



With regard to the IOUs' codes of conduct, NCSEA states that Dominion North Carolina Power's (DNCP's), code of conduct defines "customer" as "any North Carolina retail electric customer of [DNCP]" and "customer information" as "[A]ny and all Customer specific information obtained and/or held by [DNCP]." Application for Authority to Amend Code of Conduct, Attachment 2, Sec. I, Docket No. E-22, Sub 380A (April 27, 2011).

The definition of "customer" is essentially the same in the code of conduct recently approved for Duke Energy Carolinas, LLC (DEC), and Duke Energy Progress, Inc. (DEP). However, the definition of "customer information" is more detailed.

Non-public information or data specific to a Customer or a group of Customers, including, but not limited to, electricity consumption, load profile, billing history, or credit history that is or has been obtained or compiled by DEC or PEC in connection with the supplying of Electric Services to that Customer or group of Customers.

Order Approving Merger Subject to Regulatory Conditions and Code of Conduct, Appendix A, Code of Conduct, Sec. I, Docket Nos. E-2, Sub 998 and E-7, Sub 986 (June 29, 2012).

NCSEA submits that testimony and statements made by DEC support NCSEA's contention that access to customer information is directly related to greater utilization of DSM/EE. NCSEA cites the following testimony by Theodore E. Schultz, DEC's Vice President of Energy Efficiency, regarding research conducted by DEC to determine why its customers were not taking full advantage of existing EE opportunities.

Most customers do not have the data, time or desire to evaluate efficiency options. . . . Research shows most customers are not aware of the positive impact their individual behaviors can have on the welfare of others on such issues as climate change or national energy independence... These challenges limit customer participation in energy efficiency programs, regardless of who develops, markets, or administers the programs. If we are to achieve widespread adoption of all cost-effective energy efficiency, these challenges must be addressed.

Testimony of Theodore E. Schultz, T, Vol. 3, pp. 13-14, Docket No. E-7, Sub 831 (June 29, 2008).

In addition, NCSEA cites this statement on DEC's website: "[C]onsumers want more information and control[.]"<sup>1</sup> Further, NCSEA discusses a 2012 resolution by the board of directors of the National Association of Regulatory Utilities Commissioners

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<sup>1</sup> Duke Energy Corporation, Frequently Asked Questions: Why is Duke Energy building a "smart grid?" (<http://www.duke-energy.com/about-us/smart-grid-faq.asp> viewed on January 9, 2013).

(NARUC) stating, among other things, that customers should know what account data is being collected by their utility and can benefit from having access to that data by using it to make decisions about their energy use. Resolution on Customer Data Collected by Utilities (July 25, 2012). The NARUC board concluded in pertinent part that a “need [exists] for utilities to disclose the information being collected” and “encourage[d] State public utility commissions to request that [their] utilities make energy usage data information available to utility customers . . . .” Id.

NCSEA states that it is important for the Commission to recognize that meter-level customer information can be made more accessible to customers and third parties, and building-level information can be made more accessible to local governments, researchers and owners of multi-tenant buildings. NCSEA further states that the current regulatory structure is antiquated and, thus, will not support full utilization of the information that the smart grid will make available to customers. For example, NCSEA points out that Commission Rule R8-51 is silent as to the provision of customer data in electronic form. Therefore, according to NCSEA Rule R8-51 should be amended to specify that customers own their energy consumption data, that the IOUs have certain rights to use the data, and that the IOUs must provide customers with electronic access to the data, including a timely stream of data when available based on meter technology. NCSEA discusses recent California and Colorado rules and Oklahoma legislation, and maintains that the Commission should consider these as models.

With regard to the disclosure of customer information to third parties, NCSEA submits that this is important because few customers have the time to digest and make use of the data themselves. Therefore, customers should be able to easily authorize a third party to serve as their proxy to access and analyze their data. NCSEA believes that a lack of clarity is the main impediment to disclosure of customer information to third parties, noting that Commission Rule R8-51 does not address this point and the IOUs' codes of conduct are not clear. For example, the DEC/DEP code states:

Customer Information shall not be disclosed to any person or company, without the Customer's consent, and then only to the extent specified by the Customer. Consent to disclosure of Customer Information to Affiliates or Nonpublic Utility Operations may be obtained by means of written authorization, electronic authorization or recorded verbal authorization upon providing the Customer with the information set forth in Attachment A; provided, however, that DEC and PEC retains such authorization for verification purposes for as long as the authorization remains in effect.

Order Approving Merger Subject to Regulatory Conditions and Code of Conduct, Appendix A, Code of Conduct, Sec. III.A.2, Docket Nos. E-2, Sub 998 and E-7, Sub 986 (June 29, 2012).

NCSEA states that the manner in which a customer can consent to disclosure of his usage information to a third party that is not a DEC/DEP affiliate or a nonpublic utility operation is unclear. It also notes that although two forms are attached to the code – one for customer authorization of disclosure to affiliates and one for disclosure to nonpublic utility operations – there is not a form for authorizing disclosure to other third parties. Further, it is unspecified whether such access can be accomplished electronically or orally. NCSEA again suggests Colorado’s rules as a model.

With regard to the disclosure of building-level customer information to third parties, NCSEA maintains that this is important because it is a critical step in cultivating research on DSM/EE resources. For example, it points to DEC’s request in 2011 to share its aggregated customer data with the City of Charlotte and UNC-Charlotte, indicating that it believed that their research will ultimately benefit citizens. Petition for a Limited Waiver of Code of Conduct Provisions, Docket No. E-7, Sub 997, at 6-7 (December 15, 2011). However, NCSEA believes that researchers seeking aggregated customer data are stymied by the IOUs’ codes of conduct, particularly the DEC/DEP code, which includes the phrase “group of Customers” in the definition of “customer information.” It is NCSEA’s understanding that DEC, DEP and the Public Staff interpret this phrase to prohibit the disclosure of aggregated data even when the data does not disclose personal or meter-level information, an interpretation that, at least in part, prompted DEC to file its application for the above mentioned waiver.

NCSEA states that irrespective of the IOUs’ and the Public Staff’s construction of the codes of conduct, the IOUs appear to regularly disclose information specific to a group of customers, without customer authorization or explicit waiver of their code provisions, in their annual DSM/EE cost recovery riders, including “[p]rojected North Carolina retail monthly kWh sales for the rate period for all industrial and large commercial accounts, in the aggregate, that” have opted-out. Commission Rule R8-69(f)(1)(vii). See Order Adopting Final Rules, Docket No. E-100, Sub 113, at p. 137 (February 29, 2008) (“the Commission does not intend for the electric public utilities to file customer-specific data, and concludes that the rule should be clarified such that the electric public utilities are only required to file aggregated sales data for the industrial and large commercial accounts that opt out”). In addition, NCSEA states that DEC appears to be disclosing aggregated consumption data when it permits customers to “[f]ind out how [their] home’s energy usage compares to similar homes in [their] area,” as part of its My Home Energy Report program approved by the Commission in Docket No. E-7, Sub 1015<sup>2</sup>. NCSEA states that DEP has a similar program in place. Also, DEP’s Solar Water Heating Pilot Program Final Report, filed in Docket No. E-2, Sub 937, appears to disclose aggregate data about the pilot participants. Finally, DEC’s “Powering Site Selection” presentation, on the second to last slide, accessible at

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<sup>2</sup> Duke Energy Corporation, We’ve Improved Duke Energy Online Services (accessed at <http://www.duke-energy.com/ols-preview-north-carolina-res.asp#> on January 9, 2013); see also Duke Energy videos accessible at [http://streams.duke-energy.com/products\\_services.aspx](http://streams.duke-energy.com/products_services.aspx) (viewed on January 9, 2013) and [http://www.youtube.com/watch?v=iGJm5JqgnQw&list=PL5D71D5E051E93FFA&index=11&feature=plpp\\_vidео](http://www.youtube.com/watch?v=iGJm5JqgnQw&list=PL5D71D5E051E93FFA&index=11&feature=plpp_vidео) (viewed on January 9, 2013).

<http://www.duke-energy.com/electricity101/> (viewed on January 2, 2013), provides “average” loads for McDonald’s restaurants and Wal-Mart stores.

NCSEA states that it understands the overriding importance of maintaining the privacy of customers' personal information in the absence of a disclosure authorization, but it is confident that the IOUs can disclose aggregated/de-identified data without endangering customers' personal information. It again cites rules in California and Colorado and a statute in Oklahoma as models, and notes further that Colorado’s rule addresses the issue of costs associated with requests for aggregated data.

Finally, NCSEA submits that the Commission has the authority under G.S. 62-31 and other provisions to adopt reasonable and necessary rules and code of conduct requirements regarding customer and third-party access to customer usage information.

On February 6, 12 and 26, 2013 and March 26, 2013, NCSEA filed numerous letters from various entities supporting its request for a rulemaking proceeding.

On July 22, 2013, NCSEA filed a Proposed Partial Order. The proposed order includes a proposed finding of fact reciting NCSEA's assertions about the shortcomings of Commission Rule R8-51 and the IOUs' codes of conduct. Further, it includes a proposed conclusion that the Commission should open a separate docket to consider revisions to Rule R8-51 and the IOUs' codes of conduct.

### Reply Comments

On March 5, 2013, reply comments were filed by DNCP, jointly by DEC and DEP (collectively, Duke), and jointly by Southern Alliance for Clean Energy (SACE), and Sierra Club. DNCP states that a rulemaking is not needed and that the expansion of access to customer data should be approached with caution. It further states that DNCP customers are provided access to their data on their paper bills, on the internet and by telephone. In addition, customers can give written consent to have their data released to a third party or obtain it themselves and provide it to a third party. However, a real time stream of data is not currently available to most of DNCP's North Carolina customers because they do not have automated meter technology.

Duke states that it has engaged in a dialogue with NCSEA and the Public Staff about NCSEA's concerns regarding access to customer data and would not object to a Commission rulemaking proceeding on the subject.

SACE and Sierra Club agree with NCSEA that access to customer data is a potential barrier to full utilization of DSM/EE and, therefore, they support initiation of a Commission rulemaking to examine the topic and make appropriate changes.

## Discussion

The Commission has carefully reviewed the provisions of the Commission's rules and the IOUs' codes of conduct regarding access to customer usage information. NCSEA asserts that these provisions are deficient because they do not require, or it is unclear as to whether they require, the IOUs to provide: (1) usage data more granular than monthly, (2) internet access to usage data, (3) a real time stream of data, (4) a means for customers to authorize third-party access to their usage data, and (5) disclosure of aggregated data to research institutions and local governments for research and educational use.

NCSEA requests that the Commission make three findings: (1) that there is a current inadequacy of access to customer information, (2) that this inadequacy is an impediment to greater utilization of DSM/EE, and (3) that it is appropriate to initiate a rulemaking to address the accessibility of customer data.

### Customer Access to Usage Information

With respect to the first finding requested by NCSEA, the Commission is not persuaded that there is a lack of access to customer information, for two reasons.

First, in 2009 the Commission reviewed the guidelines for access to electricity consumption data, among other things, in Docket No. E-100, Sub 123 (Sub 123). The Sub 123 docket was opened by the Commission in response to amendments to the Public Utility Regulatory Policies Act of 1978 (PURPA), made by the Energy Independence and Security Act of 2007 (EISA). The PURPA amendments included a requirement that state commissions consider adopting federal standards on smart grid implementation, cost recovery, usage data and environmental information. In the Sub 123 proceeding, the Commission received testimony, held a public hearing and received proposed orders.

One of the issues considered in the Sub 123 docket was the federal standard established by Section 1307 of EISA regarding smart grid information. As amended by EISA, PURPA Section 111(d)(19) sets forth the general federal standard for smart grid information.

All electricity purchasers shall be provided direct access, in written or electronic machine-readable form as appropriate, to information from their electricity provider as provided in subparagraph (B).

Section 111(d)(19)(B) states the details of the customer information to be provided, to the extent practicable. The information includes time-based electricity rates, with daily updates and day-ahead projections. Section 111(d)(19)(C) states that electricity purchasers shall have access to their usage information at any time on the internet, and other persons shall have access to usage information that is not specific to any customer.

On December 18, 2009, the Commission issued an Order Declining to Adopt Federal Standards in Sub 123. In Finding of Fact No. 12, the Commission stated:

The Commission declines to adopt the federal standard for smart grid information set forth in Section 111(d)(19)(A)-(C) of PURPA because the utilities are generally providing sufficient access to information regarding prices, usage, intervals and projections, and sources to their purchasers, and the Commission expects that access to increase as smart grid technologies are implemented.

In the discussion of the evidence supporting this finding of fact, the Commission cites testimony by the IOUs' and the Public Staff's witnesses regarding customer access to usage information. In summary, the testimony states that all of the IOUs' retail customers can access information about their rates, including time-of-use (TOU) rate schedules, accounts and individual usage on the internet. However, real time pricing (RTP), and RTP information is currently available only to commercial and industrial customers. Further, the testimony establishes that the IOUs will provide more detailed information and greater access to the information as the smart grid develops.

In its conclusion declining to adopt the PURPA smart grid information standard, the Commission stated:

[T]he Commission expects customer access to information to improve as smart grid technologies evolve, but it does not believe it is appropriate to formally adopt this federal standard to improve such access. The Commission encourages the utilities to investigate making real time pricing available to residential customers and updating TOU rates for all customers, as recommended by Public Staff witness Floyd.

Order Declining to Adopt Federal Standards, at 23.

With regard to TOU rates, the IOUs offer voluntary TOU rates to all customer classes. Customers who choose to participate in a TOU rate receive pricing and usage information that allows them to adjust their usage to avoid peak prices. Thus, customers who choose to invest their time in monitoring and understanding peak and non-peak dynamics have access to information that enables them to save energy and money.

On May 30, 2013, the Commission issued an Order Granting General Rate Increase in Docket No. E-2, Sub 1023. The Order included a requirement that DEP complete a study of TOU rate structures, including information about DEP's efforts to encourage customers to use TOU rates. The Order requires DEP to file a report on the study results within two years.

In the Sub 123 Order, the Commission also decided to open a separate docket, which was subsequently opened as Docket No. E-100, Sub 126 (Sub 126), to consider

amending Rule R8-60. After receiving comments and reply comments, the Commission issued an order on April 11, 2012, amending Rule R8-60 and adopting Rule R8-60.1.

Amended Rule R8-60 and new Rule R8-60.1 require the IOUs to file reports detailing their smart grid technology (SGT) plans every two years, beginning on October 1, 2014. Rule R8-60(i)(10) provides that SGTs in an IOU's plan may include those that "provide customers with usage information." Further, Rule R8-60.1(c) states that SGTs

[s]hall also include those that provide real-time, automated, interactive technologies that enable the optimization and/or operation of consumer devices and appliances, including metering of customer usage and providing customers with control options.

In addition, pursuant to Rule R8-60.1(c)(7) the IOUs' SGT plans must include

(7) A description, if applicable, of how the utility intends the technology to transfer information between it and the customer while maintaining the security of the information.

Rule R8-60.1(d) allows the parties to file comments and reply comments on the IOUs' SGT plans and gives the Commission discretion to schedule a hearing.

The second reason the Commission is not persuaded that there is an inadequacy of access to customer information is the clear intent of Commission Rule R8-51. The Rule is intended to provide individual customers full access to all customer usage information currently available from the IOUs. Moreover, the Rule states that its requirements are "[T]he minimum information which shall be provided." However, NCSEA asserts that there are two aspects of Rule R8-51 that render the Rule inadequate: (1) the Rule is silent as to the provision of customer data in electronic form, and (2) the Rule does not provide for a real time stream of data.

With respect to the first point, it is correct that the Rule does not require that customer data be provided in electronic form. Indeed, the Rule does not specify that customer information be provided in any particular format. Nevertheless, the Commission expects the IOUs to provide the information in the available format that is efficient and most convenient to the customer, whether that is on the bill, in a separate written document or on the internet. Further, as noted above the testimony in the Sub 123 docket establishes that all of the IOUs' retail customers can access information about their accounts, rates and individual usage on the internet. In its reply comments, DNCP states that its customers can obtain usage data on their paper bills, on the internet and by telephone.

With respect to NCSEA's second point, it is correct that the Rule makes no mention of a real time stream of data. On the other hand, it does not limit customer data to any particular time frame. Therefore, the Commission expects the IOUs to provide customer usage information in all available time segments, whether monthly, weekly or

daily. However, in its reply comments DNCP states that a real time stream of data is not currently available to most of DNCP's North Carolina customers because they do not have automated meter technology.

DEC and DEP do not address either of these points in their reply comments. However, the Commission is aware that DEC's and DEP's customers have some level of electronic access to information, as both DEC and DEP have web sites and offer their customers electronic billing and payment options. With regard to real time data, the Commission is aware that DEC and DEP, like DNCP, have not deployed smart meters on a wide spread basis in North Carolina. Rather, the use of smart meters has generally been limited to applications such as pilot projects. Nevertheless, NCSEA's contention that these points could be clarified is well taken. As a result, the Commission finds good cause to require that the IOUs provide responses to the questions in Attachment A to this Order regarding the means by which customers can receive their usage data and whether real time data is available.

#### Increase Utilization of DSM/EE

NCSEA requests that the Commission find that an inadequacy of usage data is an impediment to greater utilization of DSM/EE. As discussed above, the Commission is not persuaded, based on the usage data currently being collected and provided by the IOUs, that there is an inadequacy of data or a lack of customer access to the data. In addition, the Commission does not have sufficient facts, in this docket or otherwise, to find that improved access to customer usage data that is currently available or might be available in the future will produce more utilization of DSM/EE. Although it is reasonably likely that such a causal relationship exists in some degree, there are other variables as well. As DEC witness Schultz testified, some customers do not have the time or desire to study and implement energy efficiency measures. Further, some customers are not fully aware of the positive impact they can have through relatively small reductions in their on-peak usage or overall consumption of electricity. These energy efficiency barriers cannot be addressed solely by ensuring that additional customer usage data is available.

#### Third-Party Access to Usage Information

The third factor that NCSEA contends the Commission should address in a rulemaking is the availability of customer data to third parties, in two situations: (1) where the customer requests that the customer's individual usage data be provided to another person, and (2) where a third party seeks aggregate data, without individual identification information, to be used for research and other purposes.

With regard to the first point, NCSEA discusses the IOUs' codes of conduct provisions. Although the codes of conduct address the sharing of customer information with affiliates and nonpublic utility operations of the IOUs, they are not intended as guidelines for sharing customer information with other third parties. However, the Commission notes that the authorization forms attached to the DEC/DEP code include

the statement: “DEC/PEC will provide this [customer] data on a non-discriminatory basis to any other person or entity upon the Customer's authorization.” Similarly, DNCP states in its reply comments that customers can give written consent to have their data released to a third party. Thus, it does not appear that the IOUs' customers face an impediment to sharing their usage information with any person they desire, although the IOUs may be able to more readily facilitate the authorization for such sharing by creating a standard authorization form.

With regard to providing aggregate usage data to third parties, pursuant to Rule R8-60.1(c)(8) the IOUs' SGT plans must include

(8) A description, if applicable, of how third parties will implement or utilize any portion of the technology, including transfers of customer-specific information from the utility to third parties, and how customers will authorize that information for release by the utility to third parties.

NCSEA cites several situations in which it contends that the IOUs currently provide aggregate usage information without customer authorization or a waiver of code of conduct provisions. According to NCSEA, these include:

- (1) The IOUs' projected retail monthly kWh sales for industrial and large commercial customers that have opted out of participation in DSM/EE programs, pursuant to Commission Rule R8-69(f)(1)(vii).
- (2) DEC's and DEP's disclosures of aggregated consumption data as part of their home energy report programs.
- (3) DEP's Solar Water Heating Pilot Program Final Report, filed in Docket No. E-2, Sub 937 appears to disclose aggregate data about the pilot participants.
- (4) DEC's Powering Site Selection presentation states the average loads for McDonald's restaurants and Wal-Mart stores.

NCSEA Comments, at 24-25.

NCSEA states that these examples “serve only to emphasize the need for clarity surrounding what types of aggregated/de-identified data *can* be disclosed without customer authorization or waiver from a code of conduct, and what types *cannot* be disclosed.” NCSEA Comments, at 25 (emphasis in original). However, the Commission does not view these examples as creating a lack of clarity about instances in which the IOUs can and cannot disclose aggregated customer usage data.

With regard to the first example, the aggregated usage data is provided by the IOUs in compliance with Commission Rule R8-69(f)(1)(vii) as part of the Commission's

annual review of the IOUs' applications for cost recovery for DSM/EE programs. This information is necessary for the Commission's review. Further, the information is not specific to and does not identify any industrial or large commercial customer. Therefore, the IOUs do not need customer authorization or a waiver of code of conduct provisions in order to provide this information to the Commission. The Commission's rule requiring them to do so is clear authorization.

As to the second and third examples cited by NCSEA, the aggregate usage data is disclosed by the IOUs as part of the pilot home energy report and solar water heating EE programs approved by the Commission. Each of these programs was approved after the Commission considered their projected costs and benefits and determined that it was in the public interest to authorize their implementation as pilot programs. Therefore, the IOUs do not need customer authorization or a waiver of code of conduct provisions in order to provide this aggregate information to program participants and the Commission. The Commission's approval of the programs authorizing the IOUs to do so is clear authorization.

With regard to the fourth example cited by NCSEA, it appears that disclosure of this usage information about these identified customers, McDonald's restaurants and Wal-Mart stores, requires that DEC have the consent of these customers. Such authorization would provide a clear basis for DEC to use this information in this manner.

The Commission amended Rule R8-60 and adopted Rule R8-60.1 in April 2012 in anticipation that the IOUs' development of SGT will provide expanded customer usage information and perhaps require new guidelines for access to that information. However, there has been little change in the type or amount of usage information accumulated by the IOUs since that time. Thus, it is premature for the Commission to launch an investigation and rulemaking without sufficient details as to the consumption data that may be available in the future. For example, it is not known what types or points of aggregated data for retail customers will be available, or when such data will be available. Much depends on the decision of whether and when to employ automated meter technology or smart meters on a large scale. Prior to that decision, a Commission rulemaking on access to aggregate customer data would be less than well informed and perhaps an inefficient use of resources. Thus, the Commission is inclined to wait for the initial IOU SGT reports, which are to be filed on October 1, 2014.

### Conclusion

The Commission is persuaded that there may be a need for clarification of the manner in which Rule R8-51 and the IOUs' codes of conduct are applied in granting access to customer information. Therefore, the Commission requests that the IOUs provide detailed verified responses to the questions included in Appendix A attached to this Order. However, the Commission is not persuaded that it is appropriate at this time to initiate a rulemaking to address the accessibility of customer usage data. With the development of SGT, it is reasonably likely that the customer usage information available and the means by which customers and third parties access that information

will change. Thus, the Commission concludes that it is premature at this time to initiate a rulemaking to promulgate rules on these evolving subjects. Instead, it will be a more efficient use of time and resources to utilize the information provided in the IOUs' SGT plans to assist in determining whether a rulemaking is needed and, if so, the parameters of any proposed new rules. Thus, the Commission is inclined to allow the IOUs to address these issues in their SGT reports to be filed on October 1, 2014. Those reports should provide information about the customer usage data currently being collected and contemplated to be collected. Given that information, the Commission and parties will be better equipped to address the need for new guidelines for access by customers and third parties to this information.

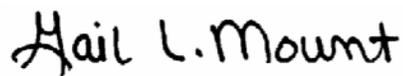
IT IS, THEREFORE, ORDERED as follows:

1. That on or before September 23, 2013, DEC, DEP and DNCP shall file verified responses to the questions in Attachment A to this Order.
2. That the request by NCSEA to initiate a rulemaking regarding access to customer usage information shall be, and is hereby, denied without prejudice to NCSEA or another party to renew such request at a later time.

ISSUED BY ORDER OF THE COMMISSION.

This the 23<sup>rd</sup> day of August, 2013.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in black ink that reads "Gail L. Mount". The signature is written in a cursive, slightly slanted style.

Gail L. Mount, Chief Clerk

Commissioner Don M. Bailey did not participate in this decision.

Bh082313.04

## ATTACHMENT A

1. State the details of all historical customer usage information that is regularly provided on retail customers' bills, including the time periods or blocks in which the information is provided and the data that is provided.
2. Describe in detail all customer usage information that is available to your retail customers.
3. State the details of the modes (internet, email, telephone, letter) that retail customers can utilize to request and receive their usage information.
4. State the details of the modes by which retail customers can authorize the release of their usage information to a third party and the modes by which the third party can receive the information.
5. Does your company have a standard form that retail customers can sign to authorize the release of their usage information to a third party? If so, please attach a copy of the form to your responses.
6. State whether your company provides real time pricing and/or real time data streaming to its retail customers. If so, provide the details of the customer classes to which this information is provided, the applicable tariffs, the data that is available, the modes that customers can utilize to request and receive such data, the frequency with which the data is available (every minute, 15 minutes, hour, etc.), and the time periods or blocks in which the data is provided.