules: http://www.jdpower.com/resource/us-electric-utility-business-customer-satisfaction-study.

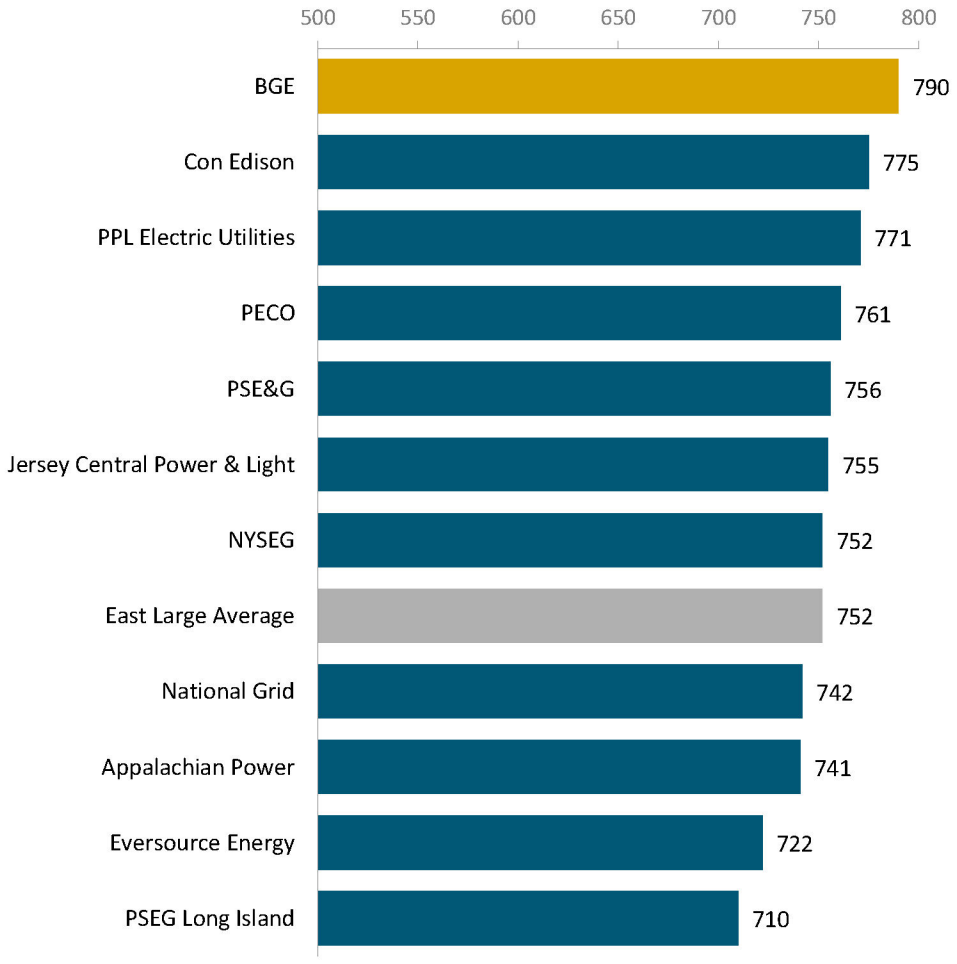
# # #

Note: Eight charts follow

J.D. Power
2017 Electric Utility Business Customer Satisfaction Study[SM]

East Region: Large Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

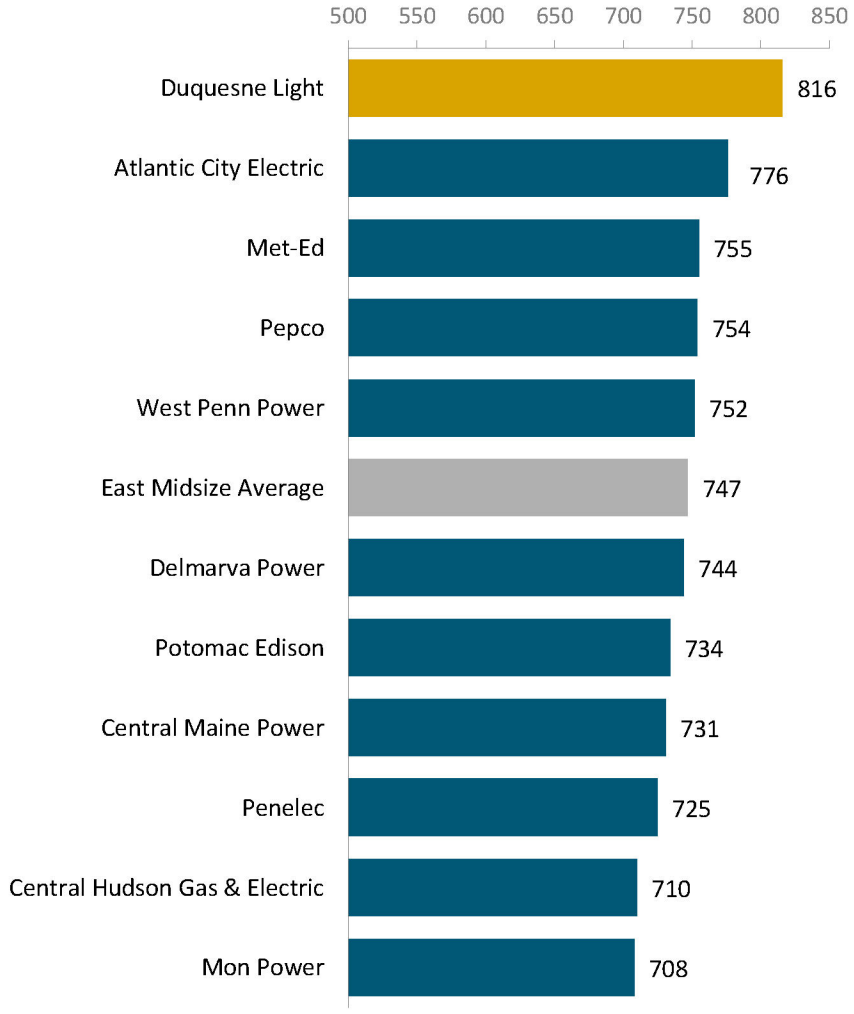


Source: J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Business Customer Satisfaction Study[SM]

East Region: Midsize Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

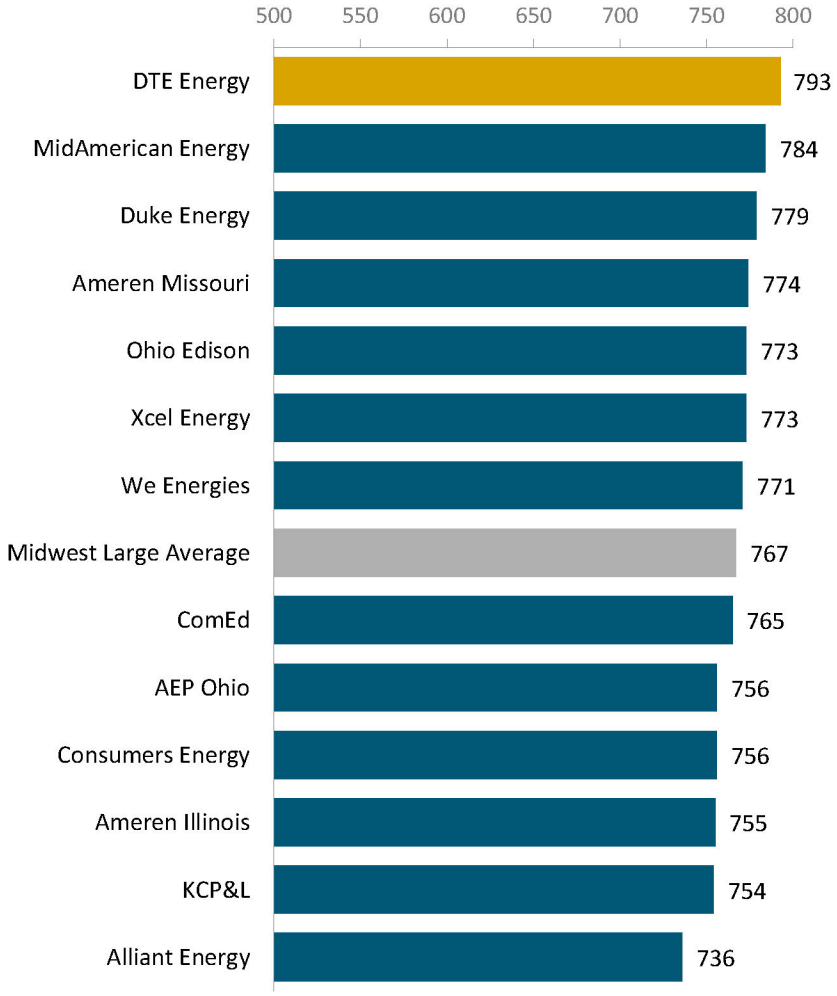


Source: J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Business Customer Satisfaction Study[SM]

Midwest Region: Large Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

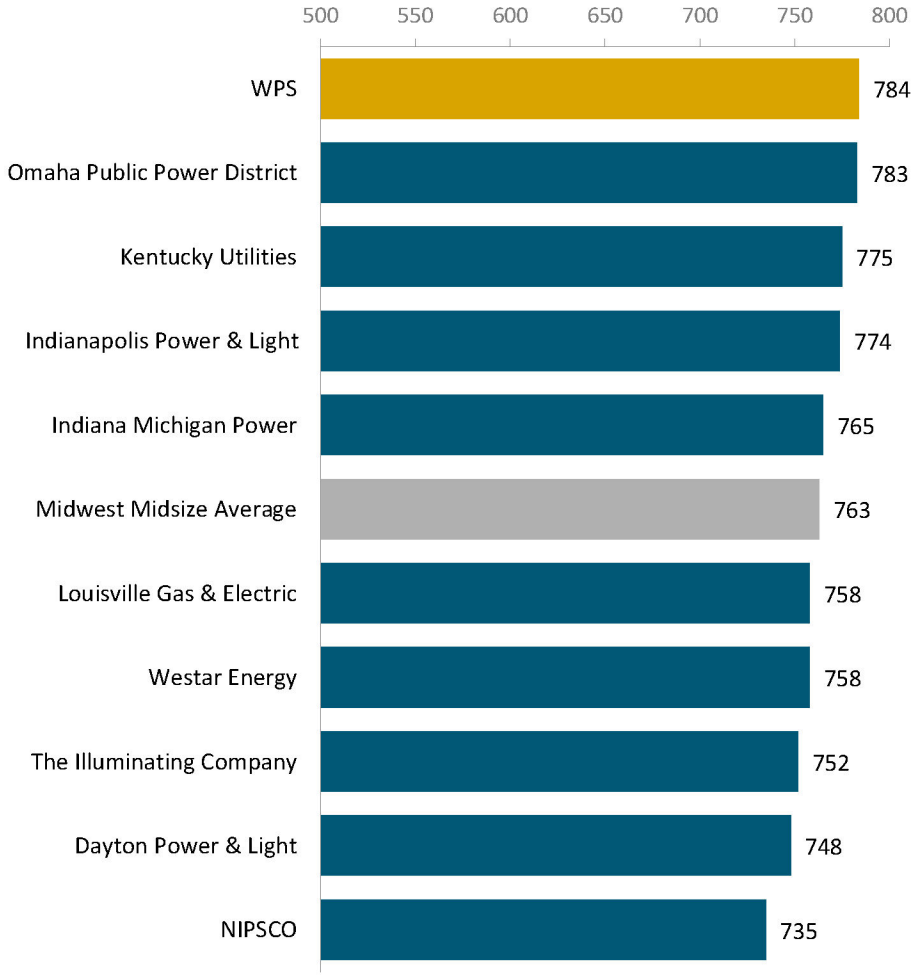


Source: J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Business Customer Satisfaction Study[SM]

Midwest Region: Midsize Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

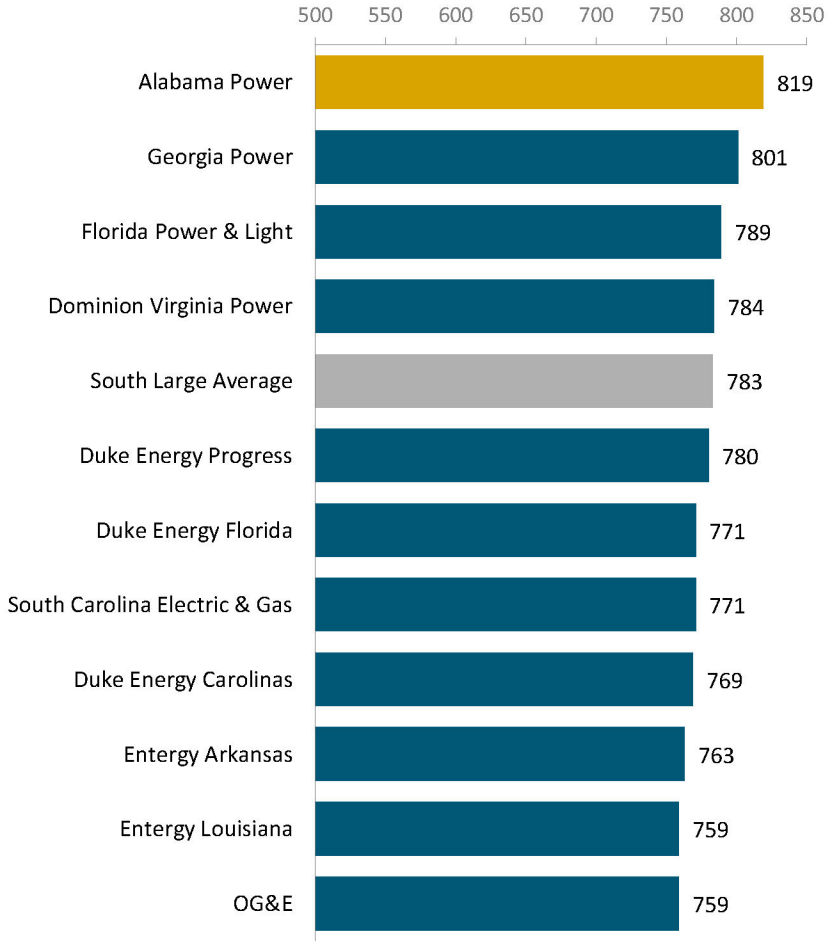


Source: J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Business Customer Satisfaction Study[SM]

South Region: Large Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

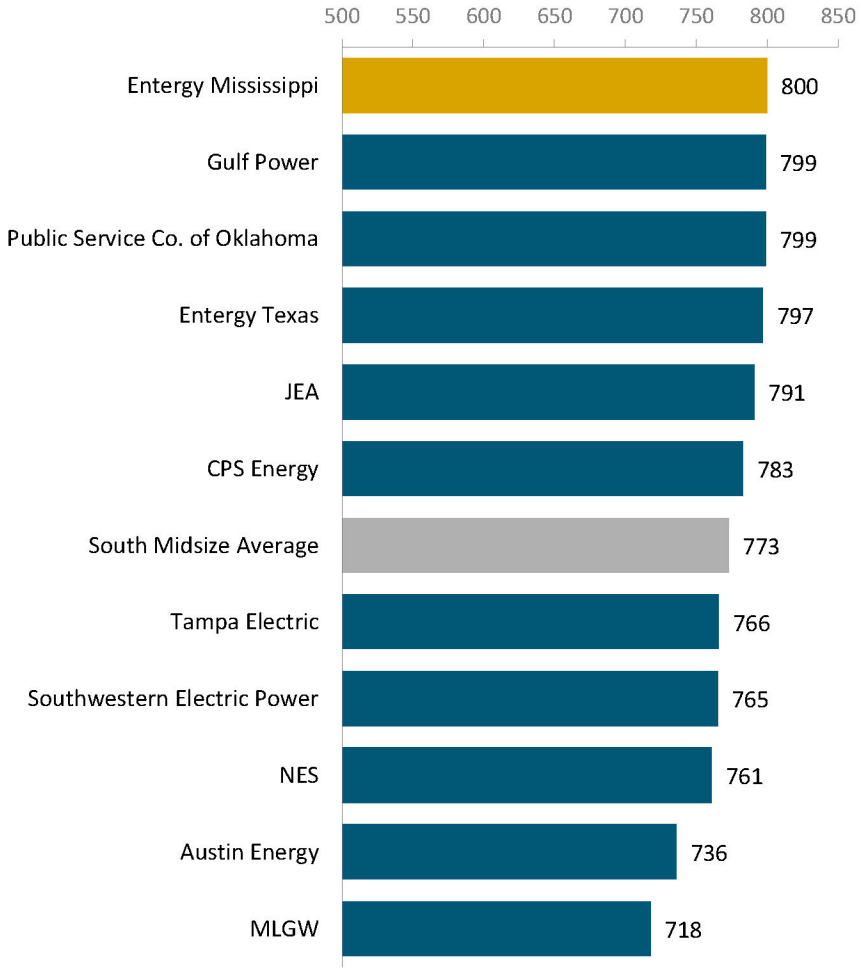


Source: J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Business Customer Satisfaction Study[SM]

South Region: Midsize Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)



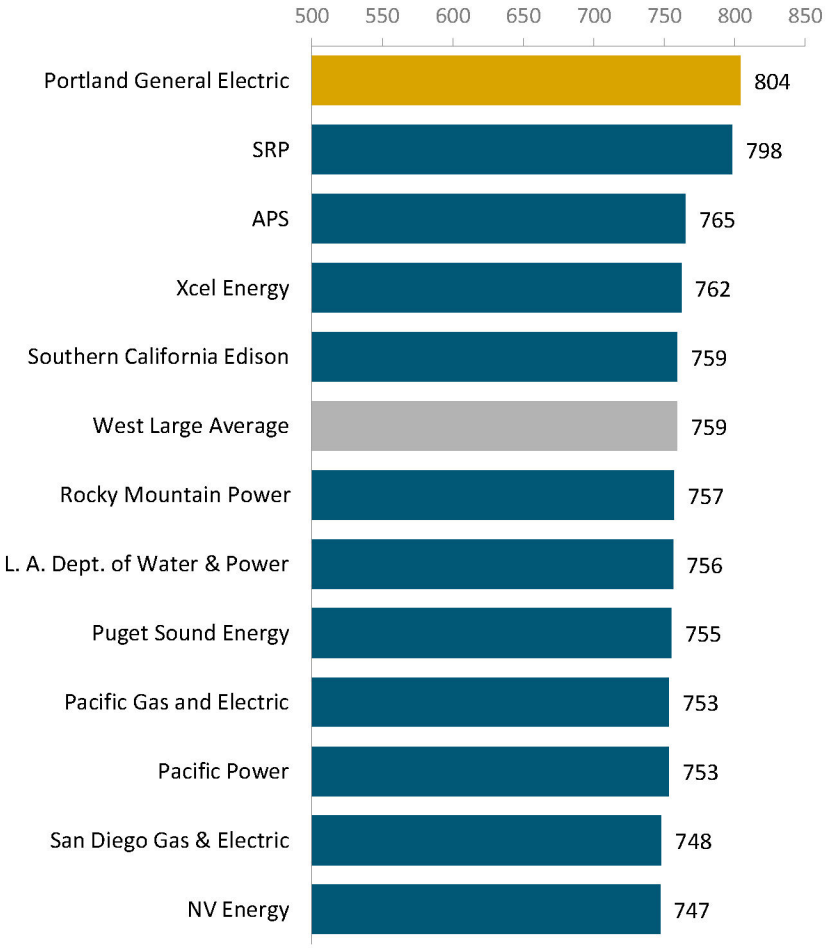
Note: Included in the study, but not ranked due to insufficient sample size is Xcel Energy-South.

Source: J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Business Customer Satisfaction Study[SM]

West Region: Large Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

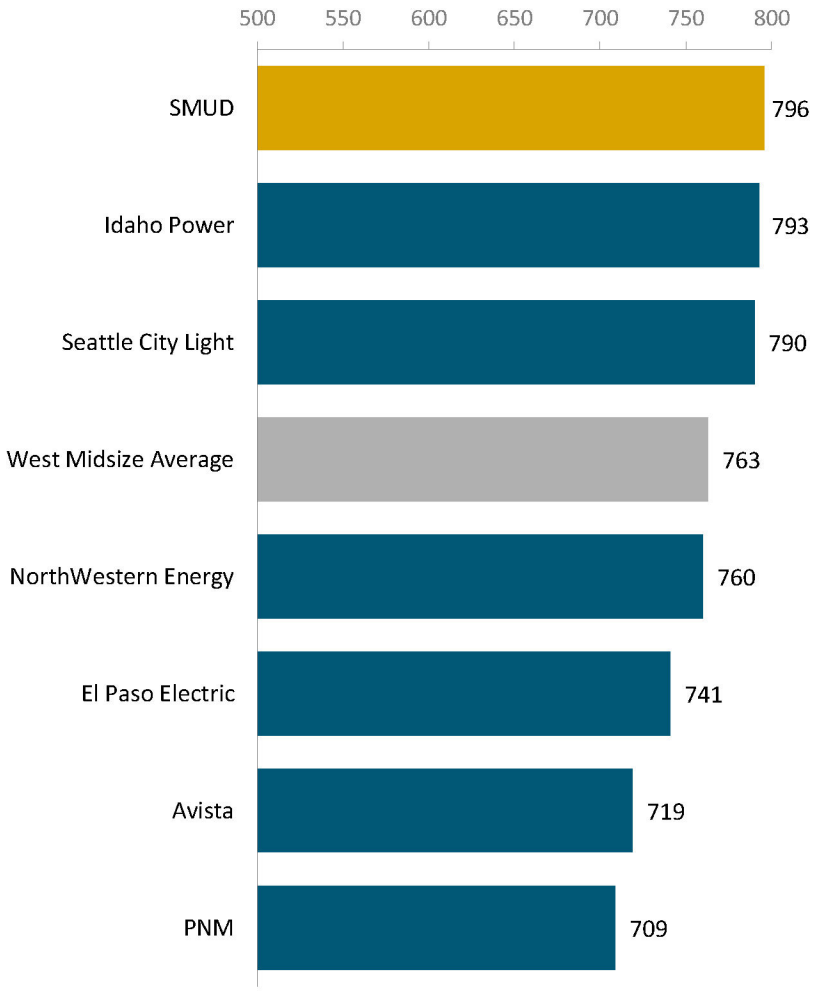


Source: J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2017 Electric Utility Business Customer Satisfaction Study[SM]

West Region: Midsize Segment
Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)



Source: J.D. Power 2017 Electric Utility Business Customer Satisfaction Study[SM]

J.D. POWER

Press Release

Residential Electric Utility Customer Satisfaction Increases for Seventh Consecutive Year, Driven by Proactive Communication, J.D. Power Finds

COSTA MESA, Calif.: 11 July 2018 — Overall customer satisfaction with residential electric utility companies shows a seventh consecutive year-over-year increase, according to the J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study,SM released today.

"Proactive communications, primarily delivered through digital channels, such as email, text message, or social media post, are having a significant positive impact on residential electric utility customer satisfaction," said **John Hazen, senior director of the energy practice at J.D. Power**. "Power outages are going to happen. The more proactive electric utilities are in clearly communicating information about the cause, anticipated duration, and repair of an outage, the more satisfied their customers will be with their overall service."

The study, now in its 20th year, measures customer satisfaction with electric utility companies by examining six factors: power quality & reliability; price; billing & payment; corporate citizenship; communications; and customer service.

Following are the highest-ranking utilities in each region:

- Cooperatives Segment: **Sawnee EMC**
- East Large Segment: **PPL Electric Utilities**
- East Midsize Segment: **Penn Power**
- Midwest Large Segment: **MidAmerican Energy**
- Midwest Midsize Segment: **Kentucky Utilities**
- South Large Segment: **Georgia Power**
- South Midsize Segment: **EPB**
- West Large Segment: **SRP**
- West Midsize Segment: **Clark Public Utilities**

The J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study is based on responses from more than 104,000 online interviews conducted from July 2017 through May 2018 among residential customers of the 138 largest electric utility brands across the United States, which collectively represent more than 99 million households.

For more information about the Electric Utility Residential Customer Satisfaction Study, visit http://www.jdpower.com/resource/electric-utility-residential-customer-satisfaction-study.

See the online press release at http://www.jdpower.com/pr-id/2018105.

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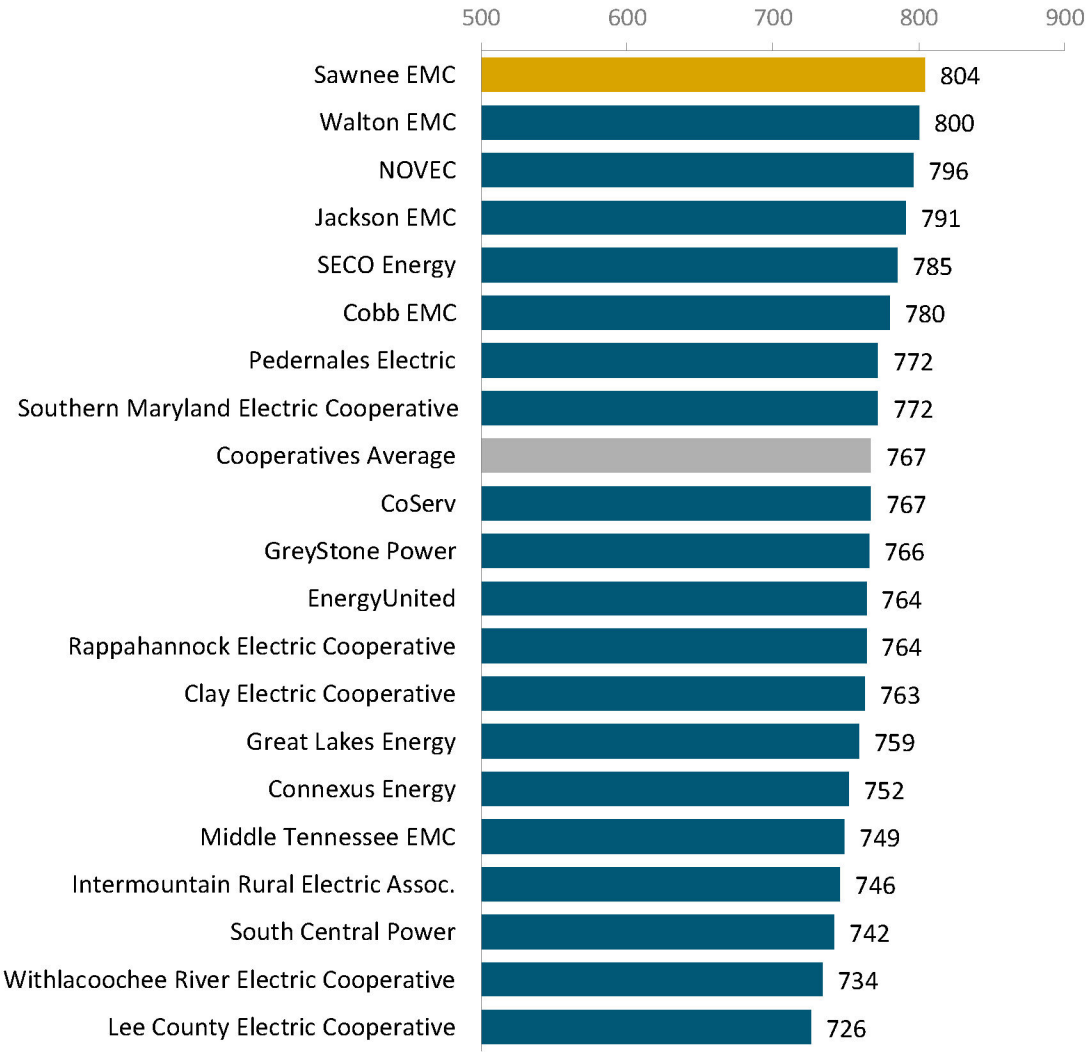
# # #
NOTE: Nine charts follow.

J.D. Power
2018 Electric Utility Residential Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
Cooperatives Segment

(Based on a 1,000-point scale)

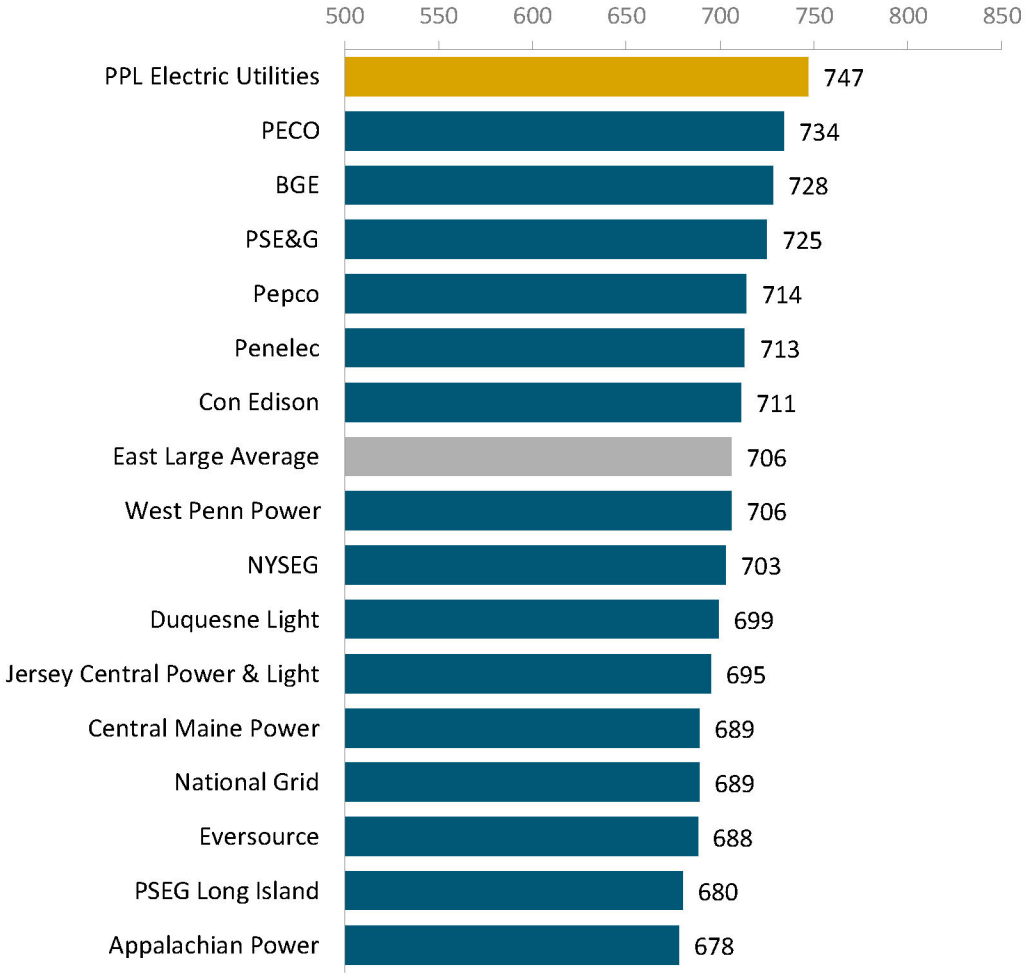


Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2018 Electric Utility Residential Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
East Region: Large Segment

(Based on a 1,000-point scale)

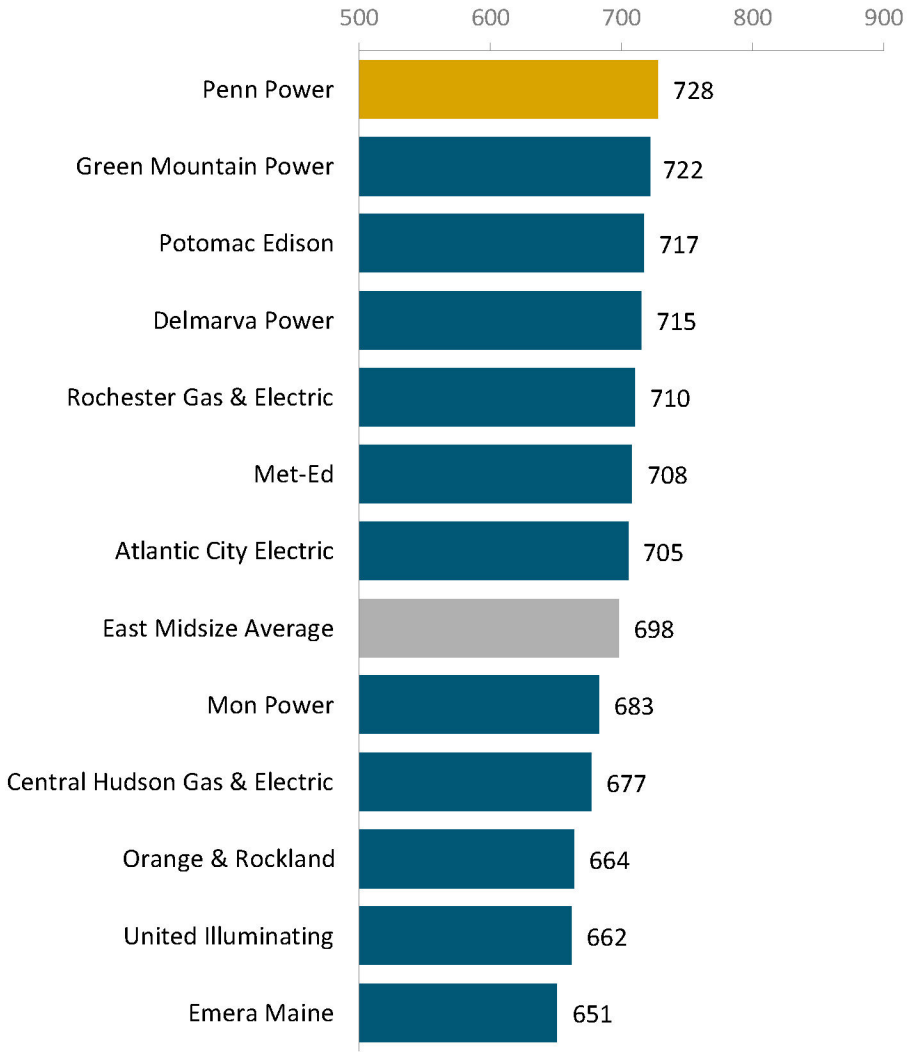


Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2018 Electric Utility Residential Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
East Region: Midsize Segment

(Based on a 1,000-point scale)

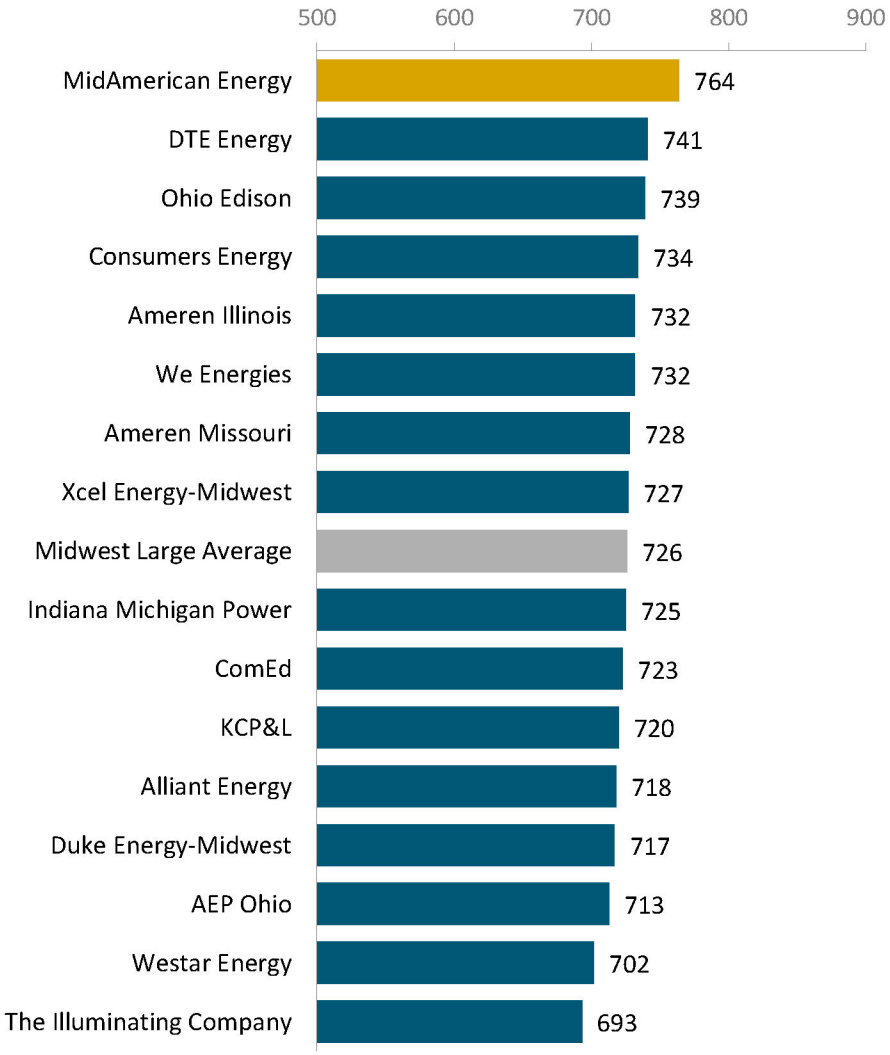


Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2018 Electric Utility Residential Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
Midwest Region: Large Segment

(Based on a 1,000-point scale)

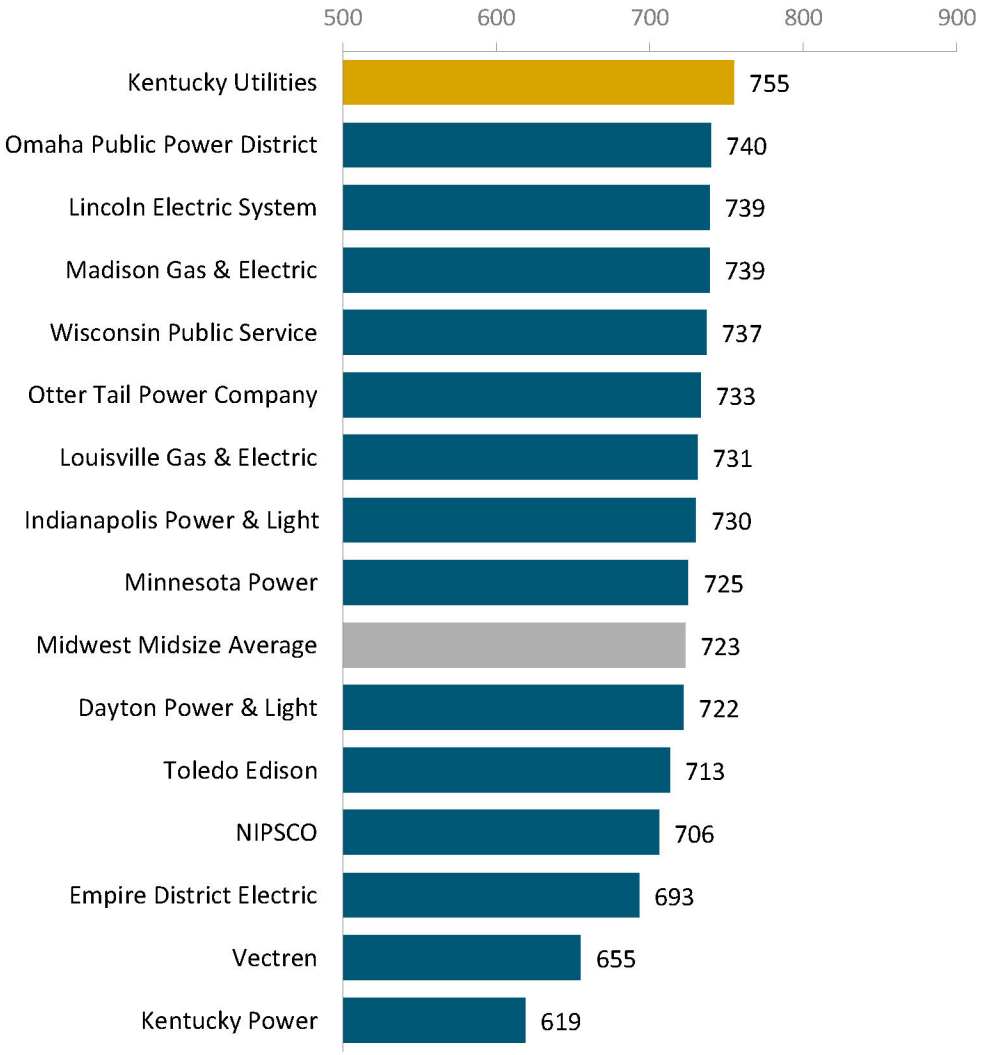


Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2018 Electric Utility Residential Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
Midwest Region: Midsize Segment

(Based on a 1,000-point scale)

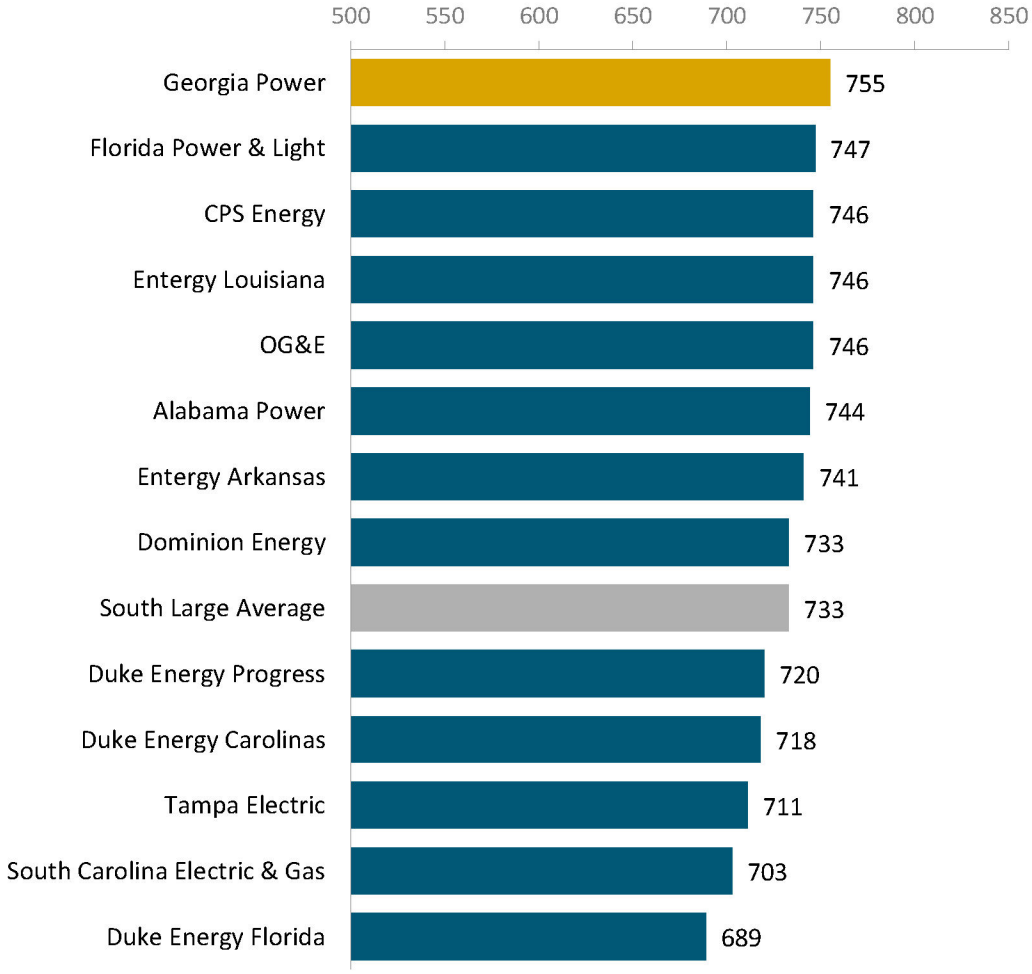


Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2018 Electric Utility Residential Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
South Region: Large Segment

(Based on a 1,000-point scale)

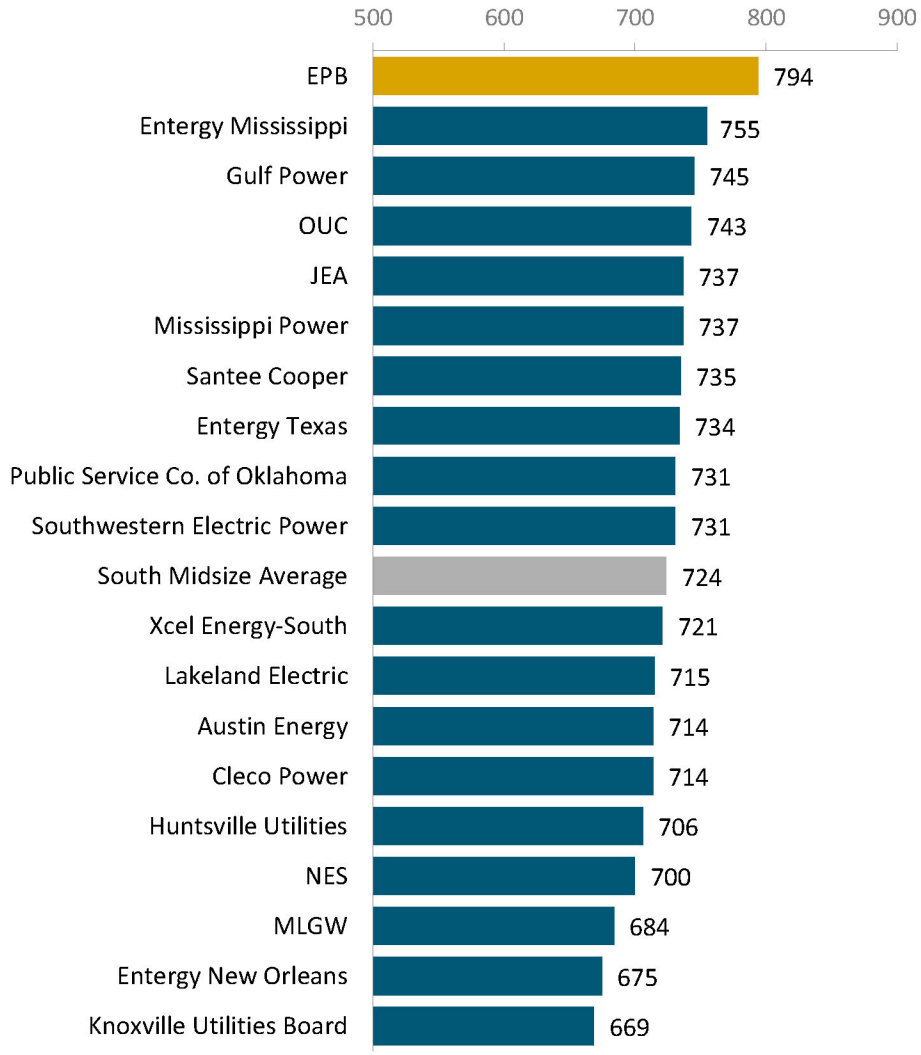


Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2018 Electric Utility Residential Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
South Region: Midsize Segment

(Based on a 1,000-point scale)

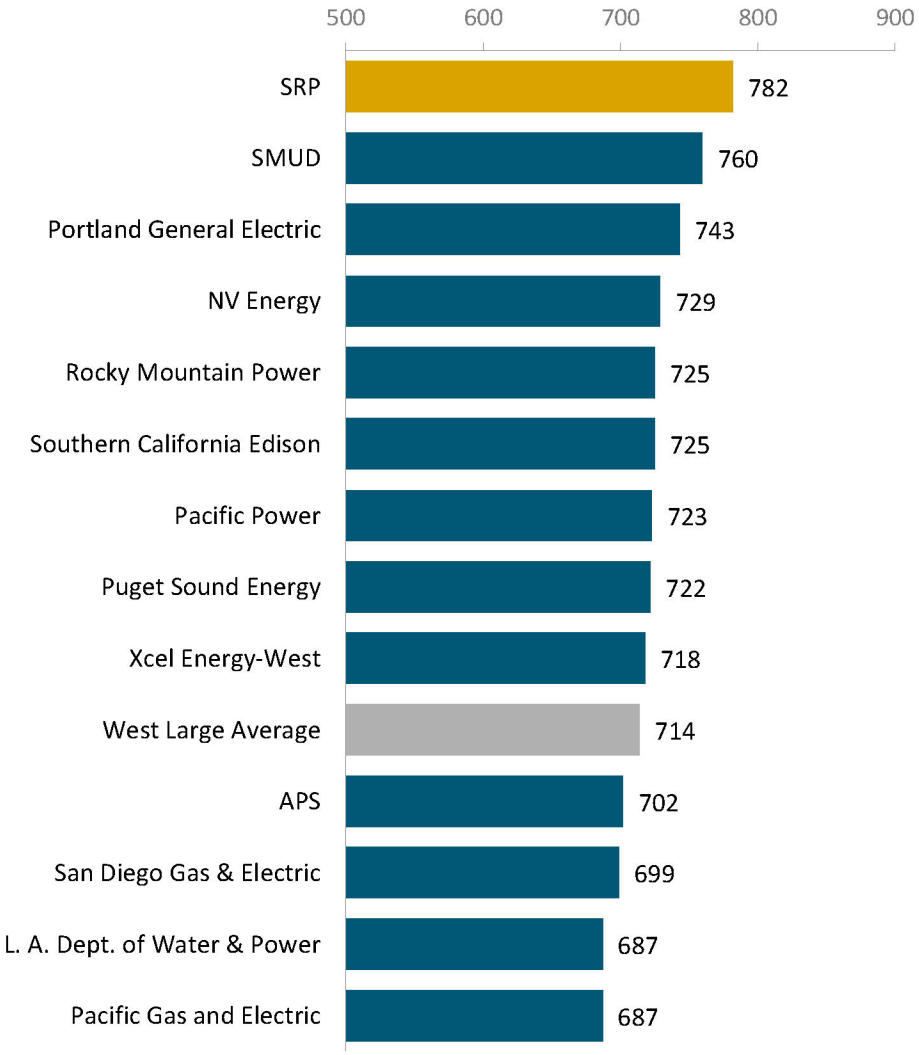


Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2018 Electric Utility Residential Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
West Region: Large Segment

(Based on a 1,000-point scale)



Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
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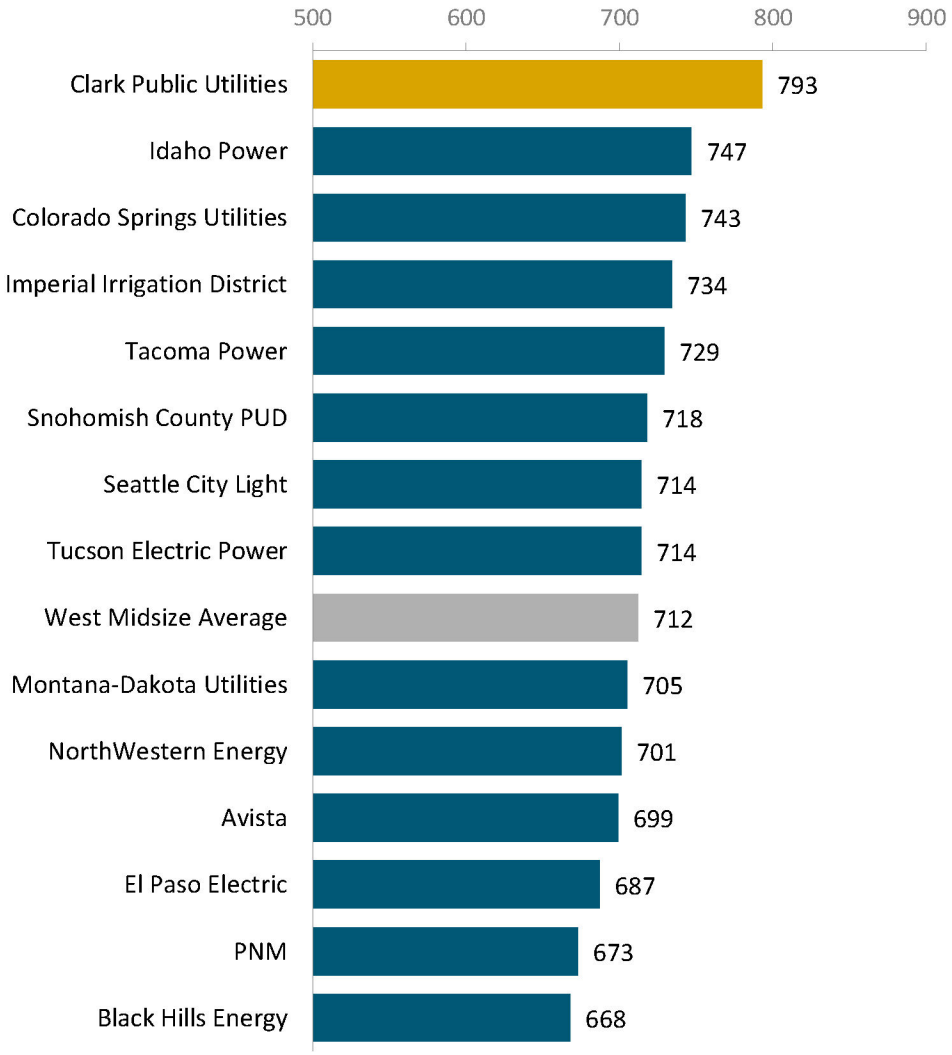
Customer Satisfaction Index Ranking
West Region: Midsize Segment

(Based on a 1,000-point scale)



Source: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study[SM]

High Satisfaction Achieved When Electric Utilities Deliver Convenience, Focus on Citizenship, J.D. Power Finds

Top-Performing Utilities Offer Convenience for Business Customer Interaction, Place Greater Focus on Participation at Community Level

COSTA MESA, Calif.: 12 Dec. 2018 — Beyond reliability, a focus on convenience and citizenship separates top-performing electric utilities from competitors regarding business customer satisfaction. That's the central finding of the J.D. Power 2018 Electric Utility Business Customer Satisfaction Study,[SM] released today, which recognizes regional electric utilities that are setting the standard for the most satisfying customer experience.

"While the top-performing electric utilities have developed a strong formula for business customer satisfaction, performance can vary considerably from one provider to the next," said **Adrian Chung, Director, Utilities Practice at J.D. Power**. "The highest-ranking electric utilities make it easier to do business with them by offering customers online account management tools and products that drive cost savings. This service execution, along with a strong commitment to supporting local communities, plays a critical role in gaining satisfaction and building customer trust."

Following are some key findings of the 2018 study:

- **Digital presence for account management improves satisfaction:** Customers have higher satisfaction when they have an online account and choose to receive an electronic bill. On average, offering these options leads to a 47-point increase (on a 1,000-point scale) in overall satisfaction. Customers of award-recipient utilities are 7 percentage points more likely to receive monthly statements electronically and 6 percentage points more likely to access their accounts online when compared with customers of other utilities.

- **Community presence is a differentiator:** Among the highest-ranking utilities, 75% of customers say their utility supports the economic development of the local community, which is 7 percentage points higher than for non-recipient utilities. A similar gap exists in customer awareness of utility employees volunteering in the community.

- **Utilities can support business customers with product and service offerings:** Electric utilities that proactively communicate outage information, product offerings and other utility messages enjoy customer satisfaction scores that are 50 points higher than those that do not provide proactive communications. Overall, satisfaction is 11 points lower among customers who need to contact their utility to get information than among those who receive proactive communications.

- **It pays to be proactive:** Customers of the highest-ranking utilities are more likely to be aware of peak-time savings programs and real-time energy monitoring tools, both of which stand to offer sizeable cost benefits.

- **Dedicated account representatives positioned to build strong relationships:** Businesses with an assigned key account representative receive significantly higher image ratings of being "customer-focused" and "trustworthy" compared with businesses that typically contact their utility through a business-specific services center or a general utility customer service telephone number.

Within each of the four geographic regions included in the study, utility providers are classified into one of two segments: large (serving 85,000 or more business customers) and midsize (serving 40,000-84,999 business customers).

The following utilities rank highest in business customer satisfaction in their respective regions:

- East Large: **BGE**
- East Midsize: **Duquesne Light**
- Midwest Large: **MidAmerican Energy**
- Midwest Midsize: **Indianapolis Power & Light**
- South Large: **Georgia Power**
- South Midsize: **Entergy Texas**
- West Large: **SRP**
- West Midsize: **SMUD**

The 2018 Electric Utility Business Customer Satisfaction Study, now in its 20th year, measures satisfaction among business customers of 88 targeted U.S. electric utilities, each of which serves more than 40,000 business customers. In aggregate, these utilities provide electricity to more than 12 million customers. Overall satisfaction is examined across six factors (listed in order of importance): power quality and reliability; corporate citizenship; price; billing and payment; communications; and customer service.

The study is based on responses from more 19,000 online interviews with business customers who spend at least $200 a month on electricity. The study was fielded from February through June 2018 and July through October 2018.

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Media Relations Contacts
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John Roderick; St. James, N.Y.; 631-584-2200; john@jroderick.com

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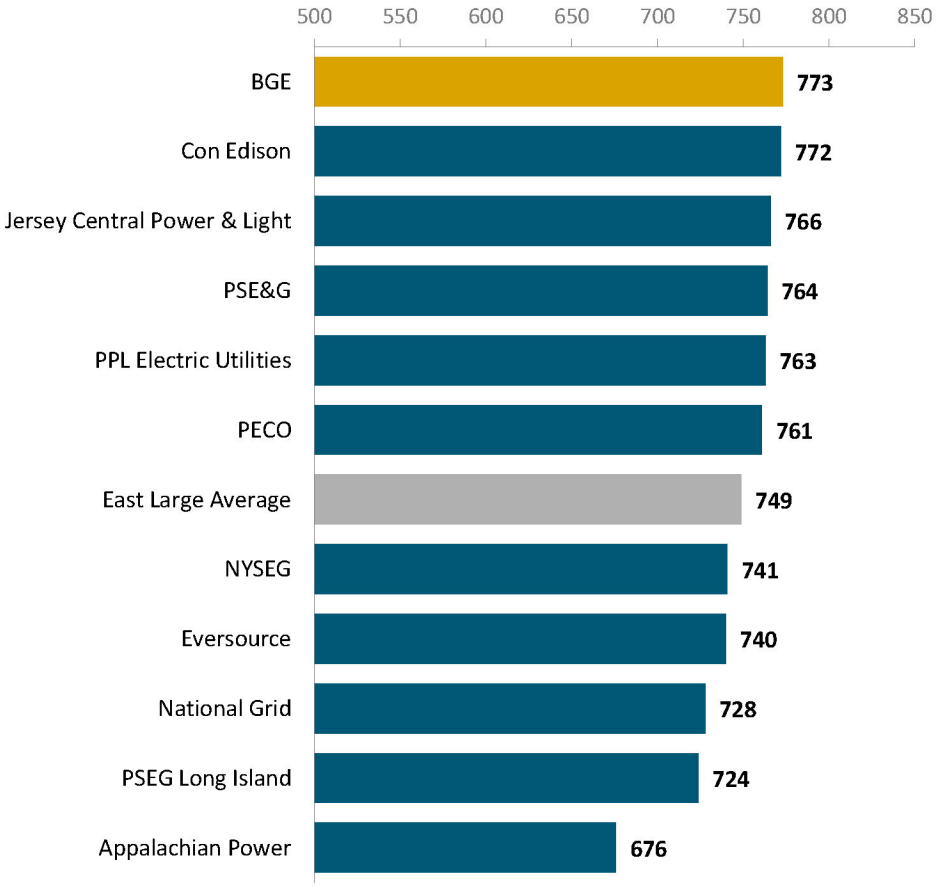
# # #

NOTE: Eight charts follow.

J.D. Power
2018 Electric Utility Business Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
East Region: Large Segment

(Based on a 1,000-point scale)

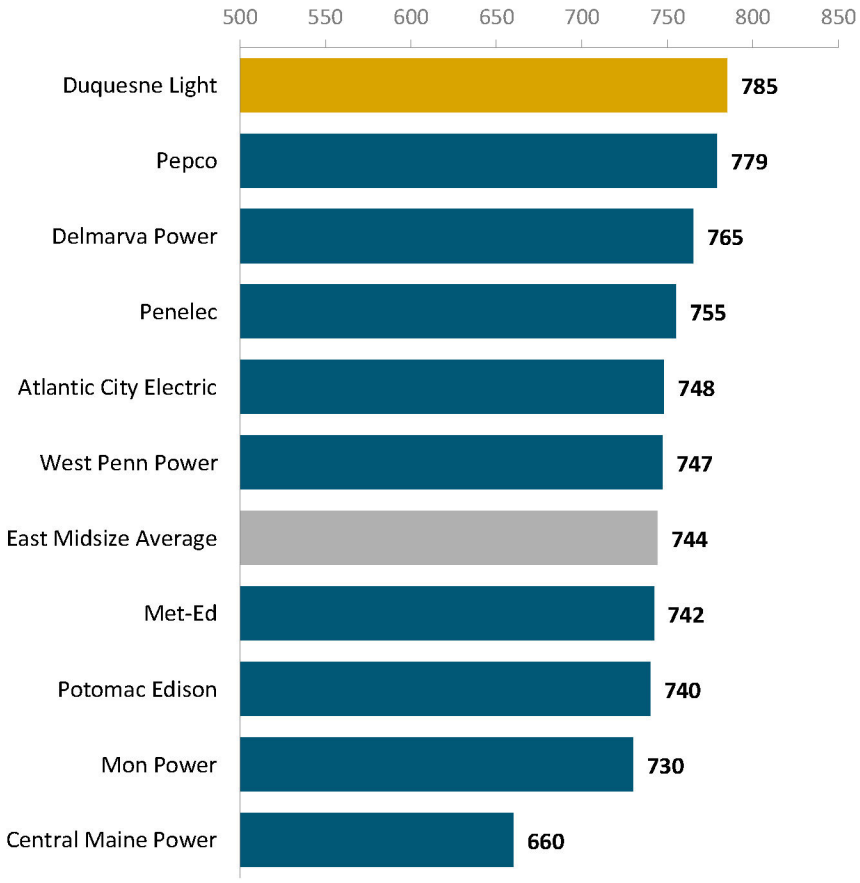


Source: J.D. Power 2018 Electric Utility Business Customer Satisfaction Study℠

J.D. Power
2018 Electric Utility Business Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
East Region: Midsize Segment

(Based on a 1,000-point scale)



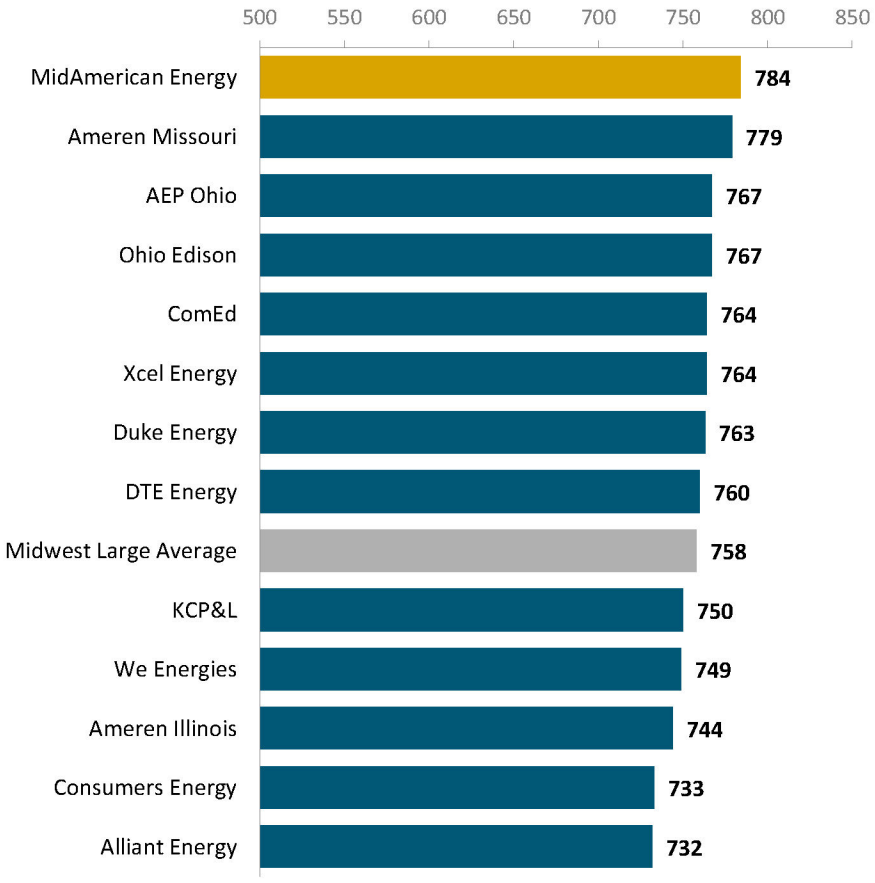
Note: Included in the study, but not ranked due to insufficient sample size, is Central Hudson and Green Mountain Power.

Source: J.D. Power 2018 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2018 Electric Utility Business Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
Midwest Region: Large Segment

(Based on a 1,000-point scale)

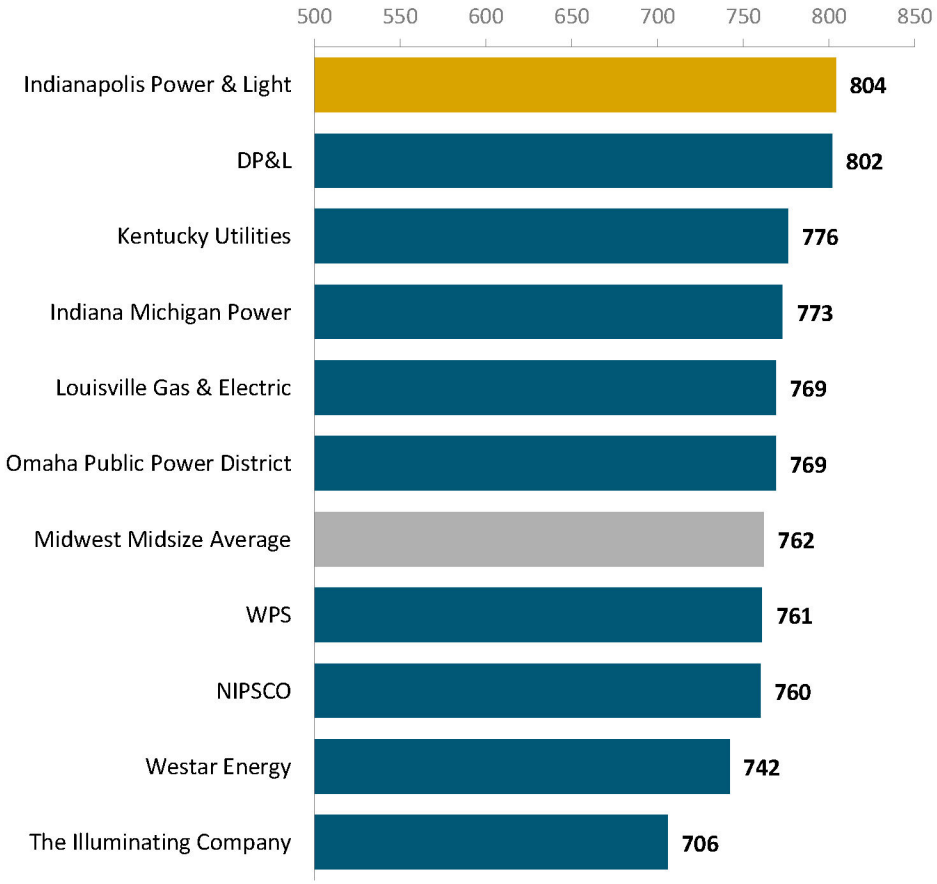


Source: J.D. Power 2018 Electric Utility Business Customer Satisfaction Study℠

J.D. Power
2018 Electric Utility Business Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
Midwest Region: Midsize Segment

(Based on a 1,000-point scale)

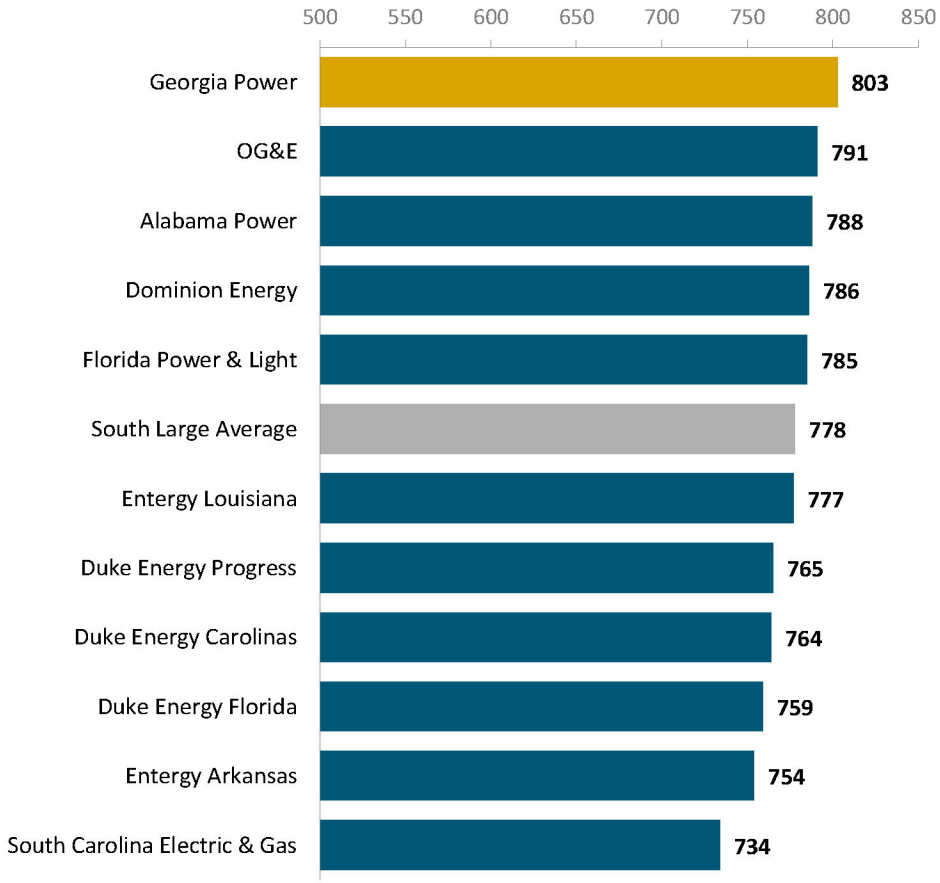


Source: J.D. Power 2018 Electric Utility Business Customer Satisfaction Study℠

J.D. Power
2018 Electric Utility Business Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
South Region: Large Segment

(Based on a 1,000-point scale)

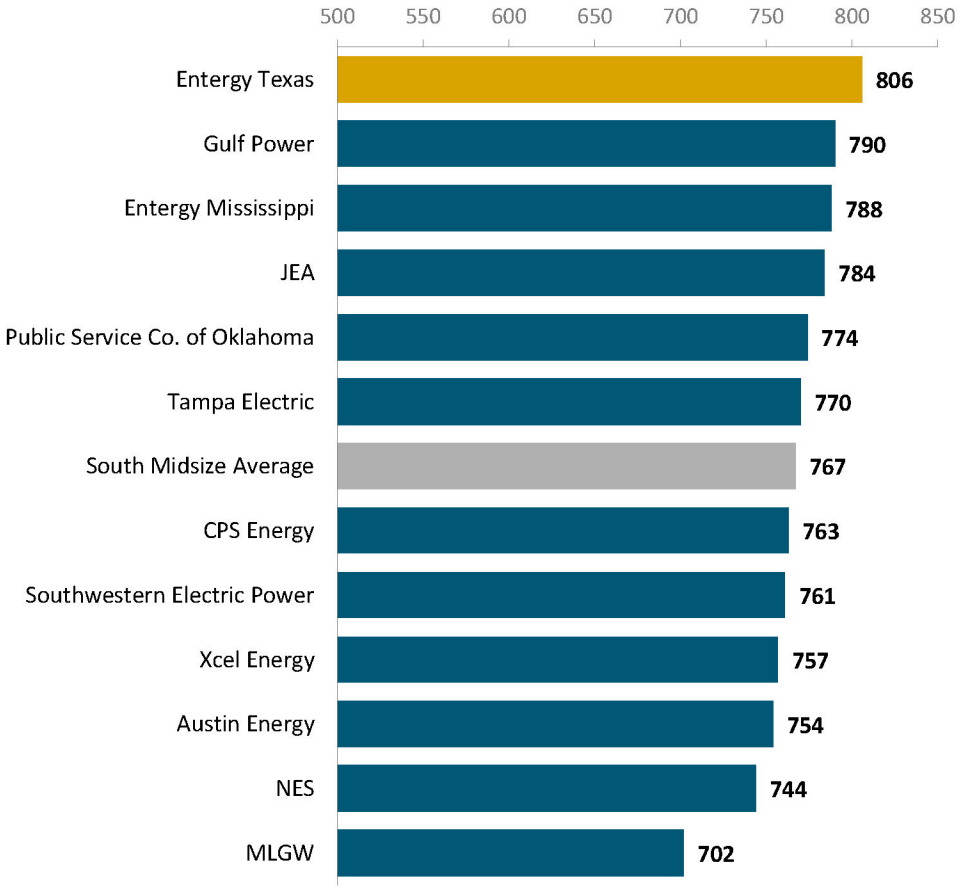


Source: J.D. Power 2018 Electric Utility Business Customer Satisfaction Study℠

J.D. Power
2018 Electric Utility Business Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
South Region: Midsize Segment

(Based on a 1,000-point scale)

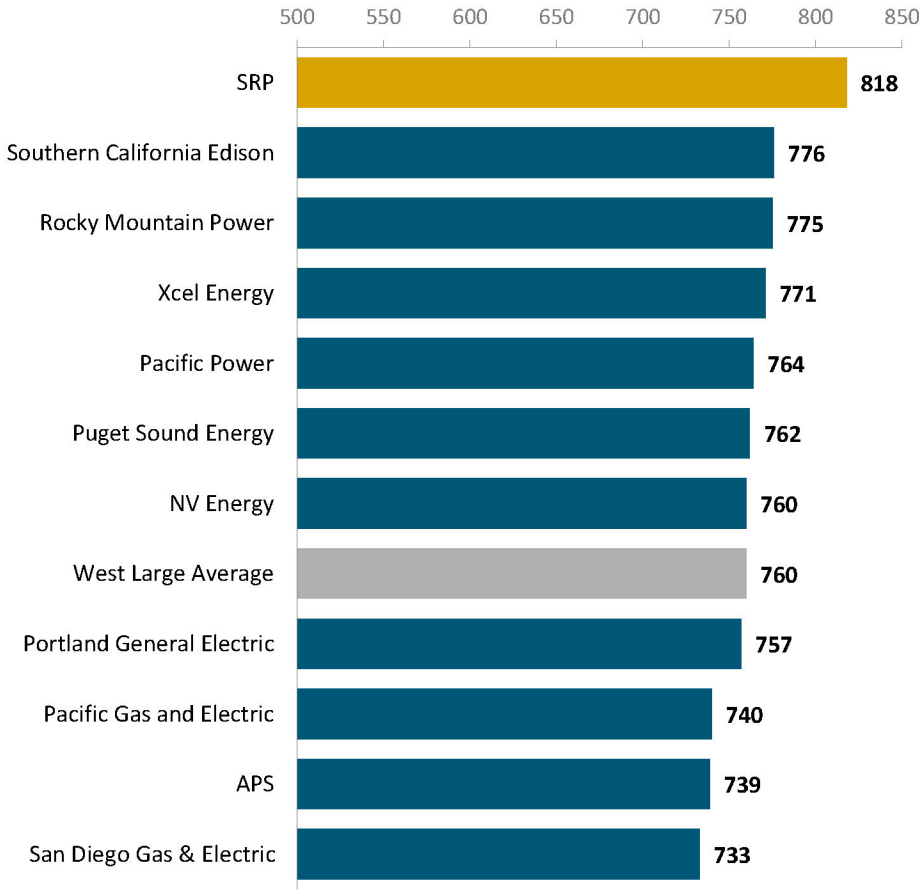


Source: J.D. Power 2018 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2018 Electric Utility Business Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
West Region: Large Segment

(Based on a 1,000-point scale)

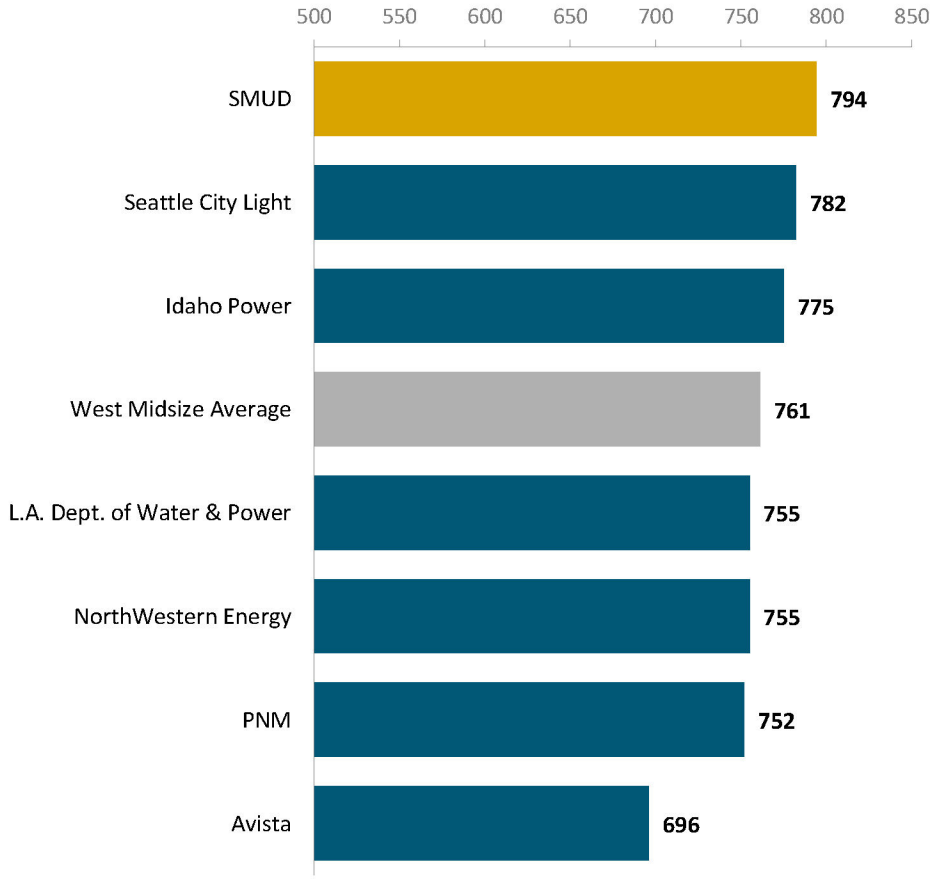


Source: J.D. Power 2018 Electric Utility Business Customer Satisfaction Study℠

J.D. Power
2018 Electric Utility Business Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
West Region: Midsize Segment

(Based on a 1,000-point scale)



Note: Included in the study, but not ranked due to insufficient sample size, is El Paso Electric.

Source: J.D. Power 2018 Electric Utility Business Customer Satisfaction Study[SM]

Electric Utility Residential Customer Satisfaction Increases in 2019, J.D. Power Finds

Increasing Customer Awareness of Community Involvement Key in Satisfaction

COSTA MESA, Calif.: 26 June 2019 — Overall customer satisfaction is up among electric utility residential customers in 2019, with the top utilities focusing their efforts on improving reliability and on communicating their ongoing community involvement efforts, according to the J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study.SM

"Utility customers want their power to stay on and to see their utility involved in their local communities and the top performers do an excellent job of both," said **John Hazen, Senior Director of the Energy Practice at J.D. Power**. "Many of the lower performing brands need to do a better job of communicating their community involvement efforts such as employee volunteering and local donations/sponsorships. This communication has shown to affect consumer awareness and satisfaction."

Study Results

- Cooperatives Segment: **GreyStone Power**
- East Large Segment: **PPL Electric Utilities**
- East Midsize Segment: **Delmarva Power**
- Midwest Large Segment: **MidAmerican Energy**
- Midwest Midsize Segment: **Kentucky Utilities**
- South Large Segment: **Georgia Power**
- South Midsize Segment: **EPB**
- West Large Segment: **SRP**
- West Midsize Segment: **Clark Public Utilities**

The 2019 Electric Utility Residential Customer Satisfaction Study is based on responses from 103,481 online interviews conducted from July 2018 through May 2019 among residential customers of the 142 largest electric utility brands across the United States, which represent more than 101 million households.

For more information about the Electric Utility Residential Customer Satisfaction Study, visit https://www.jdpower.com/business/resource/electric-utility-residential-customer-satisfaction-study.

See the online press release at http://www.jdpower.com/pr-id/2019100.

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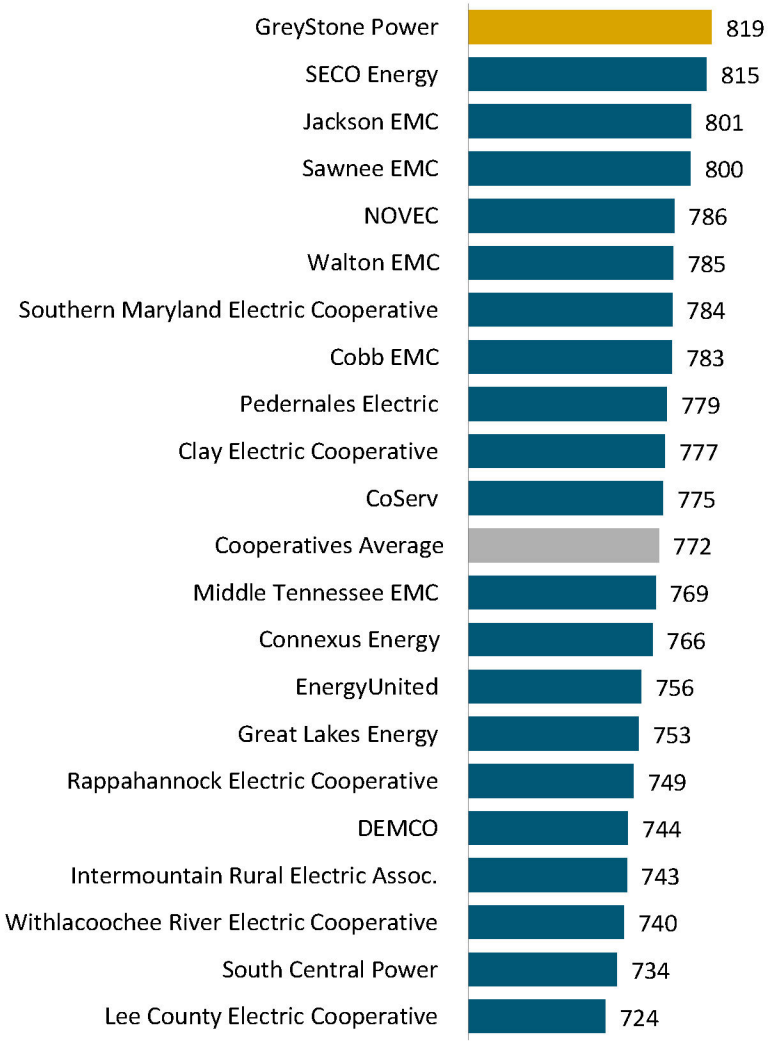
# # #

NOTE: Nine charts follow.

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study℠

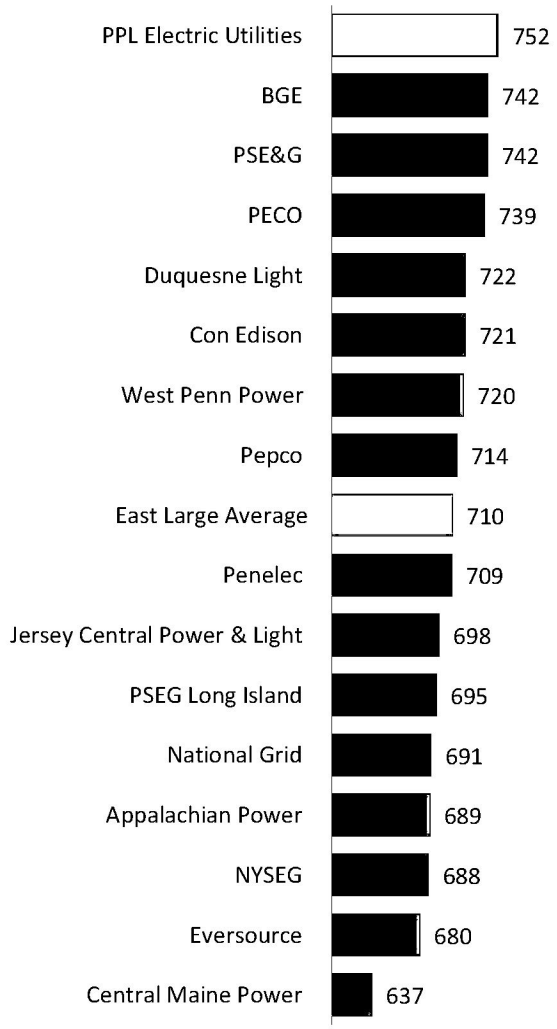
Customer Satisfaction Index Ranking
Cooperatives Segment
(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study℠

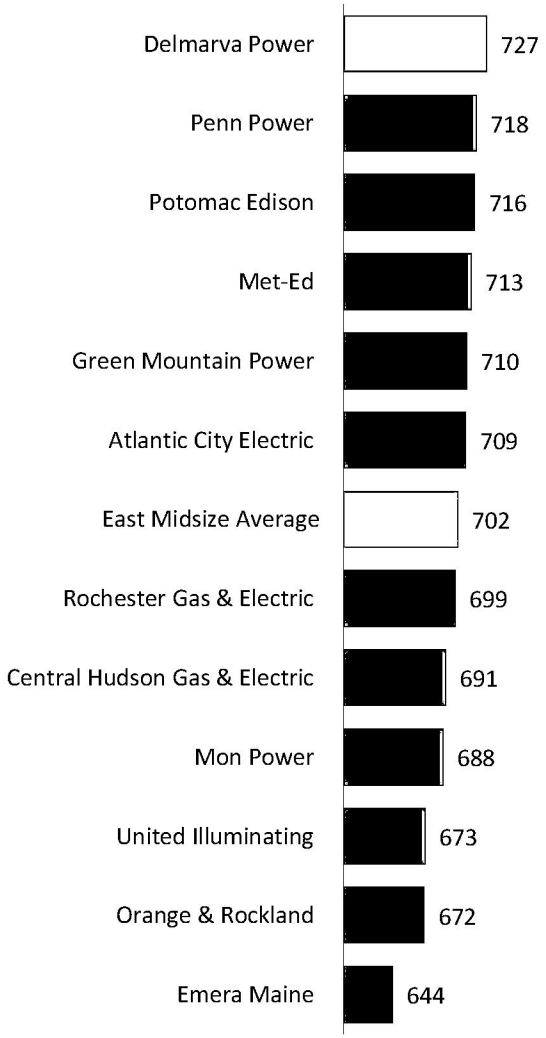
Customer Satisfaction Index Ranking
East Region: Large Segment
(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study[SM]

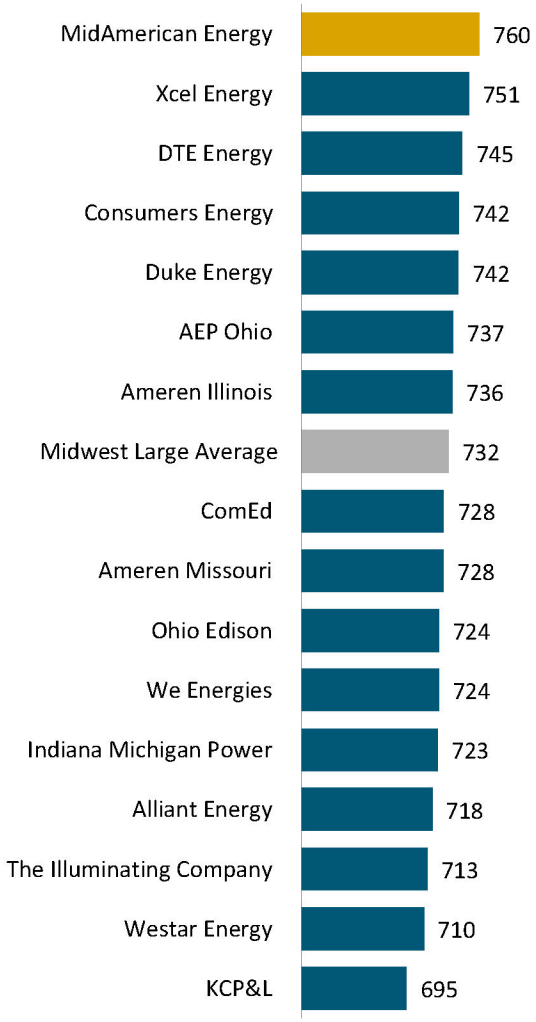
Customer Satisfaction Index Ranking
East Region: Midsize Segment
(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study[SM]

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
Midwest Region: Large Segment
(Based on a 1,000-point scale)

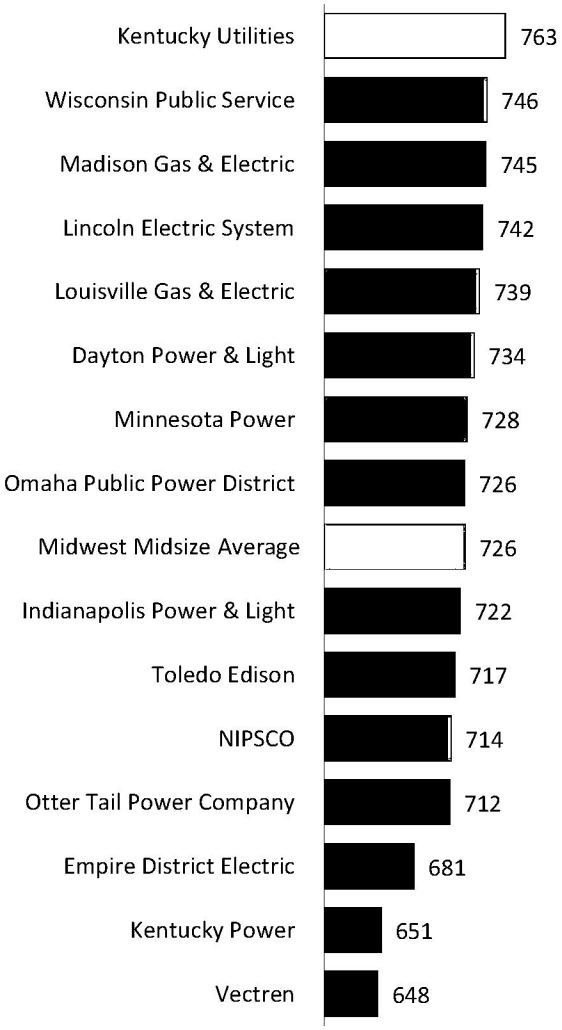


Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
Midwest Region: Midsize Segment

(Based on a 1,000-point scale)

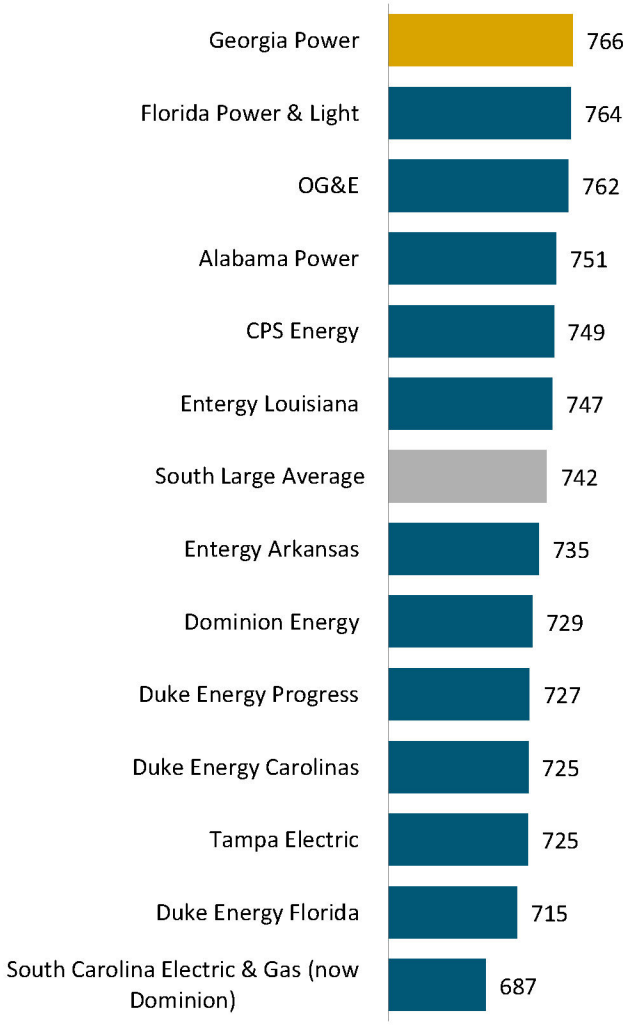


Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
South Region: Large Segment

(Based on a 1,000-point scale)

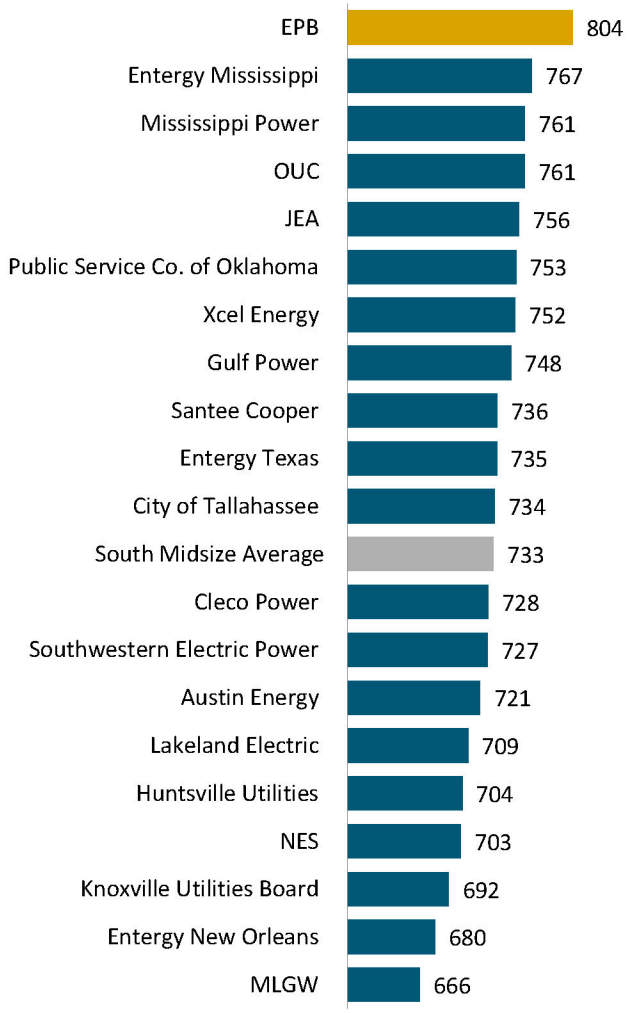


Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
South Region: Midsize Segment

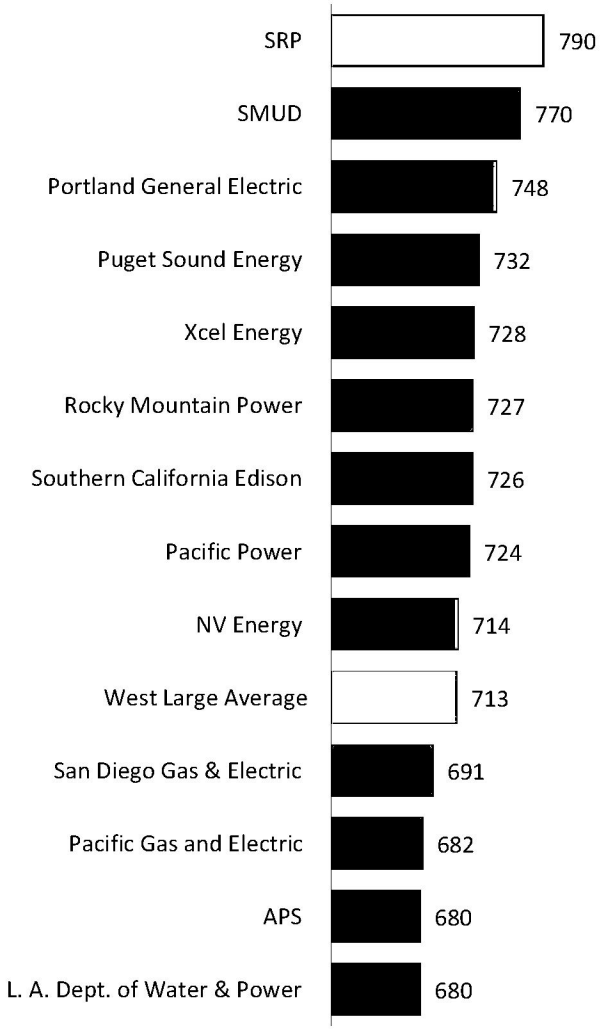
(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
West Region: Large Segment
(Based on a 1,000-point scale)

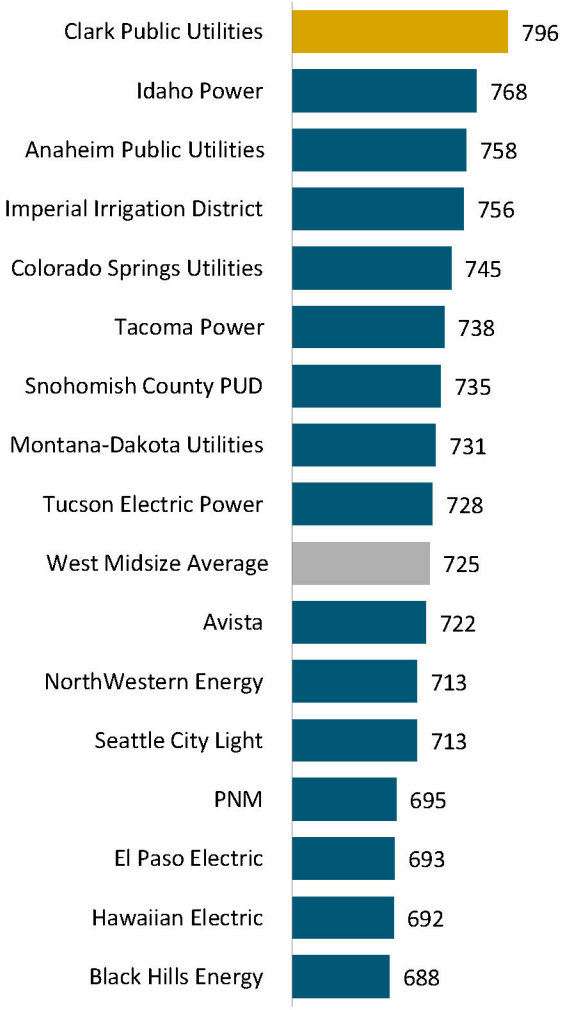


Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Residential Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
West Region: Midsize Segment

(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Residential Customer Satisfaction Study℠

Business Customer Overall Satisfaction with Electric Utilities Climbs, J.D. Power Finds

Biggest Gap in 13 Years between Highest-Ranked and Lowest-Ranked Utilities

COSTA MESA, Calif.: 13 Nov. 2019 — Overall business customer satisfaction with electric utilities has climbed significantly this year, but the gap between the highest-ranking and lowest-ranking utilities also has grown considerably. According to the J.D. Power 2019 Electric Utility Business Customer Satisfaction Study,[SM] released today, overall satisfaction has increased 18 points (on a 1,000-point scale), but the gap between the highest- and lowest-performing individual utility has increased to a 13-year high of 192 points.

"Electric utilities around the country have been ramping up their communications efforts, often addressing everything from mobile alerts about outages to updates on citizenship initiatives," said **Adrian Chung, Director, Utilities Intelligence at J.D. Power**. "Many top-performing utilities are getting that formula right, by visibly maintaining their infrastructure and leveraging technology to ensure businesses receive timely information needed to deal with outages and support decision-making. However, several utilities are still missing the mark by not focusing on these areas that drive customer satisfaction."

Following are some key findings of the 2019 study:

- **Business customer satisfaction surges:** Overall business customer satisfaction with electric utilities is 779, up 18 points from 2018, driven largely by improvements in communication and price. Proactive communication about power outages and estimated restoration times have played a key role in this increase, with overall satisfaction increasing 24 points when customers are alerted to an outage.

- **Awareness for infrastructure maintenance efforts boosts satisfaction:** Business customer satisfaction is 197 points higher when customers perceive their utility makes efforts to maintain their current infrastructure vs. those that are either unaware or perceive their utility does no maintenance. Amid continued global media attention on the recent Northern California wildfires, awareness regarding infrastructure maintenance is lowest among customers in the Western region of the United States.

- **Environmental initiatives generate low awareness—but positive effect—on customer perception:** Less than half of business customers of electric utilities are aware of their utility provider's efforts to improve their influence on the environment (44%) or protect and restore native fish and wildlife (30%). Yet when customers are awareness of both environmental initiatives, it is associated with a 200-point increase in the utility's corporate citizenship satisfaction score.

- **Business customers take advantage of utility online offerings:** Nearly three-fourths (72%) of business customers have an online account with their utility. Customers who engage online are more likely to leverage alert offerings, with 90% saying they have signed up to receive alerts related to outages, weather and billing as compared with just 60% for those without an online account.

Electric Utility Business Rankings

Within each of the four U.S. geographic regions included in the study, utility providers are classified into one of two segments: large (serving 85,000 or more business customers) and midsize (serving 40,000-84,999 business customers). The following utilities rank highest in business customer satisfaction in their respective region:

- East Large: **BGE**
- East Midsize: **Delmarva Power**
- Midwest Large: **MidAmerican Energy**

- Midwest Midsize: **Kentucky Utilities**
- South Large: **Georgia Power**
- South Midsize: **Entergy Texas**
- West Large: **SRP**
- West Midsize: **El Paso Electric**

The 2019 Electric Utility Business Customer Satisfaction Study, now in its 21st year, measures satisfaction among business customers of 87 targeted U.S. electric utilities, each of which serves more than 40,000 business customers. In aggregate, these utilities provide electricity to more than 12 million customers. Overall satisfaction is examined across six factors (listed in order of importance): power quality and reliability; corporate citizenship; price; billing and payment; communications; and customer service.

The study is based on responses from more than 21,000 online interviews with business customers that spend at least $200 a month on electricity. The study was fielded from February through October 2019.

See the online press release at http://www.jdpower.com/pr-id/2019218.

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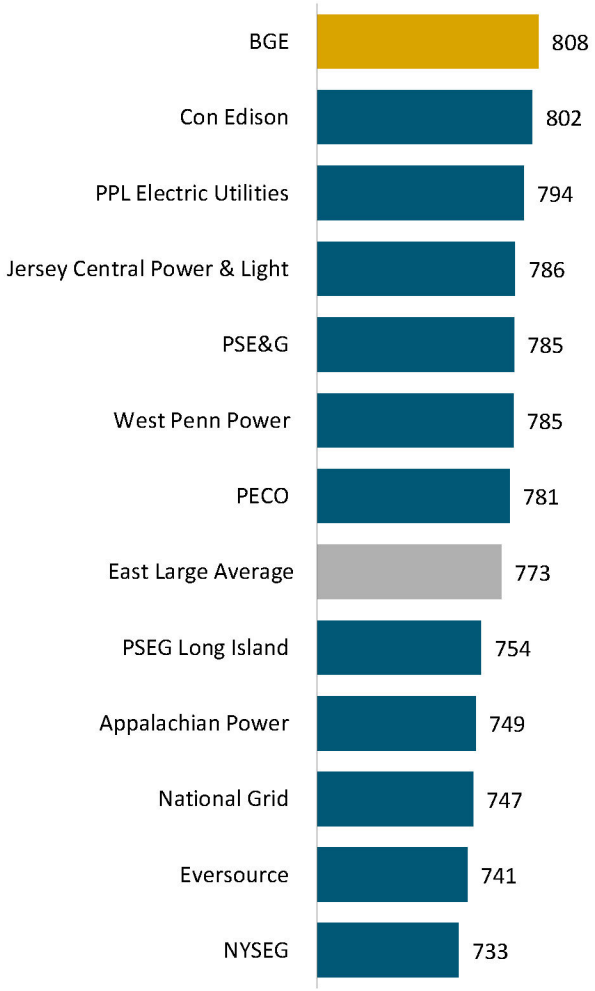
# # #
NOTE: Eight charts follow.

J.D. Power
2019 Electric Utility Business Customer Satisfaction Study℠

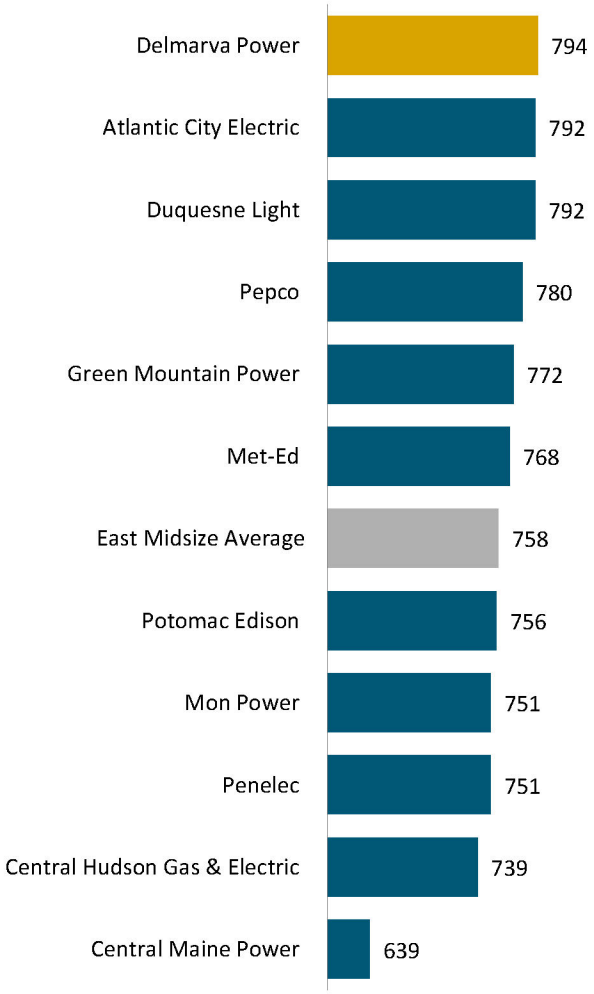
Customer Satisfaction Index Ranking
East Region: Large Segment
(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Business Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Business Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
East Region: Midsize Segment
(Based on a 1,000-point scale)

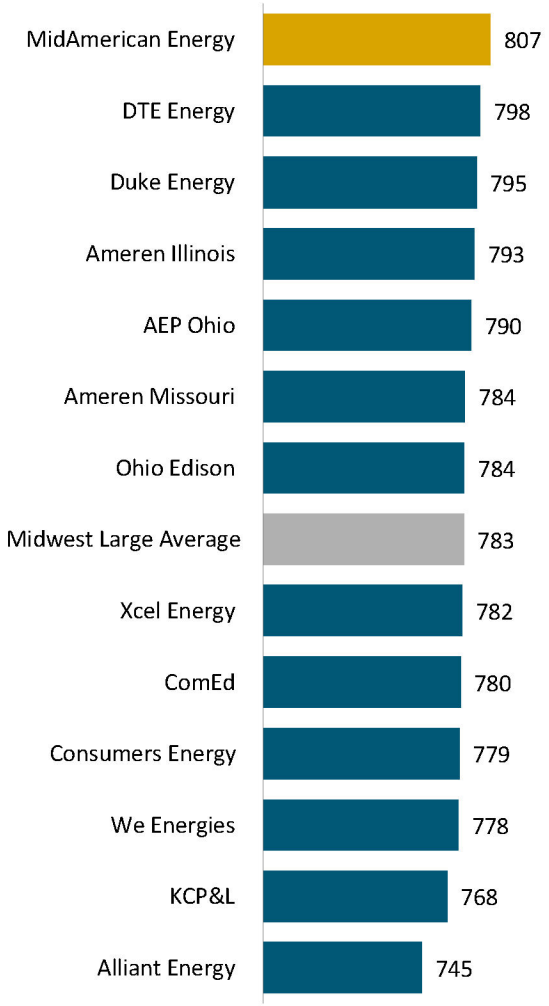


Source: J.D. Power 2019 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2019 Electric Utility Business Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
Midwest Region: Large Segment

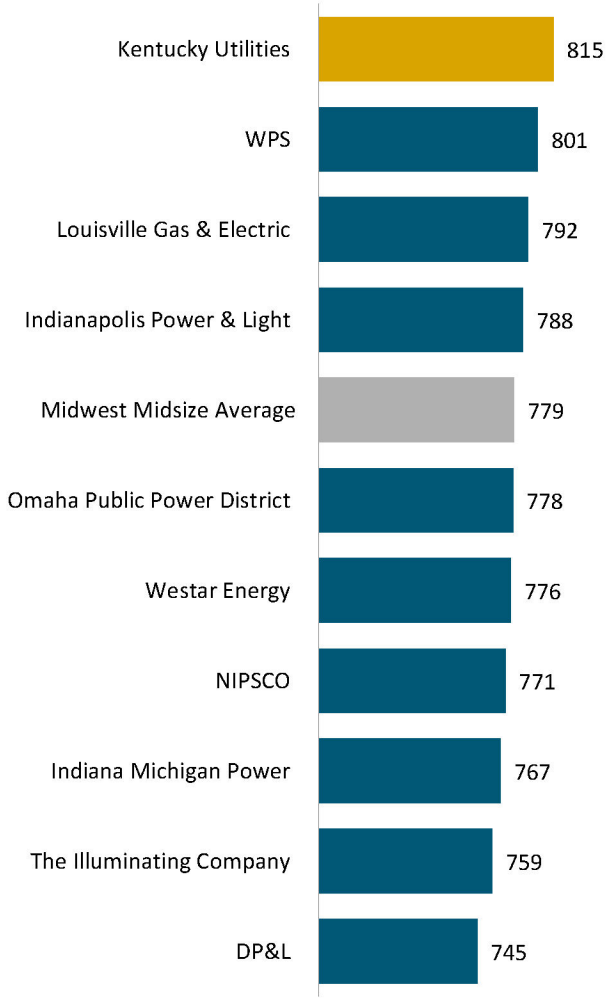
(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2019 Electric Utility Business Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
Midwest Region: Midsize Segment
(Based on a 1,000-point scale)

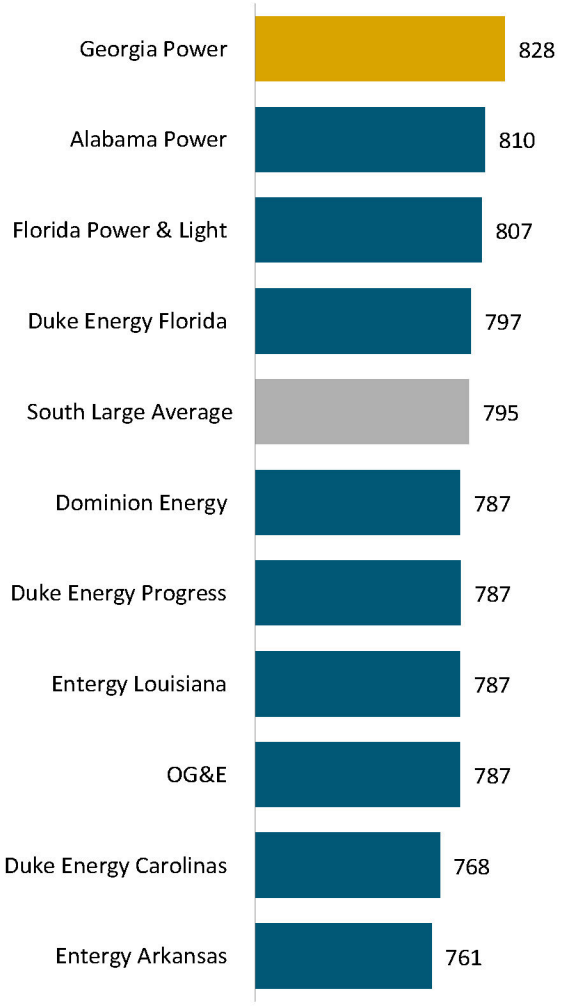


Source: J.D. Power 2019 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2019 Electric Utility Business Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
South Region: Large Segment

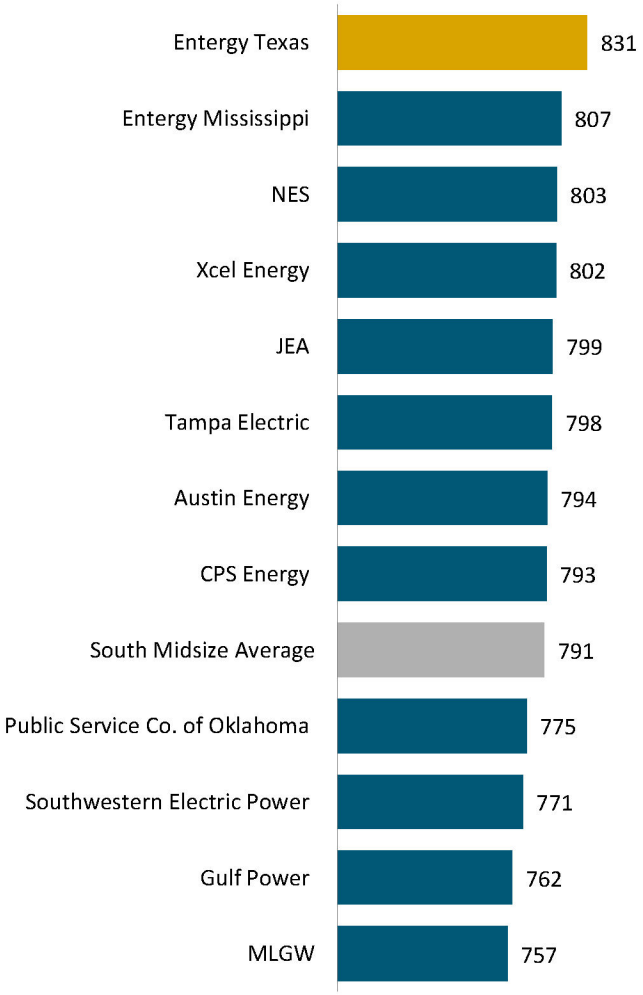
(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Business Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Business Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
South Region: Midsize Segment
(Based on a 1,000-point scale)

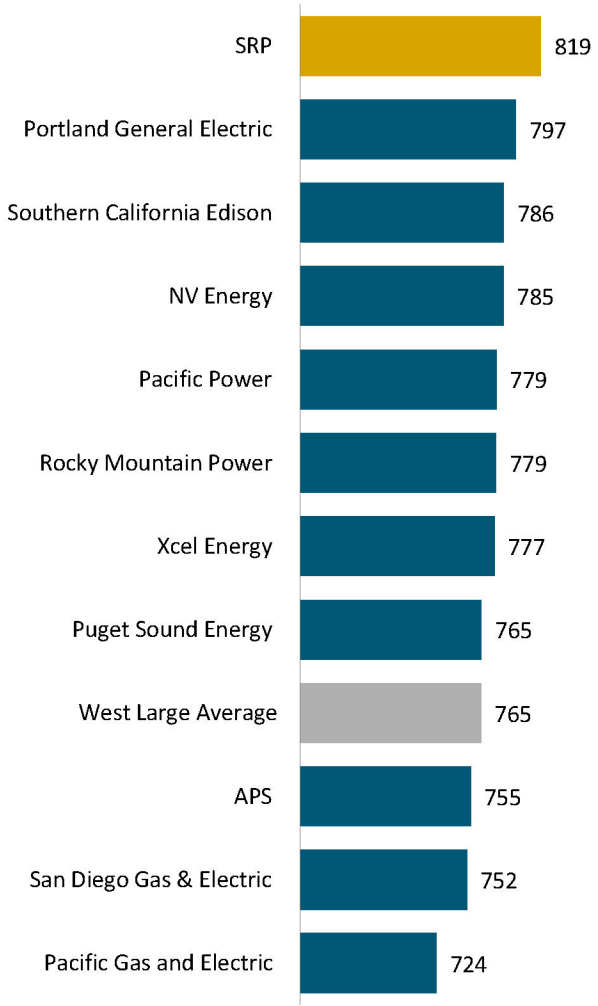


Source: J.D. Power 2019 Electric Utility Business Customer Satisfaction Study[SM]

J.D. Power
2019 Electric Utility Business Customer Satisfaction Study℠

Customer Satisfaction Index Ranking
West Region: Large Segment

(Based on a 1,000-point scale)

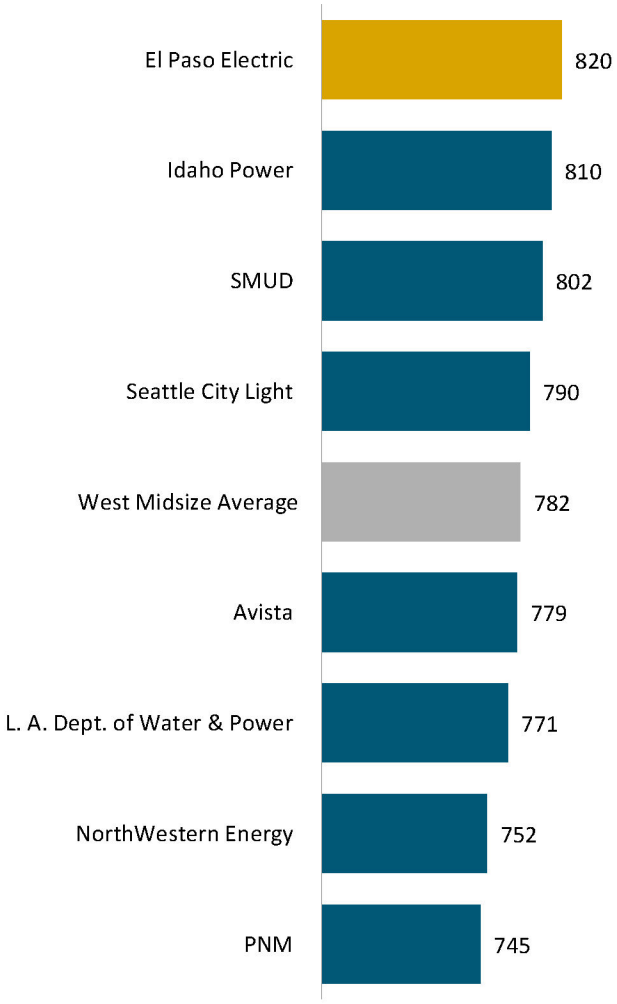


Source: J.D. Power 2019 Electric Utility Business Customer Satisfaction Study℠

J.D. Power
2019 Electric Utility Business Customer Satisfaction Study[SM]

Customer Satisfaction Index Ranking
West Region: Midsize Segment

(Based on a 1,000-point scale)



Source: J.D. Power 2019 Electric Utility Business Customer Satisfaction Study[SM]

Electric Utilities' Good Deeds—and Communication about Them—Pay Off During Pandemic, J.D. Power Finds

TROY, Mich.: 16 Dec. 2020 — Overall, electric utility residential customer satisfaction for the industry is high, especially for customers that are aware of payment deferment and other good deeds offered by their utility during the pandemic, according to the J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study,SM released today. Open and frequent communication about policies and assistance programs has proven to be key in maintaining high customer satisfaction, especially during the pandemic. Satisfaction among customers who are aware of assistance programs during the pandemic is 795 (on a 1,000-point scale) vs. 719 among those customers who were not aware.

"These satisfaction scores are evidence that kindness and being a good corporate citizen during challenging times is worth all the effort and communication that goes with it," said **John Hazen, managing director of utilities intelligence at J.D. Power**. "The challenge will come in 2021 as electric utility providers go back to business as usual and continue collections and shut-offs. The way to maintain higher satisfaction will be to continue to communicate when these changes will occur and provide excellent service."

Study Results

- East Large Segment: **PPL Electric Utilities** (for a ninth consecutive year)
- East Midsize Segment: **Rochester Gas & Electric**
- Midwest Large Segment: **MidAmerican Energy** (for a 13th consecutive year)
- Midwest Midsize Segment: **Kentucky Utilities** (for a fifth consecutive year)
- South Large Segment: **Florida Power & Light**
- South Midsize Segment: **EPB** (for a fifth consecutive year)
- West Large Segment: **SRP** (for a 19th consecutive year)
- West Midsize Segment: **Clark Public Utilities** (for a 13th consecutive year)
- Cooperatives Segment: **Sawnee EMC**

See the rank charts for each segment at http://www.jdpower.com/pr-id/2020169.

The 2020 Electric Utility Residential Customer Satisfaction Study is based on responses from 96,546 online interviews conducted from January through November 2020 among residential customers of the 143 largest electric utility brands across the United States, which represent more than 102 million households.

For more information about the Electric Utility Residential Customer Satisfaction Study, visit https://www.jdpower.com/business/resource/electric-utility-residential-customer-satisfaction-study.

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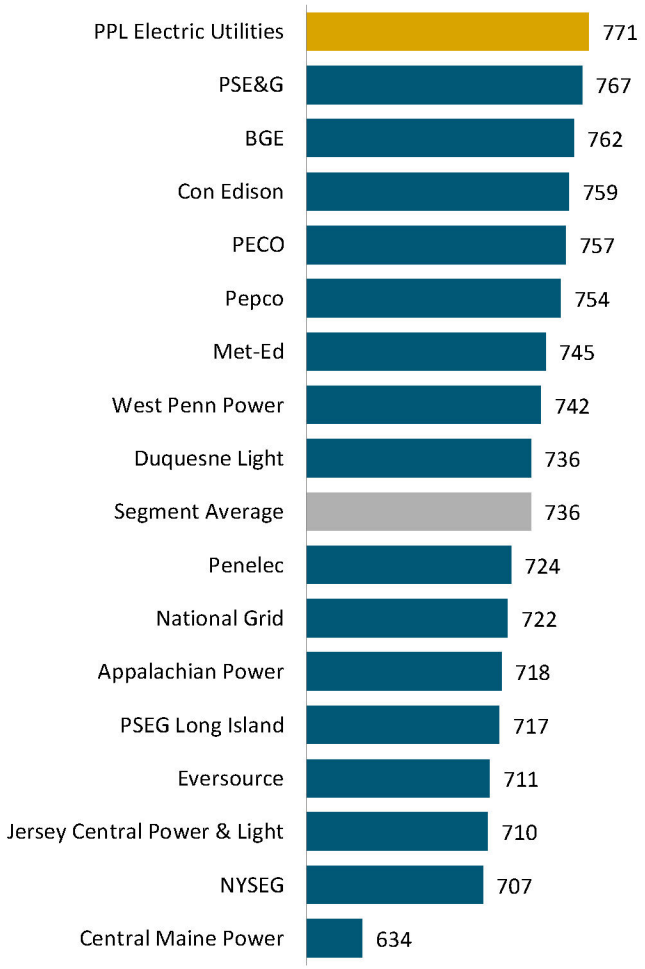
# # #
NOTE: Nine charts follow.

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study℠

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

East Large



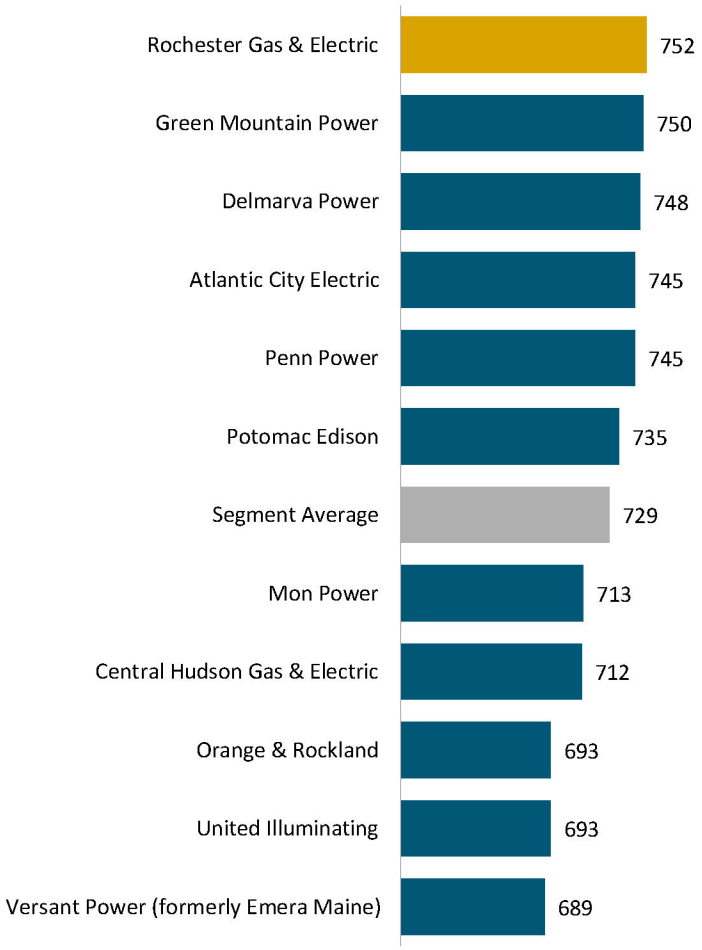
Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study℠

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

East Midsize



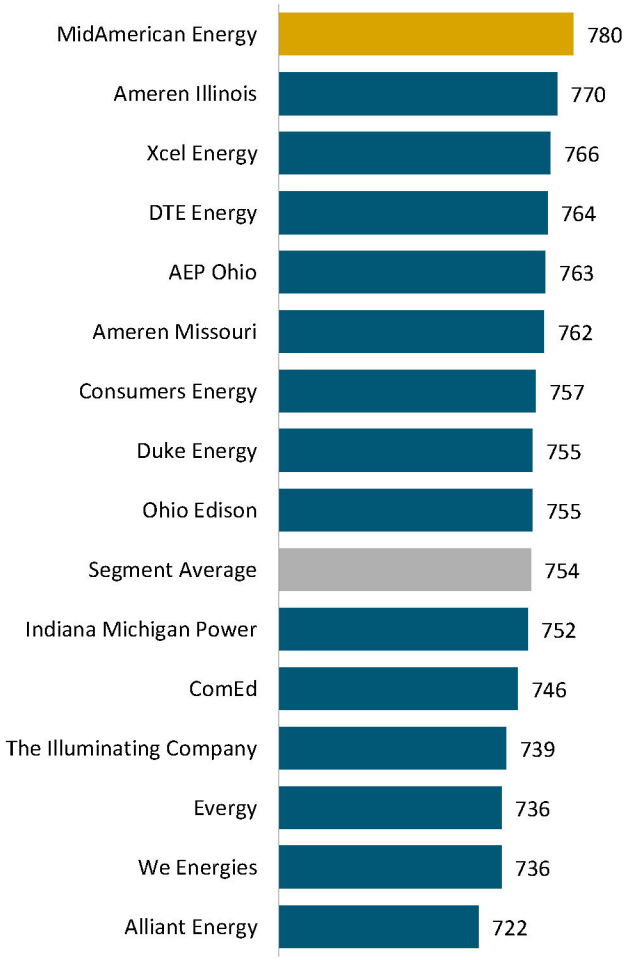
Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study℠

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

Midwest Large



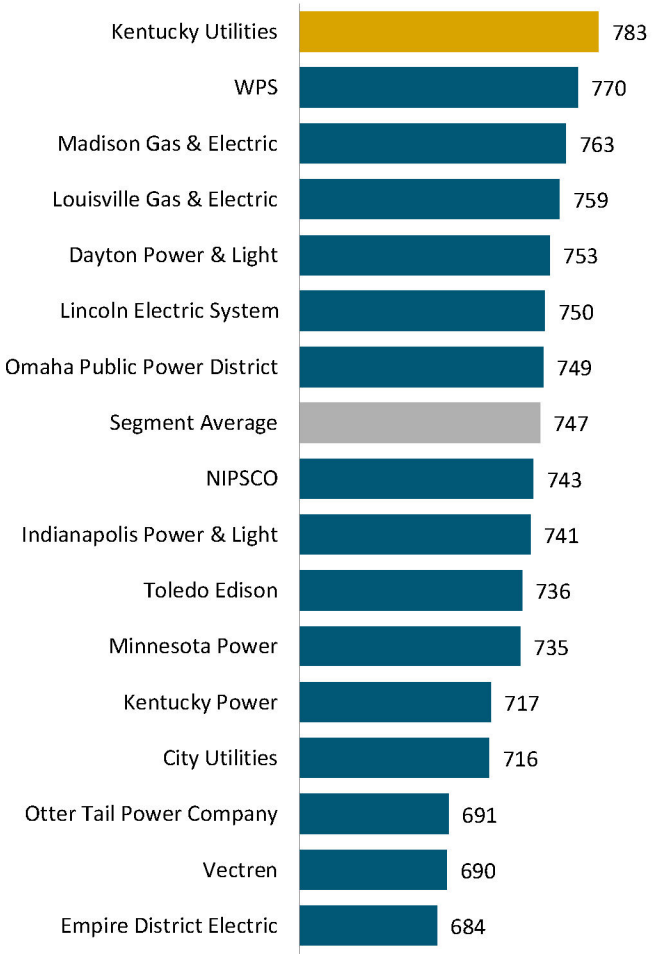
Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study℠

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

Midwest Midsize



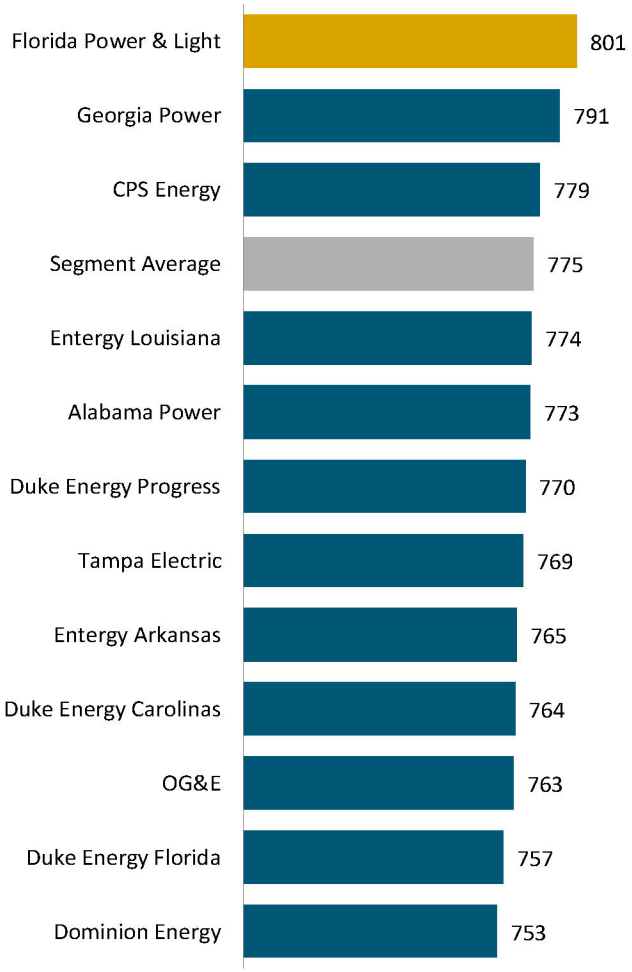
Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study℠

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

South Large



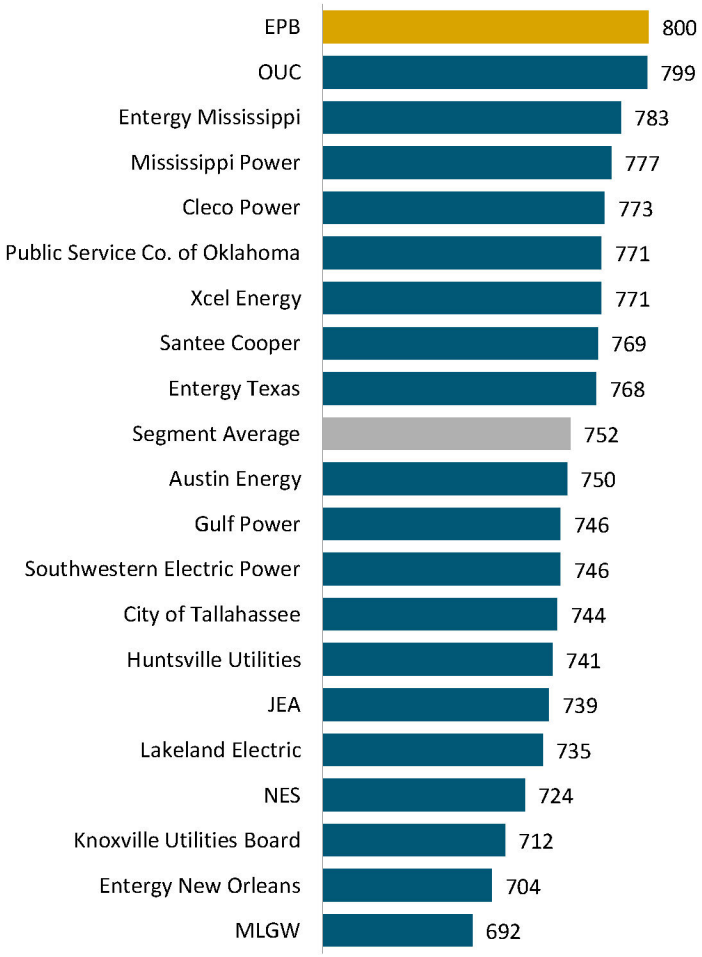
Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study℠

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

South Midsize



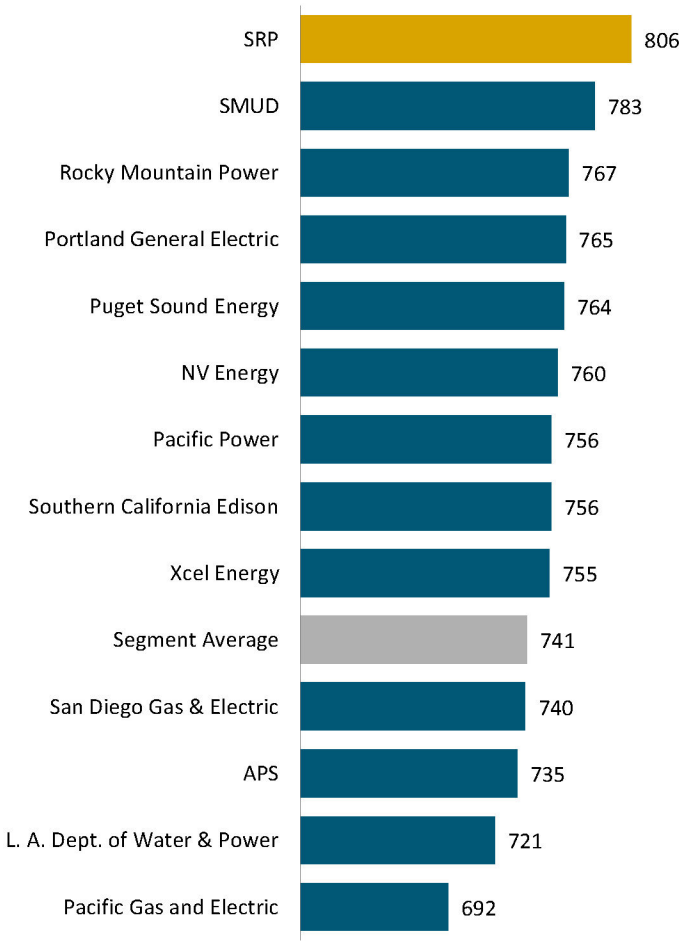
Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study℠

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

West Large



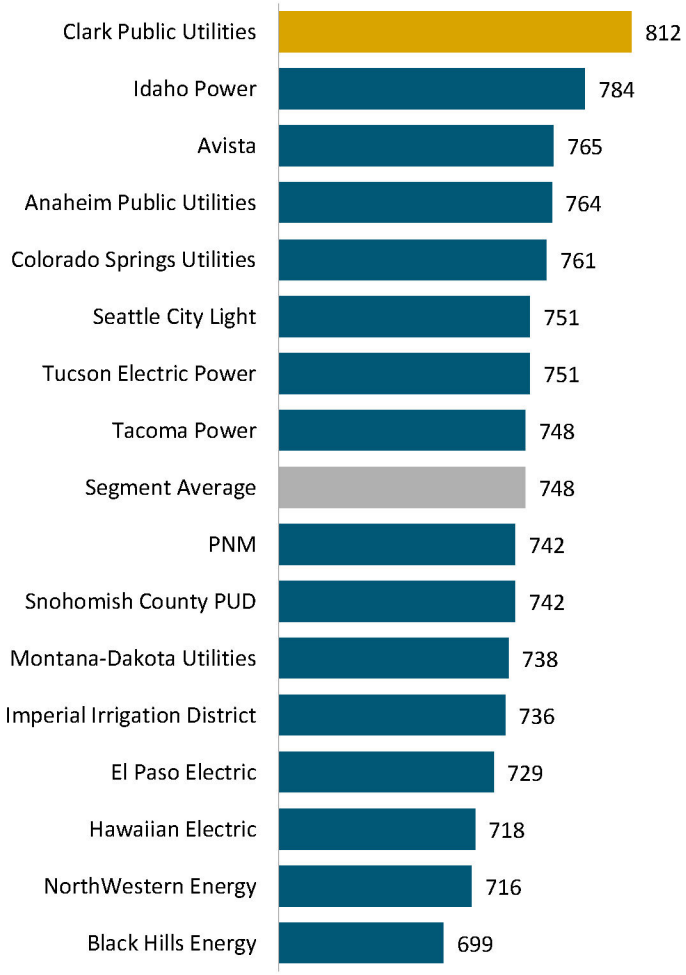
Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study℠

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

West Midsize



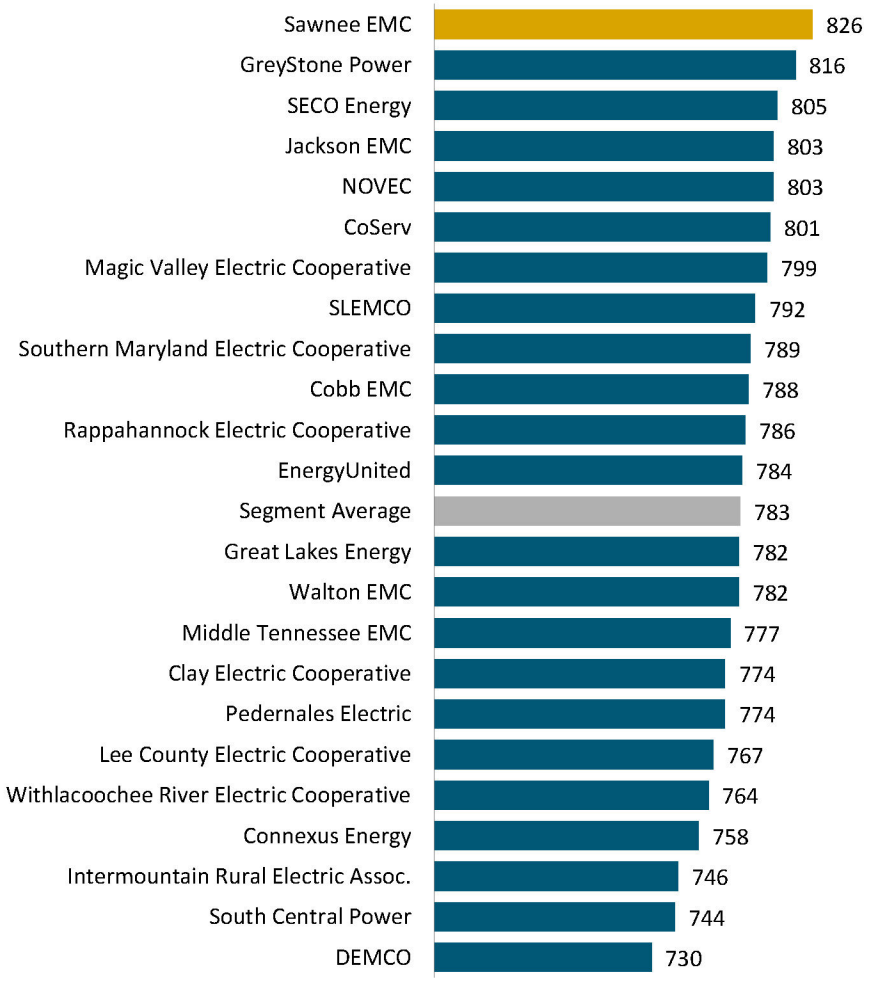
Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study℠

J.D. Power
2020 Electric Utility Residential Customer Satisfaction Study[SM]

Overall Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

Cooperatives



Source: J.D. Power 2020 Electric Utility Residential Customer Satisfaction Study[SM]

Small Business Customer Satisfaction with Electric Utilities Could Use Digital Charge, J.D. Power Finds

Effects of Pandemic on Their Business Leads to Lower Satisfaction Scores

TROY, Mich.: 18 Nov. 2020 — Overall business customer satisfaction with electric utilities has climbed this year, aided by record high reliability scores, but serious gaps in satisfaction exist between small and large businesses. According to the J.D. Power 2020 Electric Utility Business Customer Satisfaction Study,[SM] released today, satisfaction among large businesses has increased eight points (on a 1,000-point scale) during the pandemic but has declined 11 points among small businesses during the same period.

"While overall customer satisfaction remains high this year, it should be cause for concern that smaller businesses that have been more significantly affected by the COVID-19 pandemic are, in many cases, less aware of relief efforts and not receiving the same level of outreach as bigger businesses," said **Adrian Chung, director of utilities intelligence at J.D. Power**. "Peel back the layers of the data and it's clear that utilities need to fully leverage digital channels in an effective manner to engage with the broad population of small business customers."

Following are some key findings of the 2020 study:

- **Business customer satisfaction climbs:** Overall business customer satisfaction with electric utilities is 793, up 14 points from 2019, driven largely by improvements in customer contact and power quality and reliability. Nearly one-third (31%) of business customers say they received perfect power throughout 2020, up from 29% in 2019. Among those businesses that did experience an outage, 61% say they received some form of proactive communication from their utility.

- **Digital channels highly effective and most often used for connecting with utilities:** Overall satisfaction among business customers that interact digitally with their electric utility via website and mobile app is 26 points higher than among those that communicate primarily by phone. Most digital customers also say their utility is easy to do business with and is a valued business partner.

- **A performance gap:** Overall satisfaction among large businesses has increased eight points during the COVID-19 pandemic, while satisfaction among small and medium-sized businesses has declined during the same period. Small businesses posted the largest decline (-11 points) from the pre-pandemic period of Feb. 12-March 11 through the end of fielding in October. Small businesses in the study also cite increased financial stress during the pandemic, with 27% saying they are financially worse off now than before the pandemic.

- **Awareness of relief efforts:** Overall customer satisfaction is significantly higher (73 points) among the 64% of businesses that are aware of COVID-19-related relief efforts, such as late payment forgiveness, waived charges and fees and community support initiatives. However, 36% of business customers say they are unaware of these efforts.

Study Rankings

Within each of the four U.S. geographic regions included in the study, utility providers are classified into one of two segments: large (serving 85,000 or more business customers) and midsize (serving 40,000-84,999 business customers). The following utilities rank highest in business customer satisfaction in their respective region:

- East Large: **BGE** and **Con Edison** (tie) (BGE ranks highest for a fourth consecutive year.)
- East Midsize: **Pepco**
- Midwest Large: **Ohio Edison**
- Midwest Midsize: **Kentucky Utilities** (for a second consecutive year)
- South Large: **Georgia Power** (for a third consecutive year)
- South Midsize: **Southwestern Electric Power**
- West Large: **Idaho Power**
- West Midsize: **Seattle City Light**

The 2020 Electric Utility Business Customer Satisfaction Study, now in its 22nd year, measures satisfaction among business customers of 88 targeted U.S. electric utilities, each of which serves more than 40,000 business customers. In aggregate, these utilities provide electricity to more than 12 million customers.

Overall satisfaction is examined across six factors (listed in order of importance): power quality and reliability; corporate citizenship; price; billing and payment; communications; and customer contact. The study is based on responses from 18,457 online interviews of business customers in decision-making roles related to their utility company. The study was fielded from February through October 2020.

For more information about the J.D. Power Electric Utility Business Customer Satisfaction Study, visit https://www.jdpower.com/business/utilities/electric-utility-business-customer-satisfaction-study.

To view the online press release, please visit http://www.jdpower.com/pr-id/2020130.

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# # #
NOTE: Eight charts follow.