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July 22, 2022

VIA ELECTRONIC FILING

Ms. Shonta Dunston
Chief Clerk
Office of the Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: Docket E-100, Sub 161

Dear Ms. Dunston:

In accordance with the North Carolina Utilities Commission's April 22, 2022 Order, as amended, authorizing the filing of Supplemental *Comments*, please find the Mission:data Coalition's Supplemental Comments to be filed in the above-referenced docket. By copy of this letter, all parties of record are being served.

/s/
Kurt J. Olson, Esq.
Counsel for
Mission:data Coalition

cc: Counsel of Record

OFFICIAL COPY

JUL 26 2022

DOCKET NO. E-100, SUB 161
BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of:	)	
	)	SUPPLEMENTAL RESPONSE TO ORDER
Commission Rules Related	)	REQUIRING FILING OF SUPPLEMENTAL
To Customer Billing Data	)	COMMENTS
	)	
	)	

Pursuant to the North Carolina Utilities Commission’s (“Commission”) April 22nd, 2022 *Order Requiring Filing of Supplemental Comments* (the “April 22nd Order”) as amended, the Mission:data Coalition (“Mission:data”) hereby files the supplemental comments set forth below. Mission:data respectfully requests that the Commission consider and approve the proposed data privacy and data access rule Mission:data submitted with its prior comments filed on July 17, 2020 in the present docket.

Introduction

The Commission’s April 22nd Order encouraged Duke Energy Carolinas, LLC (“DEC”), Duke Energy Progress, LLC (“DEP”), Dominion Energy North Carolina (“DENC”), the Public Staff and intervenors to file supplemental comments on a variety of matters including developments in customer access and authorized third party access to energy information held by utilities, the manner in which the requested information is communicated to customers or authorized third parties, and other relevant data access developments that have occurred since the last filing of comments on these and other issues.¹ As described below, Mission:data is aware of several important developments relevant to these matters. Notably, several recent advances in other jurisdictions highlight how energy

¹ Order at 6.

information and related data should be delivered to customers and customer-authorized third parties in order to maximize consumer benefits.

Since the last activity in this docket, several new best practices have emerged regarding third-party data access. Those best practices include (1) providing complete datasets; (2) performance and uptime requirements to ensure accountability; (3) centralization via a single application programming interface (“API”); and (4) centralized registration of third parties. Our comments below are organized around those four topic areas. Mission:data requests that these best practices be incorporated into any rule that is ultimately adopted by the Commission.

1. Complete Datasets

On February 10, 2020, Mission:data and the North Carolina Attorney General’s Office (“AGO”) submitted a draft data privacy and data access rule, proposed rule “Rule R8-51”, with their initial comments in this docket for the Commission’s consideration (the “Draft Rule”). As proposed in the Draft Rule, customers have the ability to direct their utility to transmit “standard customer data” to a third party of the customer’s choosing. “Standard customer data” is defined in Section (a)(8) of the Draft Rule as follows:

(8) “Standard customer data” means

- (i) all energy usage data collected by a meter that a utility maintains as part of its regular records in the ordinary course of business, including kilowatt-hours used, load profile, and, where applicable to certain rate classes, kilo-volt-amps, kilo-volt-amperes-reactive, power factor, and the like;
- (ii) customer-specific information including customer name, mailing address, premise address, any contact information, payment history, account number(s), and all information on bills including, but not limited to, line-item charges and charge descriptions, amounts billed, the rate or tariff applicable to the account or meter, billing cycle dates, etc.; and
- (iii) any information that might be necessary for participation in, or to determine customer eligibility for, bill payment assistance, renewable

energy, demand-side management, load management, or energy efficiency programs.

As defined in the proposed rule, “standard customer data” would not include unshareable personal data.

While Mission:data believes the proposed definition of “standard customer data” remains a good one, recent experience suggests that additional detail would be helpful to regulated utilities in planning their information technology (“IT”) systems, and to the Commission as an aid to its decision-making. For example, in New Hampshire, Mission:data was a party to comprehensive negotiations and a final agreement, approved by the New Hampshire Public Utilities Commission on May 5, 2022, that defined 33 specific types of customer data that are to be made electronically shareable with users and designated third-parties. A majority of the data types were mapped to the Green Button Connect My Data (“GBC”) standard, which has the advantage of assisting the utilities in scoping out their IT business requirements. In addition, not only was this level of detail helpful to the New Hampshire utilities’ planning efforts, but it also gave third parties confidence that the information ultimately made available would be sufficient for energy management and bill management purposes. After all, it would be an inefficient use of resources for a utility to invest in a data-sharing platform only for third parties to realize, at the end of the process, that key pieces of data were missing. The specific data set, attached hereto as Attachment 1, helps resolve that concern and Mission:data encourages the Commission to evaluate and ultimately to adopt this standard.

Furthermore, in July 2021, a Washington, D.C. working group consisting of utilities, consumer advocates, energy management companies, and Public Service Commission staff

unanimously recommended the same data set to the Public Service Commission, which then approved the data set in an order dated September 9, 2021. The order requires PEPCO, the area utility, to provide the information to customer authorized parties. The Washington, D.C. Public Service Commission stated: “[T]he Commission determines that the [recommended] data fields . . . should be the data fields used to implement the District CMD [*Green Button Connect My Data*] platform.”² The data fields adopted in that case are identical to those identified in Attachment 1 hereto.

Mission: data requests that the Commission, after reviewing reply comments from parties, incorporate the data types defined in Attachment 1 into the Draft Rule’s definition of “standard customer data.” If additions or amendments are required to accommodate billing or metering practices unique to North Carolina, then the parties’ reply comments should address those issues for Commission consideration.

2. Performance and Uptime Requirements to Ensure Accountability

A second significant development over the past two years was the adoption and implementation in a number of jurisdictions including California, New Hampshire, New York and Ohio, of metrics or standards aimed at holding utilities accountable for the operational performance of their GBC data-sharing platforms. Unfortunately, the evidence reported over the past few years tends to show that it is insufficient for a state commission to merely mandate that a utility provide a GBC platform. Instead, the commission must go further and specify the performance characteristics it expects, and specifically define metrics used to evaluate performance over time.

² Order No. 21013, Formal Case No. 1130, *In the Matter of the Investigation Into Modernizing the Energy Delivery System for Increased Sustainability*. Washington, D.C. Public Service Commission. September 9, 2021 at 8. Available at <https://edocket.dcpSC.org/apis/api/Filing/download?attachId=140983&guidFileName=e790ade0-1691-4b7c-b099-2ce3853158c8.pdf>

For example, in California, a formal complaint alleging data failures by Southern California Edison currently is pending before the state utilities commission.³ In that case, the utility provided a data-sharing system pursuant to commission orders; however, according to a local demand response provider, the utility's system repeatedly experienced system outages and numerous bugs and defects. This resulted in customer complaints, and substantial costs to the demand response provider in investigating and responding to those complaints. In the end, the situation created the perception of inherent problems in the utility's data-sharing system and allegedly resulted in significantly fewer customer enrollments in demand response.

Other jurisdictions have faced similar issues. In a separate case before the California Public Utilities Commission, Mission:data has alleged that San Diego Gas & Electric Company has poorly operated its data sharing platform, citing many serious defects. Such problems remained unaddressed for weeks at a time during which customers were redirected to a web page simply stating "System Down."⁴ In New York, the Public Service Commission was persuaded that poor operation of data-sharing platforms would impede customers from exercising their right to access new digital services and issued the following mandate in an order dated April 15, 2021:

Data Performance Metrics to be used to track and assess utilities performance in greater customer engagement and third-party data access shall include, if applicable, but not be limited to, the following:

1. The number of completed data-sharing authorizations, including the number of customers with one-time and ongoing data-sharing authorizations;
2. Time elapsed for a random sample of customers to complete a data-sharing authorization with a third-party;
3. The percentage of data-sharing attempts that are successful;

³ *Complaint of OhmConnect, Inc. Against Southern California Edison Company for Data Failures*. California Public Utilities Commission Docket No. C1903005. Filed March 8, 2019.

⁴ See, e.g., *Prepared Direct Testimony of Michael Murray for Mission:data Coalition*, Exhibits MM2- and MM-3. California Public Utilities Commission Proceeding No. A.18-11-015. Filed December 18, 2020.

4. Average and maximum data delivery time (seconds) following customer authorization;

5. Number and type of errors generated, if any;

6. System availability (uptime), GBC applicable;

7. Unplanned Outages (downtime), not related to scheduled system maintenance, date, reason, length of outage, and whether notification of outage and/or restoration was provided;

8. Number and type of data issues raised by third parties and customers, including severity, mean and max acknowledgment time, and mean and max resolution time;

9. Number and type of access mechanism issues or complaints received from third parties, including type and severity;

10. Time to complete third-party technical and administrative onboarding;

11. Number of third parties in various stages of onboarding;

12. Accuracy of data transferred; and

13. Percentage of data that includes redundant or extraneous entries.⁵

Similarly, New Hampshire and Ohio also established performance metrics and uptime requirements for utilities with data-sharing platforms. In the negotiated agreement referred to above, the New Hampshire Public Utilities Commission approved a standard that establishes a 99.5% to 99.9% “uptime” or system availability requirement. The Commission also approved severity-based resolution times for technical shortfalls where defective “critical functions” must be remedied within three (3) business days and defective “non-critical functions” must be remedied within ten (10) business days.⁶ Likewise, on June 2, 2021, the Public Utilities Commission of Ohio approved an

⁵ *Order Adopting a Data Access Framework and Establishing Further Process*. New York Public Service Commission Case No. 20-M-0082, dated April 15, 2021 at 54-55.

⁶ *Order Approving Settlement and Establishing a Process for Developing a Statewide Data Platform*. New Hampshire Public Utilities Commission Order No 26,589. May 2, 2022 at Appendix F of settlement agreement, Bates page 46.

agreement in which Dayton Power & Light is obligated to operate a GBC platform with at least 99% uptime.⁷

The Draft Rules submitted by Mission:data and the AGO in their July 2020 reply comments did not specify any performance metrics or uptime requirements for the GBC platform. With modern IT systems, such as cloud services and enterprise software, performance outcomes are industry standards. The Commission should no longer accept a “best effort” standard for its regulated utilities in connection with the operation of information technology systems. Thus, not only should the Commission order the establishment of a GBC platform consistent with the Draft Rules, but the Commission should also strengthen its oversight capabilities in light of other jurisdictions’ experiences regarding GBC platform performance. Just as the Commission oversees power outage metrics (such as Sustained Average Interruption Duration Index, or “SAIFI”) and reporting by regulated utilities, so should the Commission establish performance expectations and reporting standards related to data access. Toward that end, in Attachments 2 and 3, Mission:data has provided a Service Level Agreement (“SLA”) and performance metrics common in the modern software industry. Mission:data requests that the Commission incorporate these terms into Section (f) of the Draft Rule following receipt of reply comments.

3. Centralization via a Single Application Programming Interface (“API”)

Another key lesson learned from other jurisdictions over the last several years is that, in order for consumers to have the most meaningful choices in accessing digital energy management services, each electric utility operating in the state should coordinate their data-sharing platform

⁷ *Stipulation and Recommendation*. Public Utilities Commission of Ohio, Proceeding No. 18-1875-EL-GRD, *In the matter of the application of The Dayton Power and Light Company for approval of its plan to modernize its distribution grid*. Filed October 23, 2020 at 25.

into a single point of entry for third party service providers. A centralized API means that, from the third party's perspective, there would be a single API endpoint regardless of where the customer is located across the state. An example diagram is shown below, which illustrates how four (4) utilities would "funnel" their data to customer-authorized third parties through a single, "virtual" API, once customers have granted their consent via the individual utilities' existing customer web portals.

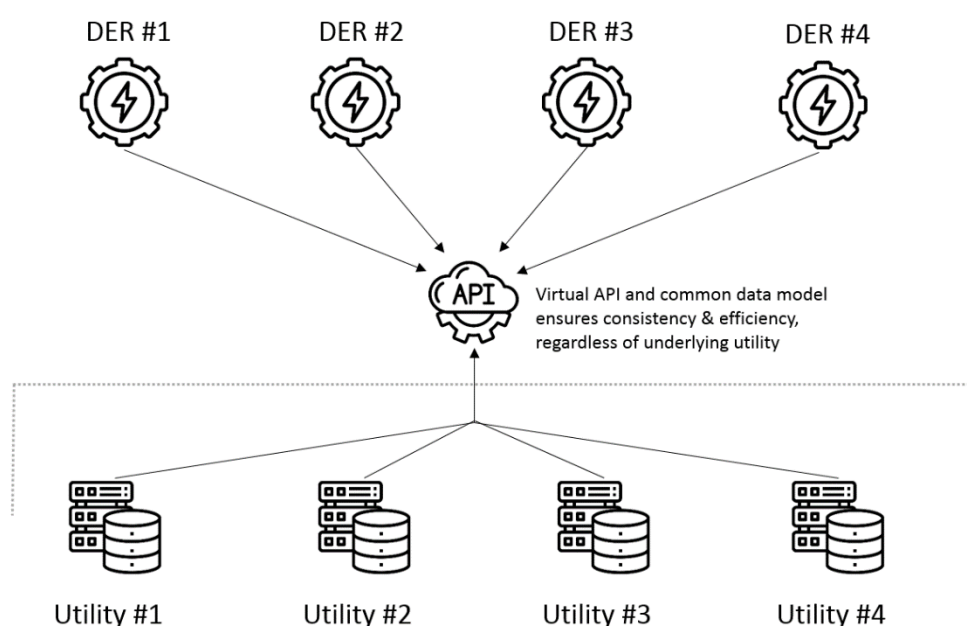


Figure 1: A centralized approach to sharing customer-authorized energy data with distributed energy resources (DERs).

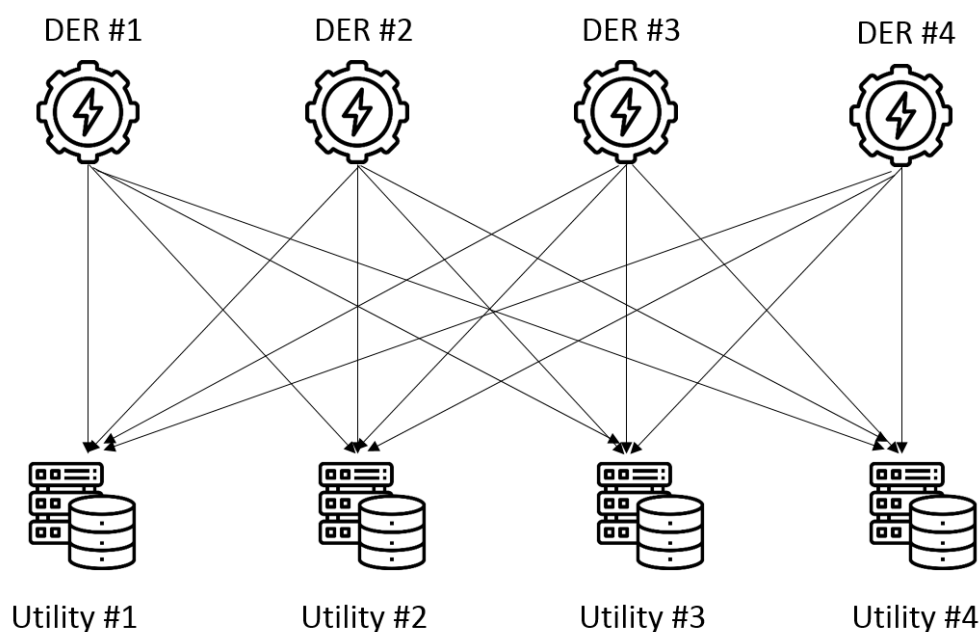


Figure 2: A traditional, "many-to-many" approach is four (4) times as complex due to 16 unique connections to utilities' customer information systems instead of four (4).

A centralized design such as the above has been used successfully in Texas since 2013, is currently underway in New Hampshire and New York, and is being actively considered in Maine. There are significant benefits to be gained from this approach. A centralized API means that customer data is harmonized across a single format and a single data model. A "data model" is defined as the set of relationships between pieces of information, such as the relationship between a utility customer, their accounts, meters, service locations, and bills. Without a common data model, it would be impossible for energy management software to be universally available to North Carolina ratepayers due to the lack of interoperability. For example, the software helping a multifamily property manage energy consumption in DEC's service area could not be simultaneously applied to another property looking for those services in DENC's territory if the two utilities have not first synchronized the often complex relationships among customer account,

usage and billing information. Put another way, if each utility were to make its own bespoke data-sharing method, then energy management software providers would have to uniquely tailor their tools to fit the service area where it was being applied, leading to faulty comparisons across service territory lines, inefficiencies for service providers and, ultimately, reduced choices available to ratepayers.

Establishing a common data model takes effort and coordination, but it is achievable, as was recently demonstrated in New Hampshire. There the Public Utilities Commission approved the agreement mentioned above that was reached by numerous interested parties including Eversource, Unitil, Liberty Utilities, the Office of the Consumer Advocate, Clean Energy New Hampshire and Mission:data. The settlement thoughtfully addresses the overall cost of the data access system by requiring a common data model, a common data format and centralized API. This commonality benefits everyone. Because the API is “virtual,” duplicative storage in multiple location is not necessary, saving utilities’ time and expense. (Mission:data believes that separate storage, as is done in Texas, is costly and unnecessary.)

Another key benefit to North Carolina of a centralized API approach would be the reduction in overall complexity. As shown in Figure 2 above, if each electric utility in North Carolina were to make its own unique data-sharing platform, then as the number of customer-authorized DERs grows, the total number of connections between DERs and utilities grows geometrically. In a hypothetical case of four (4) DERs and four (4) utilities, there are 16 unique connections that must be maintained and secured on an ongoing basis. However, with a centralized API approach as shown in Figure 1, the number of unique connections drops from 16 to four (4), a 75% reduction.

The cost to energy management firms of maintaining an ongoing, automated connection with a single API endpoint is substantial, and so having multiple connections across North Carolina would greatly increase those costs. Indeed, several Mission:data members, for example, employ full-time, highly-skilled personnel simply to manage a small number of APIs offered by utilities in other states. In DENC's case, it would be impractical for many firms to serve its territory in North Carolina simply because of the relatively low ratio between the number of customers and the cost of maintaining an individual API endpoint. Moreover, if each utility in North Carolina were to provide information in a different format according to a different data model, the resulting complexity could render the idiosyncratic platforms virtually unusable, defeating the central objective of empowering consumers to use their energy data in productive ways.

Mission:data strongly recommends North Carolina adopt a centralized API approach. The result would lead to significantly more choices of energy management solutions for consumers. Furthermore, consumers could access the same software-based energy management service in their location in Waynesville as they could in the Outer Banks. And, as other eastern states follow this approach, new innovations developed in New Hampshire and New York could be easily offered to consumers in North Carolina. Conversely, North Carolina's economy could benefit by "exporting" these energy management tools to other jurisdictions.

4. Centralized Registration Process for Third Parties

Another efficiency adopted as part of the New Hampshire agreement mentioned above is that the utilities agreed to jointly register third parties to interact with their data-sharing platform. The advantages of this centralized registration are significant. Without centralization, DEC could accept a third party's registration and DENC could reject it. Inconsistent treatment would lead to

administrative inefficiency and potentially unnecessary litigation before the Commission. A more rational approach would be for the utilities to coordinate the registration process. The Draft Rule specifies the eligibility criteria of customer-authorized third parties in Section (f)(9), which states:

To be eligible to receive standard customer data, authorized third parties shall be required by utilities to: (i) demonstrate technical capability to interact securely with the utility's servers; (ii) provide contact information and federal tax identification numbers to a utility; (iii) acknowledge receipt and review of these privacy and access Rules; (iv) not have been disqualified as an authorized third party provider in the past pursuant to processes outlined at subdivisions (h)(2)-(4); and (v) adopt and comply with the most updated version of the 2015 Department of Energy's Voluntary Code of Conduct Final Concepts and Principles for Data Privacy and the Smart Grid (the "DataGuard Seal") or a similar nationally accepted eligibility standard approved by the Commission as a necessary, comparable, reasonable and appropriate alternative.

If authorized third parties are determined to be eligible to receive customer data from one North Carolina utility, then it is sensible for that eligibility to apply to other utilities as well. As the number of authorized third parties grows, centralized registration demonstrates its value in terms of efficiency.

Thus, for the reasons stated above and in previous submissions by Mission:data, the AGO and others, Mission:data respectfully requests that the Commission approve the Draft Rule originally submitted by Mission:data and the AGO, with the modifications described herein.

Respectfully submitted this the 22nd day of July, 2022.

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CERTIFICATE OF SERVICE

I hereby certify that all persons on the docket service list have been served true and accurate copies of the foregoing by first class mail deposited in the U.S. mail, postage pre-paid or by email transmission with the party's consent.

Respectfully submitted this the 22nd day of July, 2022.

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