

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Filing by Ohio Edison)
Company, The Cleveland Electric Illuminating)
Company, and The Toledo Edison Company of) Case No. 16-481-EL-UNC
a Grid Modernization Business Plan.)

In the Matter of the Filing by Ohio Edison)
Company, The Cleveland Electric Illuminating)
Company, and The Toledo Edison Company) Case No. 17-2436-EL-UNC
Application for Approval of a Distribution)
Platform Modernization Plan.)

In the Matter of the Application of Ohio Edison)
Company, The Cleveland Electric Illuminating)
Company, and The Toledo Edison Company to) Case No. 18-1604-EL-UNC
Implement Matters Relating to the Tax Cuts and)
Jobs Act of 2017.)

In the Matter of the Application of Ohio Edison)
Company, The Cleveland Electric Illuminating)
Company, and The Toledo Edison Company for) Case No. 18-1656-EL-ATA
Approval of a Tariff Change.)

DIRECT TESTIMONY OF BRANDON CHILDERS

On behalf of Interstate Gas Supply, Inc.

1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

2 **Q. Please introduce yourself.**

3 A. My name is Brandon Childers. I am employed by Interstate Gas Supply, Inc.
4 (“IGS” or “IGS Energy”) as Chief Marketing & Technology Officer. My business
5 address is 6100 Emerald Parkway, Dublin, Ohio 43016.

6 **Q. Please describe your educational background and work history.**

7 A. I have spent most of my 15-year career at IGS Energy where I have held a wide
8 variety of roles across the organization. I began at IGS as a software engineer
9 where I led the development of large transaction processing and billing systems
10 supporting both residential and commercial customers. Eventually, after six years
11 of hands on software development, I assumed leadership roles over both IT and
12 Operations, where I oversaw all infrastructure and systems supporting company
13 operations from sales to operations and accounting. During my most recent two
14 years, as Chief Marketing & Technology Officer, I have led the organization’s IT,
15 Marketing, Innovation, and Enterprise Program Management teams, with a
16 majority of my focus in utilizing technology to deliver innovative new products and
17 improve customer experiences.

18 I hold a Bachelor of Science in Computer Science & Engineering from The Ohio
19 State University, where I graduated Magna Cum Laude. I also sit as a board
20 advisor to a Columbus-based tech startup, Safe Chain.

21

22 **Q. What is the nature of IGS' business?**

23 A. IGS Energy has over 28 years' experience serving customers in Ohio's competitive
24 markets. IGS Energy serves over 1 million customers nationwide and sells natural
25 gas and electricity to customers in 11 states across more than 40 utility service
26 territories. In Ohio, IGS currently serves electric customers in the AEP Ohio, Duke
27 Energy Ohio, FirstEnergy and the Dayton Power & Light service territories. The
28 IGS family of companies (which include IGS Generation, IGS Home Services and
29 IGS CNG Services) also provides customer focused energy solutions that
30 compliment IGS Energy's core commodity business including distributed
31 generation, demand response, CNG refueling, back-up generation and utility line
32 protection.

33 **Q. What is the purpose of your testimony?**

34 A. My testimony addresses the provisions included in the Stipulation and
35 Recommendation filed in this proceeding that would advance the competitive retail
36 electric market and the Commission's PowerForward initiative. The Stipulation
37 contains provisions that will reduce the current disconnect between the wholesale
38 market and the retail market and enable the delivery of innovative products and
39 services. The Stipulation achieves this result through the utilization of granular
40 customer energy usage information, access to that information, and the reliance
41 on market-based principles to deliver these products. Specifically, the Stipulation
42 recommends the following:

- 43 • Wholesale Market Settlements: IGS supports including the capability to
44 calculate wholesale market settlements (energy, capacity, and network service
45 peak load obligations) based upon actual hourly customer energy usage
46 information, otherwise commonly referred to as total hourly energy obligations
47 ("THEO"), peak load contribution ("PLC"), and network service peak load
48 ("NSPL").
- 49 • Data Access Enhancements: IGS supports providing CRES providers with
50 access to customer data through electronic data interchange ("EDI")
51 transactions, through an Application Program Interface ("API"), and through a
52 Home Area Network ("HAN") connected to the AMI deployment via qualified
53 devices
- 54 • Time-of-Use Rates: IGS supports the option to forego a default service time-
55 of-use rate offering when products utilizing AMI data are readily available in the
56 competitive market.

57 **II. WHOLESALE MARKET SETTLEMENTS**

58 **Q. What is a PJM Interconnection, LLC ("PJM") settlement statement?**

59 A. This is a billing statement provided by PJM to each load serving entity ("LSE")
60 which settles all charges and credits for market and transmission-related activities
61 between market participants and PJM. PJM relies upon each electric distribution
62 utility to provide customer metered data to calculate these statements.

63 **Q. How are PJM settlements currently calculated?**

64 A. Generic load profiles. In other words, the utility estimates each customer's THEO
65 for each hour. The actual energy usage of the customer is not utilized.

66 **Q. Are there problems with using generic load profiles?**

67 A. Currently, customers are not rewarded for optimizing their energy usage—there is
68 simply no way to monetize efficient behavior. Furthermore, generic load profiles
69 have difficulty profiling customers on non-normal days, such as holidays. This often
70 flows through other adjustments mechanisms, such as Unaccounted For Energy
71 Loss Factors (UFE). UFE is an unhedgable component for CRES providers and
72 unpredictable UFE factors may cause CRES providers to bear additional risk.

73 **Q. Does the Stipulation address settlement statements?**

74 A. Yes. The Stipulation provides for the necessary upgrades for wholesale market
75 settlements, moving away from utilization of generic load profiles to actual
76 customer energy usage information for each hour.¹ This means FirstEnergy will be
77 able to use an individual customer's actual hourly energy usage to establish: (1)
78 total hourly energy obligations ("THEO") (2) each customer's peak load
79 contribution ("PLC"), and (3) each customer's network service peak load ("NSPL").

80 **Q. Why is it beneficial for customers and CRES providers to have the ability to**
81 **calculate settlements for individual customers, instead of relying on generic**
82 **load profiles?**

¹ Stipulation at 15.

83 A. Once FirstEnergy utilizes THEO to calculate customers' energy and capacity
84 obligations and incorporates such information into settlement statements, CRES
85 providers can offer products that will incentivize customers to manage their usage
86 in accordance with market-based price signals. As a result, there will be less stress
87 on the electric grid during peak periods and customers may see a reduction in their
88 electric bills. The more granular the data, the easier it will be for CRES providers
89 to offer innovative products to customers.

90 **Q. What types of innovative products could be delivered to customers to help**
91 **them manage their usage in accordance with market-based price signals?**

92 A. Customers can be placed on rate structures that better align their behavior to the
93 underlying costs. This would include both time of use rates that align charges with
94 the time of day the energy is being consumed, as well as customized fixed rate
95 products based on customer-specific energy usage.

96 Furthermore, by providing market-based price signals to customers, CRES
97 providers and other solutions providers could employ a variety of demand side
98 management solutions to better shape a customer's load. Examples include
99 energy monitoring dashboards to aid in behavior changes, behind-the-meter
100 energy storage, and internet connected devices that control load, such as smart
101 thermostats, water heaters, and smart appliances.

102 **III. DATA ACCESS ENHANCEMENTS**

103 **Q. What is an Application Program Interface ("API")?**

104 A. An API is a set of routines, protocols, and tools for building distributed software
105 applications. APIs specify the way in which software components interact to
106 perform operations and exchange data.

107 **Q. What is the difference between API and Electronic Data Interchange (“EDI”)?**

108 A. APIs are utilized for near real-time data operations whereas EDI is typically utilized
109 for batch operations that transfer data. APIs typically are used to perform
110 operations and exchange data in a sub-second timeframe, similar to the time it
111 takes to request a web page in a browser, where EDI is typically used to transmit
112 data on a delay over minutes, hours, or days.

113 **Q. How can EDI data access enhance the customer electricity experience?**

114 A. EDI is a commonly used method to exchange large amounts of data in batch,
115 enabling CRES operations for billing and forecasting. Assuming the CRES has
116 access via EDI to granular usage data, the CRES would be enabled to provide
117 time of use products to customers.

118 **Q. How can API data access enhance the customer electricity experience?**

119 A. An API would be utilized for interactions requiring immediate response. For
120 example, a CRES provider would be able to access prospective customer data,
121 with proper customer consent, in real or near-real time. By providing the CRES
122 provider with immediate access to a prospective customer’s data, the CRES will
123 be able to tailor its offerings for the customer based on their actual usage patterns.

124 This includes offering a customized fixed price offer, which would reward
125 customers with attractive load profiles with better pricing.

126 **Q. What is a Home Area Network (“HAN”)?**

127 A. A HAN is a network within a customer’s home that connects multiple devices for
128 the purposes of communication, data exchange, and control. In the context of the
129 Stipulation, it is a dedicated network that enables the connectivity between the
130 Smart Meter and household devices such as load controllers, smart appliances,
131 smart thermostats, and in-home displays of energy usage.

132 **Q. How can connectivity to the Smart Meter via a HAN enhance the customer
133 electricity experience?**

134 A. By enabling access to the customer’s Smart Meter via generally accepted
135 standards (e.g. Smart Energy by Zigbee Alliance), providers with qualified devices
136 passing technical eligibility requirements can deliver solutions that engage
137 customers with their energy consumption in real time. Most notably, customers
138 would be able to choose between options for in-home or mobile app displays of
139 the home’s usage in almost real-time, ultimately enabling the customer to alter
140 behavior and lower energy costs.

141 **Q. Are there any other data access provisions in the Stipulation that will provide
142 customer benefits?**

143 A. Yes. FirstEnergy has committed to hosting collaborative meetings including one
144 specific to data access once per quarter during the term of Grid Mod Phase I.² This
145 will provide an opportunity for stakeholders to discuss any issues that may arise.

146 **IV. TIME-OF-USE RATES**

147 **Q. What are time-of-use rates?**

148 A. Time-of-use rates are rate structures that better align the retail price of energy
149 charged to a customer with the actual cost of energy at the time it is produced.
150 Typically, this entails higher prices during peak hours and lower prices during off
151 peak hours.

152 **Q. Why would customers benefit from time-of-use rates?**

153 A. Customers could benefit from time-of-use rates if they shifted their energy usage
154 to times when prices are lower, lowering their overall bill, and ultimately reducing
155 strain on the electric grid. Time-of-use rates will empower customers to have a
156 choice of the rate structure that best aligns to their needs and behavior.

157 **V. CONCLUSION**

158 **Q. Does this conclude your testimony?**

159 A. Yes, but I reserve the opportunity to further supplement my testimony at a later
160 date.

² Stipulation at 14.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Direct Testimony of Brandon Childers was served this the 7th day of December 2018 via electronic mail upon the following:

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Summary: Testimony Direct Testimony of Brandon Childers in Support of the Stipulation and Recommendation electronically filed by Bethany Allen on behalf of Interstate Gas Supply, Inc.