STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of Eligibility Criteria for Energy Service Companies.	)	**Case 15-M-0127**
Proceeding on the Motion of the Commission to Assess Certain Aspects of the Residential and Small Non-Residential Retail Energy Markets in New York State.	)	**Case 12-M-0476**
In the Matter of Retail Access Business Rules.	)	**Case 98-M-1343**

DIRECT TESTIMONY OF

FRANK LACEY

ON BEHALF OF

THE RETAIL ENERGY SUPPLY ASSOCIATION

SEPTEMBER 15, 2017

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Direct Testimony of Frank Lacey on Behalf of RESA

I. INTRODUCTION

Q1. Please state your name and business address.

A1. My name is Frank Lacey. My business address is 3 Traylor Drive, West Chester, PA 19382.

Q2. By whom are you employed and on whose behalf are you testifying?

A2. I am an independent consultant testifying on behalf of the Retail Energy Supply Association ("RESA").

Q3. Please summarize your educational background and professional experience.

A3. As a consultant, I am providing policy-related consulting services to advanced energy management companies and end-use customers. I have worked in the electric power industry for approximately 24 years, beginning immediately after earning my graduate degree. I have worked on major industry restructuring issues including generation asset divestiture, with a specialization in environmental asset valuation; stranded cost valuations; transmission restructuring including the development of Independent System Operators ("ISOs") and Regional Transmission Organization ("RTOs") and other independent transmission entities; the development of retail energy markets; and the development of demand response markets. Early in my career, I was employed as a consultant to industry participants, first by Putnam, Hayes & Bartlett, Inc. and then by Arthur Andersen Business Consulting. Within the industry, I have worked for Strategic Energy, a

retail electricity supplier, Direct Energy, a retail energy supplier that acquired Strategic Energy in 2008, and most recently, Comverge, Inc. and CPower, two companies that share a common owner and provide demand response services to residential and to commercial & industrial ("C&I") customers, respectively. My professional experience brings a unique and valuable perspective to the policy issues in this proceeding as I have extensive practical business experience having worked for both traditional Energy Service Companies ("ESCOs") and demand response service providers. I created Electric Advisors Consulting LLC in the fall of 2015. I hold a Bachelor of Science degree in Transportation and Logistics from the University of Maryland and a Master of Science in Industrial Administration with concentrations in finance and environmental management from the Tepper School of Business at Carnegie Mellon University. My resume is provided as **Exhibit__(FL-1**).

Q4. Would you please describe your professional affiliations?

A4. I am currently a member of the board of directors of the Smart Electric Power Alliance ("SEPA"), a trade association with more than 1,000 members including utilities, distributed resource providers and related service providers. I am the Chairman of the Advisory Council on Demand Response and Smart Grid within SEPA, which is a standing Committee dedicated to enhancing the vision of demand response and smart grid ideas within SEPA. Prior to its dissolution in

2015, I served on the board of directors of the Demand Response and Smart Grid Coalition. I am also a founding member and the current Chairman of the Advanced Energy Management Alliance. I served on the board of directors of the Electric Reliability Council of Texas ("ERCOT"), the independent electric grid operator in Texas, from 2002 to 2004.

Q5. Have you ever testified before the New York Public Service Commission or any other utility regulatory agency?

A5. I have not testified before the New York Public Service Commission ("Commission" or "PSC"). However, I have testified in numerous proceedings in other jurisdictions, before other state regulatory agencies, state legislatures, and twice as a technical conference witness at the Federal Energy Regulatory Commission ("FERC"). I have provided expert testimony in Pennsylvania, Massachusetts, Ohio, Maryland, Illinois, Utah and California. I have presented oral testimony in less formal proceedings and technical conferences before the Commissions of Maryland, Pennsylvania and Texas. I have presented legislative testimony in several states, including New York, Maryland, Pennsylvania, Delaware, Michigan, California, Texas and Virginia. I recently filed an expert report on energy matters in the Superior Court of New Jersey in Bergen County. I have also spoken at numerous trade shows, conferences and other industry and

corporate events as an expert on electricity market issues. A summary of my prior testimony is attached as **Exhibit__(FL-2)**.

Q6. Could you please provide an overview of your testimony?

A6. Yes. At one time, New York was a leader in the development of competitive retail markets. Many of the tools the State and utilities implemented to facilitate retail choice nearly two decades ago were cited by retail providers around the country as the model to replicate and follow. The New York model, however, has not progressed with technology improvements and product innovations.

The Commission has recently undertaken an exercise to compare the price that ESCO customers paid for electric and gas service to what those customers presumably "would have paid" had they remained on utility default service. I will show that this analysis was flawed in several ways. Despite the flawed analysis, the results have prompted regulators to take action against the ESCOs operating in the market. The Commission has expressed its desire to have ESCOs offering innovative value-added products and services and its frustration that the offerings have not been prolific to date. The Commission is also contemplating capping the rates that ESCOs could charge customers at the default service price, an outcome that is incompatible with the desire for more advanced and innovative energy products and services.

I will discuss other policy goals enacted by the State for clean energy deployment, more efficient use of the grid and customer engagement in the markets and show that the ESCOs are the most efficient path to achieve the Commission's goals as outlined in those policies.

The products and services that the Commission wants to see in New York , are already being delivered to customers by ESCOs in other markets around the country. In my testimony, I will show that the ESCO community would be delivering its value-added products to New York if the New York market could accommodate them. I will also show that without some market improvements, such as advanced metering, no entity will be able to deliver the products and services desired by the Commission.

I will also show that there is scant evidence that customers are unhappy with ESCO products and services. A review of customer complaints from 2016, the most recent year for which data is available, shows that the customer complaint rate for ESCOs is virtually identical to the customer complaint rate for utilities in New York. It is likely that comprehensive reforms at the utility level will lead to more engaged customers and fewer complaints directed at utilities and ESCOs.

The Commission should neither mandate rates on ESCOs nor should restrict any specific products or services offered by the ESCOs in New York. Instead, the Commission should embrace these proceedings as an opportunity to develop the

market tools and infrastructure to create the "Utility of the Future" that will in return empower the "ESCO of the Future" to deliver the products and services desired by the Commission. I will show that the ESCO of the Future already exists and that other states' energy markets are exhibiting the deployment of advanced energy products and services.

New York should endeavor to transform its retail model and regain its leadership that it once had in these markets. It is only with this kind of leadership that the policy goals with respect to New York's ongoing Reforming the Energy Vision ("REV") initiative, the Utility Earnings Adjustment Mechanisms ("EAMs") and the Clean Energy Standards ("CES")will be achieved.

Q7. Are you sponsoring any Exhibits?

A7. Yes. I am sponsoring seven exhibits:

Exhibit_(FL-1): Frank Lacey Resume

Exhibit_(FL -2): Frank Lacey – Detailed List of Prior Testimony

Exhibit_(FL -3): Summary of Wireless Provider Market Share Data

Exhibit_(FL -4): Examples of ESCO Investments in New Products, Services and Technologies

Exhibit_(FL -5): Examples of ESCO Product Announcements and Use of Traditional Marketing Channels

Exhibit_(FL -6): Response to Commission's Statements and Questions

Exhibit_(FL -7): Summary of Surety Requirements Imposed on Competitive Retail Suppliers (ESCOs) in Other States.

II. OVERVIEW OF THE CASE

Q8. Have you reviewed the Notice of Evidentiary and Collaborative Tracks and Deadline for Initial Testimony and Exhibits?

A8. I have read the Notice of Evidentiary and Collaborative Tracks and Deadline for Initial Testimony and Exhibits ("Notice").[1]

Q9. Could you please provide an overview of the proceeding?

A9. Yes. As described by the Commission in the Notice, the PSC adopted retail choice in the hopes of recognizing all of the benefits of competition, which it eloquently restated in the notice, including efficient allocation of resources, pricing at marginal cost, efficient production of goods and services, many buyers and sellers, and several others. The Notice states that the Commission opened the retail energy markets in hopes of spurring innovation in the creation of value-added products, particularly energy efficiency services that regulated utilities might not provide. The Commission has reached the unfortunate and inaccurate conclusion that despite efforts to realign the retail energy market, the market

[1] Cases 15-M-0127, 12-M-0476, and 98-M-1343, *Proceeding on Motion of the Commission to Assess Certain Aspects of the Residential and Small Non-residential Retail Energy Markets in New York State*, Notice of Evidentiary and Collaborative Tracks and Deadline for Initial Testimony and Exhibits (Issued on December 2, 2016).

serving mass market customers for differentiated services is immature or non-existent. The Notice stated that a well-designed market could offer these consumer opportunities, but it doesn't exist today. Thus, the Commission is undertaking a review to consider several market issues including, among others, the prospect of prohibiting retail electric and natural gas service to mass-market customers, a review of market rules, rate reviews and bundled product requirements. I disagree with the conclusions set forth in the Notice.

Q10. What has prompted the Commission to take these actions now?

A10. There appears to be a concern by the Commission and some consumer advocacy groups that ESCO consumers are being harmed because they may be paying more for ESCO service than they would if they remained with the default utility supply option. For example, an affidavit was filed in these proceedings seeking to have ESCOs cease marketing their products and services to low-income customers.[2] In that affidavit ("Alch Affidavit"), Mr. Bruce Alch stated that retail choice customers had paid more than $800 million more to electricity and gas suppliers than they would have paid if the customers had stayed with their respective utilities for gas and electric commodity service. The Commission also appears to

[2] Case 12-M-0476, *supra*, *Affidavit of Bruce Alch* (November 18, 2016). Mr. Alch's Affidavit was originally filed in *National Energy Marketers Ass'n v. Public Service Commission*, Index No 05680-16, Supreme Court of New York for Albany County, on or about October 26, 2016.

be concerned about certain ESCO marketing practices that they believe might be misleading, deceptive or otherwise harmful to consumers.

Q11. What is your preliminary reaction to these concerns that seem to be underlying the Commission's actions in this proceeding?

A11. First, I recognize that the Commission's goal in this proceeding—to protect consumers—is a laudable one. However, I believe it is important to separate and distinguish the two issues noted above which appear to be underlying this proceeding. To the extent that there is evidence of marketing abuses by ESCOs, the Commission is right to take action. RESA supports rigorous oversight of ESCO behavior and swift enforcement action against any ESCO engaged in unlawful or deceptive practices. However, I do not believe it is appropriate to economically regulate an entire industry as a policy substitute for enforcement and oversight.

Q12. What is your reaction to the Commission's apparent conclusion that customers are harmed if they are paying more than the utility default product?

A12. RESA's second witness, Economist Jeff Makholm from National Economic Research Associates, Inc. ("NERA"), will delve into this issue in more detail. However, my first reaction is that this comparison amounts to asking the wrong question. The apparent assumption underlying the Notice is that the market has

failed because some or even many customers may be paying more than what they would have paid, had they taken service from another default utilities. The flaw in this logic is readily apparent. In any competitive marketplace, there will be some customers paying more than others. Products, services, and costs vary by vendor in every competitive market. Companies position their products differently and prices can be directly related to that positioning. This is commonly referred to as "product differentiation" and it exists in nearly every, if not every product market, including those products that could and should be highly "commoditized." Indeed, if this "test" were to be applied to almost any other industry, one would similarly conclude that the marketplace in that industry had "failed." Consumers frequently and readily choose more expensively priced products and services. For example, customers overwhelmingly prefer more expensive cell phone service providers like Verizon and AT&T despite cheaper options like T-Mobile and various pre-pay providers. Customers routinely elect premium car insurance coverage such as lower deductibles and higher coverage limits although state minimum liability coverage is cheaper. Customers will fill their gas tanks with name brand gasoline when an off-brand company is selling the same product across the street for 10-20 cents less per gallon. Customers regularly pay a premium for food products that might be raised or harvested

differently. These consumer behaviors show that customers perceive value in attributes other than price.

III. COMPARING ESCO PRICES TO UTILITY DEFAULT SERVICE PRICES

Q13. Have you reviewed the Alch Affidavit?

A13. I have.

Q14. Do you find the statements in the Alch Affidavit to be credible?

A14. RESA has retained NERA to perform a comprehensive review of the data presented in the Alch Affidavit. NERA is providing testimony in this proceeding on their findings. (*See* RESA-Jeff Makholm Testimony and Exhibits.) However, without conducting my own comprehensive review of the underlying data, I have three immediate reactions to Alch Affidavit. First, ESCO energy products and the utility default service products are not one in the same and should not be compared on an apples-to-apples, penny-to-penny basis. I will discuss this further below.

Second, it appears that Mr. Alch's computations involved a very static analysis. As such, Mr. Alch did not determine what the utility default service price would have been had all of the customers been on default service instead of supplier service. This would be a major undertaking on Mr. Alch's part, but this is an extremely important point because the utilities procure much of their default

electric service obligation in the short-term markets. Meaning, if demand in the short-term markets was higher than it otherwise was because the demand for all of the customers was met in the short-term market, the resulting market price would have been higher. If this were the case, then the utility electricity price to its default service customers would have been higher. Additionally, this higher price would have been borne by all default service customers, not just the ESCO customers who would have been theoretically moved back to default service (these are the customers referenced in the Alch Affidavit). Similarly, on the gas side, there would be increased costs for risk management, storage and gas procurement. Finally, Mr. Alch acknowledges the seasonal fluctuation in energy pricing when discussing Attachment A to his affidavit. He states that "[i]n viewing this data I would note that the November 2014 to May 2015 heating season was a more typical winter than the more recent November 2015 through May 2016 winter which was significantly warmer than normal. Yet, as depicted in the chart, customers served by ESCOs were subjected to significant financial impacts during both periods." In other words, Mr. Alch, observed larger spreads between default energy service prices and ESCO prices in the winter months. This observation is not unexpected and represents a valuable customer attribute. In recent years, natural gas pipeline constraints and winter deliverability issues have increased costs for hedging winter energy. Mr. Alch is simply showing that

those hedges were perhaps more costly than what eventually evolved in the short-term market. This brings me back to the first point, ESCO products are not the same as default service – one is a contracted hedge and one is not. Going back to the second point, the Alch observation could have been drastically different had all of the energy been procured in the short-term market, especially if the weather had been colder than expectations. If for example, the winter periods identified by Mr. Alch had been similar to the winter of 2014 (also known as the Polar Vortex), the utility pass-through costs to default service customers would have been significantly higher than the "fixed prices" that were provided by the ESCOs.

Q15. Why do you believe this price spread represents a positive customer attribute?

A15. A fixed price is a product attribute for which customers are generally willing to pay a premium. This phenomenon exists in other markets, such as the mortgage market. In March 2017, only nine percent (9%) of mortgage applications was for adjustable rate mortgages. Nine percent was the highest percentage of adjustable-rate mortgages since October 2014.[3] According to the Mortgage Bankers Association, the average interest rate for a 30-year fixed rate mortgage for the month was 4.46%. The average interest rate for a five-year adjustable rate

[3] See: https://www.mba.org/2017-press-releases/march/mortgage-applications-decrease-in-latest-mba-weekly-survey

mortgage was 3.41%. That difference would allow a customer with a $250,000 mortgage to save $150 per month for at least five years, yet only nine percent of homebuyers took advantage of this opportunity. Homebuyers instead chose the significantly higher-priced mortgage to ensure stability in their mortgage payments.

Q16. Are cost comparisons between ESCOs and utility default such as those referenced by Mr. Alch a significant driver for this proceeding?

A16. Yes. In prior phases of this and other proceedings, Department of Public Service ("DPS") Staff has presented analyses such as the Alch Affidavit noted above, attempting to show that ESCO customers, either as a whole or certain sub groups, have paid more in aggregate with ESCO service than they would have paid had all of these customers received utility provided default service.[4] While these are extremely flawed analyses, in its February 23, 2016 Order[5] the Commission appears to have relied upon this type of information as the basis for sweeping policy changes to severely restrict the products and services that ESCOs could continue to offer in New York. In the February 23 Order, the Commission sought to prohibit ESCOs from providing service to consumers at rates above the

[4] *See* for example, the Alch Affidavit discussed above.

[5] Case 15-M-0127 *et al.*, In the Matter of Eligibility Criteria for Energy Service Companies, Order Resetting Retail Energy Markets and Establishing Further Process, February 23, 2016.

applicable utility default supply price with some limited exceptions for renewable or certain other products the Commission deemed to be value-added. In the current Evidentiary Track, the Commission has noted its intent to examine issues such as: (i) ESCO "overcharging," (ii) what, in the Commission's determination, may constitute "acceptable" ESCO rates; and (iii) how to ensure "just and reasonable" rates for any form of continued ESCO service.[6] It appears that the examination of ESCO prices, particularly how such prices compare to the utility default rate, is a central issue in this proceeding.

Q17. What conclusions do you think the Commission, DPS Staff and other parties may attempt to draw based upon such price comparisons?

A17. I am concerned that DPS Staff may again focus heavily on such ESCO-to-utility price comparisons in an attempt to reach the conclusion that the ESCO market isn't working because ESCO customers are paying more, either individually or collectively, for their selected ESCO service than they would under utility default service. While the Commission has not yet put forward any concrete policy reforms as a result of this current Evidentiary Track, from the Notice instituting this proceeding, it appears that policies similar to those contained in the February 23 Order may be under consideration. Of significance, the Notice indicated that

[6] Notice at p.4.

the Commission will consider "whether ESCOs should be completely prohibited from serving their current products to mass-market customers…"[7] Ironically, the Commission, while expressing concern about "overcharging" is also in the same proceeding, exploring why more expensive products, the "value-added energy products and services," are not being offered. Because of this contradiction, it is difficult to ascertain precisely what the goals of the Commission are.

Q18. Would it be appropriate to draw broad conclusions about the functioning of the ESCO market because some ESCO customers may be paying higher prices than the utility default service?

A18. No. For a myriad of reasons, I believe no meaningful conclusions, other than that the market is working, can be drawn from different customers paying different prices for different products. ESCO products and utility default service products are fundamentally different products. They should be priced differently. It is not even reasonable to presume that only energy commodities are being delivered with ESCO products. Dr. Makholm discusses at length the problems associated with such price comparisons and I agree with his conclusions (RESA-Jeff Makholm Testimony). While Dr. Makholm presents a quantitative and economic perspective to support his conclusion that such price comparisons to the utility's

[7] Notice at p.3.

default service are fundamentally flawed, I would like to discuss this issue from a more practical perspective as both an expert in the energy industry and an observer of markets for other products and services. I believe it is useful to look to these other industries as a lens through which to examine consumer behavior and policies for shaping the markets in the energy industry.

Q19. How can a review of markets for other products and services help inform the issues in this proceeding?

A19. As a society, we generally accept that "consumer choice through a free market" is a good thing and it is fundamental to efficient market operations for most goods and services. In the United States, we enjoy a free-market economy for nearly all of the everyday products and services that we consume. Given that one of the underlying assumptions of the Commission in this proceeding is that the ESCO market has purportedly "failed" because some customers are paying more for ESCO services than they would have with the utility's default service, I believe it is useful to examine to what degree consumers willingly pay more for products and services in other industries.

Q20. Can you offer some examples of how customers often choose products or services that cost more relative to certain alternatives?

A20. Yes, there are dozens of examples that come to mind, but below are a few specific ones:

- I demonstrated above that only nine percent of homebuyers choose a mortgage option that could save them $150 per month for five years. More than 130,000 houses were purchased in New York in 2016, at an average price of $328,406. If each of those homebuyers financed 90% of the purchase price of their home and 91% of those opted for a fixed price mortgage, New York home buyers would have voluntarily opted in to paying an extra $254 million in mortgage payments per year. Over the course of a five-year initial interest rate period, New Yorkers will have voluntarily paid $1.3 billion more than they would have paid with the lower-cost adjustable rate mortgage.
- Many customers choose higher priced mobile and data plan providers. As shown in **Exhibit__(FL-3)** to this testimony, Verizon and AT&T are the clear market leaders, and they also have the highest revenue per customer of the four companies. Notably, Verizon Wireless receives $260 more per year per customer than Sprint. Stated another way, Verizon's revenue per customer is 49% higher than Sprint's. Despite this price differential, Verizon has almost twice as many customers and enjoys an 85% customer retention rate.

- Smartphone consumers overwhelmingly prefer expensive new models. For example, the top-selling smartphone in 2016 was Apple's iPhone 7,[8] despite a price tag of $649 and an abundance of alternatives priced at or below $300.
- When shopping for a pay TV package, many customers choose premium channels or channel bundles beyond "basic cable." For example, one recent study shows that 38.7 percent of respondents pay for premium channels like HBO, Showtime or Starz.[9]
- Consumers are increasingly willing to pay more for certain products that align with their values, such as organic and sustainably raised foods and environmentally conscious brands. For example, a Pew Research Center study found that 68% of the adults in the Unites States surveyed bought organic food within the last month prior to the study.[10]

[8] https://www.kantarworldpanel.com/global/News/iOS-Share-Driven-Higher-by-iPhone-77-Plus-Sales

[9] http://www.gomohu.com/wp-content/uploads/2016/04/Digitalsmiths_Q4_2015_Video_Trends_Report-Consumer_Behavior_Across_Pay-TV_VOD_PPV_OTT_Connected_Devices_and_Content_Discovery.pdf

[10] *See:* http://www.pewinternet.org/2016/12/01/americans-views-about-and-consumption-of-organic-foods/

- Many consumers willingly pay more for name-brand groceries and packaged goods with national brand market share at 85.5% versus private label (e.g., generic) products at 14.5%.[11]

These examples show that customers perceive value in a lot of different ways and are often willing to pay a higher price for a range of reasons.

Q21. Is evidence of customers "paying more" necessarily an indicator of a failed market or consumer abuses?

A21. No. It is an indicator of just the opposite – a well-functioning, competitive market offering different products and service levels. Clearly no one wants to pay more than required. But the examples above indicate that consumer purchasing decisions are not one-dimensional and show that consumers readily embrace products with price premiums in other markets. A recent study conducted in Ohio and Florida showed that only 45% of the respondents chose price as their primary consideration when choosing energy products.[12] The willingness of customers to purchase premium products is based on such factors as differences in features, brand loyalty, company reputation, convenience, customer service, environmental concerns, etc. Each of these attributes is present in the energy industry. Indeed, a

[11] *See:* https://www.iriworldwide.com/IRI/media/T_TPrivate%20Label-11-16.pdf

[12] American Coalition of Competitive Energy Suppliers, The Power of Choice: Consumer Preferences on Energy Choice in Florida and Ohio, June 2017, pp. 10-12.

hallmark of a free-market economy is price and product differentiation among many competing sellers. Most casual observers would agree that it is not unusual for customers to frequently prefer a higher priced option for goods and services. Dr. Makholm will address the economic criteria for a well-functioning competitive market and will show how the ESCO market easily meets this test despite any relative price comparisons between ESCOs and the utilities.

Q22. Are the industries from your examples above dramatically different from the energy industry?

A22. Every industry is unique and clearly the energy industry has specific distinguishing characteristics. Most notable is the fact that competitive retail choice for electricity and natural gas is a fairly new phenomenon in energy markets. However, the basic drivers of consumer preferences are just as applicable in the ESCO markets as they are for mortgages, cell phone service, groceries or other products. ESCOs are differentiating their products and brands in a variety of ways. Table FL-1 details several product differentiation attributes that are available in markets for many different products and offers examples of how these attributes avail themselves in the electric and gas markets.

Table FL-1: ESCO Product Differentiation	
Differentiation	**Examples from ESCO Industry**
Product features	• Fixed rate terms ranging from 3 months to 36 months • Variable rate • Variable rate with price limit • With or without early cancellation fees • Renewable energy content, carbon offsets
Brand loyalty	• Airline miles and other reward points • Cash back incentives • Enrollment incentives (gift cards, rebates, etc.)
Alignment with Customer Values	• Renewable energy attributes • Carbon offsets • Charitable contributions
Product Bundling	• Smart thermostats • Home automation devices • Home security • Cable TV bundles • Home services, warranty and protection plans
Customer Service and Convenience	• Online enrollment and account management • App and text customer notifications • Usage reports and benchmarking • Customer satisfaction guarantees • Priority phone service lines • Extended customer service hours • Daily consumption updates

Q23. Would it be appropriate in the other industries noted above for a regulator to intervene and require a company to price its products at or below the price of another?

A23. No. However, it is an interesting thought exercise to apply the logic from the February 23 Order to these other industries. Imagine if the Federal Trade Commission intervened to force Verizon to lower its plan rates to at or below those of Sprint? Or, if the Food and Drug Administration ("FDA") prohibited grocery stores from selling organic products in an effort to protect consumers from paying higher prices. An even closer analogy is the mortgage example. The mortgage market bears many of the same characteristics as the energy markets, as a main feature of both business models is managing risk associated with market volatility. The primary benefit of a fixed-rate mortgage is stability and cost certainty just as a fixed ESCO rate offers similar benefits. What this Commission is contemplating is akin to having the Federal Reserve or the Treasury Department require that all fixed-rate mortgages to be priced at or below variable-rate mortgages. If any of these policies were pursued, there would likely be dramatic and serious damage to the markets for these products. Wireless carriers, might stop investing in new cell towers, technologies and mobile data infrastructure. Customers could revolt at the notion of the FDA taking away their choice for organic foods. And banks would likely not offer fixed-rate mortgages.

Such policy intervention is equally inappropriate for the ESCO market, and the result of such policy intervention will likely be similar to the results hypothesized in those other markets.

Q24. Can you provide an example from the energy industry to illustrate why policy decisions based on such simplistic price comparisons are misguided?

A24. Yes. In the February 23 Order, the Commission sought to limit ESCOs to providing service at rates equal to or less than the utility's default rate. Presumably, this was intended to protect customers from paying more. It is interesting to point out, however, that the Order did not require that customers receive service from the *lowest available option* in the marketplace. Indeed, such a policy might result in placing all customers with an ESCO. For example, today in the Westchester area of the Consolidated Edison service territory, there are both fixed and variable ESCO electric offers priced below the monthly variable Consolidated Edison rate. Even during the Polar Vortex, the highest priced energy markets in recent years, there were ESCOs continuing to enroll customers at rates less than the then-current utility default rate. If the central support for major policy changes in the ESCO market is the desire to protect customers from "overpaying" relative to some lower-priced alternative, then the Commission should consider the following policy alternatives:

- Moving all utility default service customers to the lowest priced ESCO offer;
- Requiring that the utility's default price be equal to or less than the lowest available ESCO price;
- Requiring the utilities to refund money to any default service customers who paid more for energy during the Polar Vortex (or any other month) than they would have paid to an ESCO.

Of course, such policies would present substantial challenges. I expect the utilities would object vociferously to any suggestion that their rates be capped at the lowest available ESCO rate, and for good reason. Similarly, any requirement to place all customers on the lowest available ESCO rate would meet significant practical challenges. It is just as problematic and inappropriate to place such pricing restrictions on ESCOs.

IV. CUSTOMER COMPLAINTS

Q25. Have you reviewed the summary of customer complaints posted on the Commission's website?

A25. I have.

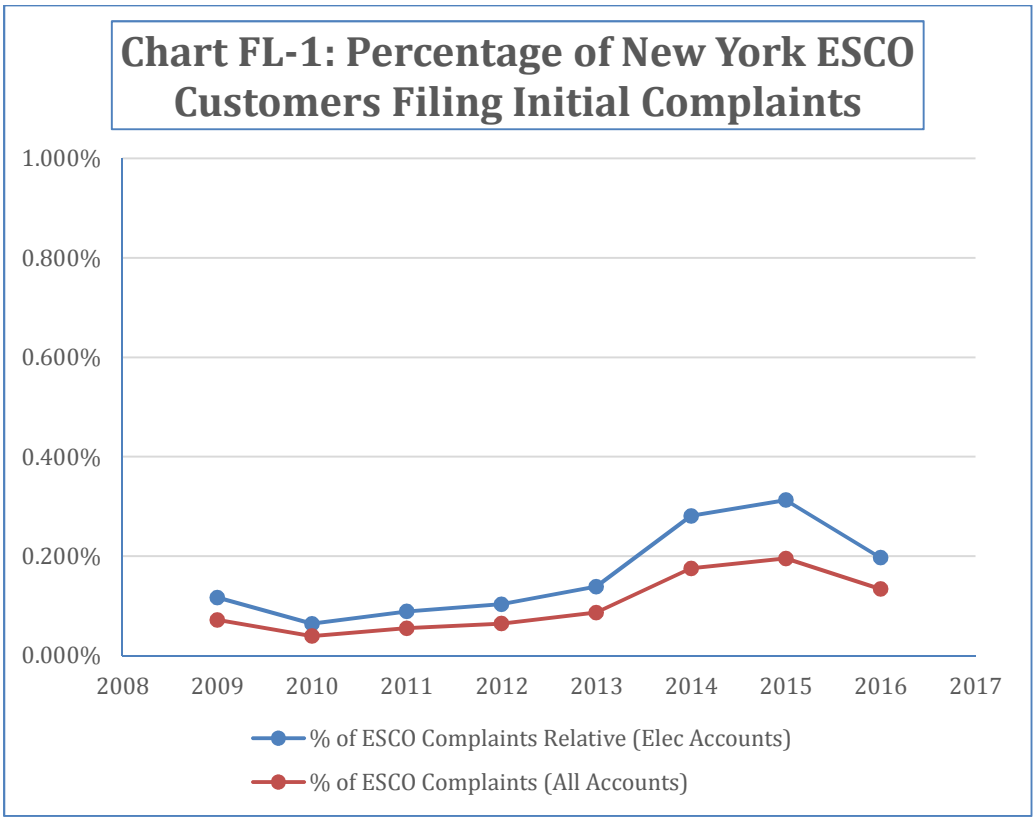
Q26. What do you conclude based on a review of that complaint data?

A26. My review of the complaint data suggests exactly what was stated above. ESCO customers are intelligent. They understand the value proposition of ESCOs and

ESCO products, and the overwhelming majority is happily engaged with their respective ESCOs. Between 2009 and 2016, approximately 20,500 "initial complaints" against electric and gas suppliers were made with the Commission. Approximately 9,700 of those were made in 2014 and 2015, many of which were likely related to the Polar Vortex, which caught the entire energy industry off guard. On its face, 20,500 complaints might sound like a large number, but over that time span, it equates to about 2,500 per year. Over that same time horizon, there were almost 2.5 million customer accounts on competitive energy service each year. That equates to about 1 customer complaint per year per 1,000 customers. If the outlier years are removed, the average was about 0.7 ESCO complaints per year per 1,000 customers. Nobody likes to hear that the market generates complaints, but some are simply unavoidable.

The raw numbers suggest that perhaps there is a bit of an over-reaction and a more measured approach to looking at the competitive retail energy markets is warranted. Chart FL-1 below, with the top bar representing 1% of ESCO customers, shows that even in the years with the highest numbers of complaints, still only small fractions of 1% of the customers lodged initial complaints with the Commission.[13]

[13] The data is presented in the chart two ways. First, the denominator used to calculate the complaint rate was the number of electricity accounts on electric supply. The second approach was to include both



Q27. Are you familiar with the Number of Complaints filed against ESCOS in other states?

A27. Yes. I researched complaints from a few states. Notably, I reviewed Texas, Pennsylvania and Illinois, as those are states with restructured energy markets that are comparable in size to New York's. For Texas and Illinois, I was only able to see complaint data for the most recent six-month reporting period. Texas electric

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electricity and gas accounts in the denominator when performing the calculation. It is shown both ways because the data is not available to determine how many customers receive both electricity and gas from ESCOs in New York.

suppliers received 1,037 complaints between January 1 and June 30, 2017.[14] In New York, 1,201 initial complaints were received in that same time frame against all ESCOs. In Illinois, 649 complaints were received between October 2016 and March 2017 against electric suppliers.[15] In New York, 1,228 initial complaints were received in that same time frame against all ESCOs. I was able to track Pennsylvania complaint data back to 2010, so have done a bit more comparative analyses with the Pennsylvania data.

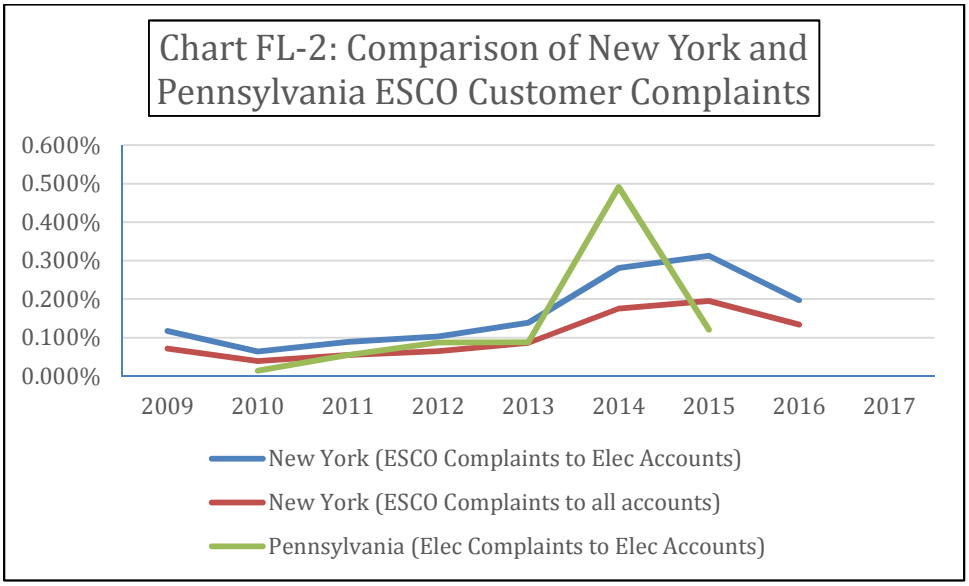
Robust electric competition began in Pennsylvania in one utility in 2010 and across the remaining utility service territories in 2011. Today, more than 2 million customers in Pennsylvania are procuring electricity from competitive suppliers. The data shows that over a six-year period from 2010 to 2015, almost 15,000 complaints were filed with the Pennsylvania Public Utility Commission. The number of complaints peaked during the Polar Vortex in 2014. In fact, the percentage of ESCO-related complaints in Pennsylvania was higher than in New York during the Polar Vortex. Chart FL-2 compares the percentage of ESCO customers who filed complaints in these states.[16] The percentage of customers

[14] See: https://www.puc.texas.gov/consumer/electricity/CustomerComplaintStats.aspx.

[15] See: https://www.pluginillinois.org/ComplaintGrid.aspx

[16] The New York data is presented the same way it is presented in Chart FL-1, with two different trend lines. The Pennsylvania data shown above excludes complaints related to ESCO gas service because the data for gas and electric complaints and customer counts come from two separate areas. Additionally, there is no data linking customers that might be receiving both energy products from ESCOs. In 2014, at the

complaining in Pennsylvania hovered near the percentage of complaints in New York prior to the Polar Vortex.



The Polar Vortex caused a spike in complaint activity in Pennsylvania, but that Commission responded vigorously, flexing its regulatory authority over the competitive supply community, opening targeted investigations of specific companies' activities and issuing fines where appropriate. The Pennsylvania regulators have not threatened to take away competitive supply options from customers. They have simply applied enforcement mechanisms over the market participants, sending a strong signal to the retail markets that the Commission will

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peak of the Polar Vortex, the Pennsylvania PUC received 975 complaints related to gas ESCO service, on an ESCO customer base of approximately 358,000, yielding a complaint rate of approximately 0.27%. That would lower the peak slightly on the graph shown in Chart FL-2.

not tolerate certain behaviors. The result was an immediate drop in consumer complaints.

Q28. Have you reviewed any data relative to the amount of complaints against the utilities in New York?

A28. I have. I have reviewed the Commission's customer complaint data for 2016. This data reflects the most current annual review of the market.

Q29. How many complaints were initiated against the utilities in New York in 2016?

A29. In 2016, the utilities collectively had 12,890 initial complaints made against them in 2016.[17]

Q30. How many complaints were made against ESCOs in New York in 2016?

A30. The ESCOs in aggregate had 2,995 initial complaints against them – less than one-quarter of the number of complaints received against the utilities.

Q31. How do those numbers compare?

A31. Interestingly, I find that the ESCO complaint rate is virtually the same as the utilities' complaint rate. Table FL-2 calculates the complaint rate in 2016 using only residential customers in the denominator of the calculation. The available complaint statistics do not distinguish residential from non-residential complaints. Thus, in the absence of data from the Commission that shows

[17] Reports on ESCO and Utility Complaints in New York are available at http://www3.dps.ny.gov/W/PSCWeb.nsf/All/448C499468E952C085257687006F3A82?OpenDocument

otherwise, I assume the majority of complaints listed on the Commission's website are from residential customers. This chart also calculates the utility complaint rate two separate ways. I present two separate calculations because of a limitation in the data regarding dual fuel customers. The available data does not identify which complaints are related to gas versus electric service and similarly there is no way to know how many customers receive both commodity services from their provider. In the "Elec. and Gas Customer Rate" column below, I divided the respective complaint number, for ESCOs and utilities over the total number of residential accounts counting both gas and electric accounts in the denominator. Under this approach, the complaint rate is virtually identical for ESCOs and utilities. While this approach may double count some dual fuel customers in the denominator, this double counting occurs on both the ESCO and utility number. Another approach is to only include electric accounts in the denominator. This is the calculation shown in the "Elec Customer Rate" column below. Under this approach, the ESCO rate of complaints is actually lower than

the utility rate.

Table FL-2: Comparison of ESCO Complaint Rate to Utility Complaint Rate in 2016 (Residential Customer Count)

Business	Complaints	Residential Customers Electric	Residential Customers Gas*	Elec Customer Rate	Elec & Gas Customer rate
ESCOs	2,995	1,210,374	720,000	0.247%	0.155%
Utilities (Less ESCO Customers)	12,890	4,702,494	3,780,000	0.274%	0.152%
Utilies (All Customers)	12,890	5,912,868	4,500,000	0.218%	0.124%

* = Exact Gas Customer Count and distribution b/t residential and non-residential not available

Table FL-3 shows the same data, only it incorporates all customers, including C&I customers into the denominator. It shows the same result. Depending on how you calculate the complaint rates, the utility rate of complaints is either slightly higher or slightly lower than the ESCO complaint rate. This table uses the same gas numbers as above, because there is insufficient data on the PSC website to ascertain exact amounts of gas customers, there rate classification and the gas switching rates.

Table FL-3: Comparison of ESCO Complaint Rate to Utility Complaint Rate in 2016 (All Customer Count)

Business	Complaints	All Customers Electric	All Customers Gas*	Elec Customer Rate	Elec & Gas Customer rate
ESCOs	2,995	1,528,128	720,000	0.196%	0.133%
Utilities (Less ESCO Customers)	12,890	5,317,584	3,780,000	0.242%	0.142%
Utilities (All Customers)	12,890	6,845,712	4,500,000	0.188%	0.114%

* = Exact Gas Customer Count and distribution b/t residential and non-residential not available

Q32. What do you conclude when looking at this complaint data?

A32. First, and most importantly, I conclude that the rate of ESCO complaints is not dissimilar from that of the utilities. ESCOs may have had a higher rate of complaints during the Polar Vortex, an unusually disruptive period, but the complaint rate has subsided to relatively the same level as for the utilities. However, it must also be noted that the utilities benefited from some regulatory protections during the Polar Vortex period, such as the cost deferrals noted in Dr. Makholm's testimony (*see* RESA-JDM Testimony). Given that the ESCO complaint rate is relatively the same as for the utilities, it would be unfounded to conclude that the ESCO market is providing inferior service to consumers or is indicative of widespread misconduct or abuse. This supports my overarching conclusion discussed elsewhere that the Commission should focus on targeted enforcement in response to specific ESCO violations instead of imposing sweeping pricing and product restrictions on the entire marketplace. More fundamentally, I conclude that energy consumers everywhere are engaged. They expect certain levels of service and if they those levels are not delivered, they take matters into their own hands and take the actions necessary to get their issues resolved. This consumer engagement is a sign that the market is functioning.

V. RETAIL CHOICE IN NEW YORK

Q33. Are you familiar with the New York Retail Choice Market?

A33. I am. The two energy suppliers that I was employed by during my career both offered retail energy products in the New York market.

Q34. How long has electric retail choice been available in New York?

A34. New York was one of the early states to adopt and implement retail choice, beginning in 1997. As described in the Notice, New York recognized early that the regulated utility model was not maximizing value to the market. The State was looking for alternatives to "spur innovation in the creation of value-added products, particularly energy efficiency services that regulated rates may not provide."[18] In a rate-regulated monopoly paradigm, customers had no options and the utilities were not driving innovation.

Q35. Has deregulation spurred innovation in the creation of value-added products?

A35. Yes. Deregulation, which is more appropriately referred to as "restructuring" or "retail choice" given that ESCOs remain subject to significant oversight and regulation, has spurred the creation of many value-added energy products, including some commodity-only products that incentivize and enable efficient energy consumption and "commodity-plus" products that offer additional bundled

[18] Notice, at page 1.

services or benefits to consumers. The New York market already has over 1,200 MW of electricity demand response participating at the New York Independent System Operation ("NYISO").[19] The deployment of Distributed Energy Resources ("DER") (exclusive of demand response) has already reduced the NYISO peak electric load by approximately 650 MW. The NYISO expects that the system peak will be reduced by almost 3,000 MW through the deployment of DER by 2026.[20] I discuss other more retail-specific value-added products below.

Q36. Could you please provide a few examples of value-added retail energy products?

A36. Yes. It is very common to see energy products today bundled with smart thermostats. The bundling effectively finances the purchase of the thermostat, which could sell for as much as $250 at retail. Deployment of the thermostat should allow the customer to realize savings on heating and cooling bills (by doing nothing but installing the thermostat). For example, Nest Thermostats can lower the amount of natural gas used for heating by approximately 10%. They can lower the amount of electricity used for cooling by approximately 17%.[21] Additionally, the remote features of the thermostat allow for control of the

[19] NYISO, Power Trends 2016, The Changing Energy Landscape, p. 5.

[20] NYISO, Power Trends 2016, The Changing Energy Landscape, p. 11.

[21] See: https://nest.com/downloads/press/documents/energy-savings-white-paper.pdf.

temperature while away from the thermostat. A smart thermostat can also provide a level of insurance to a homeowner who is traveling as well. For example, if a furnace breaks down while a family is on vacation, the thermostat can alert the homeowner that the house is getting too cold. The customer could then take actions while on vacation to ensure that the pipes in the house do not freeze. A smart thermostat could also be utilized to engage the customer in a demand response program, allowing for compensation to the customer as a capacity resource, energy resource, or both. I have witnessed many ESCOs deploying these and other value-added services and technologies in markets across the country. I have attached **Exhibit__(FL-4)** which is a collection of recently published articles that describe ESCO investments in alternative service providers, new products and new technologies. Even in instances where a technology provider is not a retail market participant (Nest, for example), I am aware of several instances where these providers are working with ESCOs to co-market and deploy their technologies.

Q37. Could you provide an example of commodity-only energy products that are value-added products?

A37. Yes. I am particularly fond of time-of-use pricing and pre-paid energy products. Under time-of-use products, customers will typically curtail their use of some electricity-consuming products until the electricity is less expensive. A

comprehensive study recently released by ACEEE showed that time-of-use rates reduce peak-load consumption quite significantly. The study also investigated whether moving electric consumption to less expensive periods would incentivize an increase in consumption. The ACEEE study showed that on average, across 50 time-of-use programs implemented by utilities, consumers reduced total electric consumption by an average of 2.1%.[22]

Pre-paid electricity products have also been shown to induce electricity conservation. Participants in pre-paid electricity programs are shown to reduce electricity consumption by between 10% and 15%.[23]

Q38. Do you consider Fixed-Price energy products to be value-added products as well?

A38. Yes. In New York, the utility default service price is a price that varies monthly based on actual market conditions, utility forecast of market conditions and other non-market factors such as utility deferrals and prior period reconciliations.

Many customers prefer a simple, contractual fixed rate. As shown above, 91% of consumers across the country opt for a fixed-price mortgage, at a cost of hundreds of dollars monthly. For many customers, a fixed price provides peace of mind.

[22] Brandon Batz, American Council for an Energy-Efficient Economy, Report U1702, *Rate Design Matters: The Intersection of Residential Rate Design and Energy Efficiency*, March 2017.

[23] Nat Treadway, Distributed Energy Financial Group, LLC, *Prepayment, Conservation and Behavior*, Presented to the Behavior, Energy and Climate Change Conference, December 8, 2014, See also: Cobb EMC, https://www.cobbemc.com/content/how-prepaid-electricity-saves-energy.

For customers trying to manage energy expenses, a fixed-price contract for electricity and/or natural gas enables them to set a budget for a year or two or longer. The ability to lock into a budget long term, to protect against inflation and to shield from energy market swings, provides tremendous value to customers.

Q39. Do variable-rate products also offer value to consumers?

A39. Yes. I recognize that there has been concern regarding variable-rate products, particularly following the Polar Vortex. However, variable-rate products can and do offer value to certain consumers. Variable-rate products can be a useful bridge service when customers are in between fixed-rate price plans. They might also be useful when planning a sale of a home or business. Alternatively, a customer may be willing to assume price volatility for the opportunity to save money in the long run. Also, as smart meters are deployed, a number of innovative rate designs and energy management services will be dependent on some form of variable or index-based pricing to maximize value to the consumer.

Q40. Is it reasonable to conclude that the New York ESCO market is failing to provide value to customers?

A40. No. The ESCO business model is dependent on providing value to a customer. Indeed, if customers did not perceive value they would not elect service with an ESCO in the first place. It is perplexing to me that anyone could conclude that a

market in which over 2 million electric and natural gas consumers have affirmatively chosen their energy supplier is failing to provide value.

Q41. Can the utilities become an adequate avenue for delivering value-added services to New York customers?

A41. No. An over-reliance on utilities to offer such services would shift risk unnecessarily back to customers. Under a regulated regime, if a utility made a bad hedge, or other type of bad investment, the customers were forced to pay for that mistake. This was one of the central reasons for moving from a regulated regime to a deregulated market construct. In a restructured market, if an energy company makes a business mistake, it is the responsibility of the energy company. Customers are no longer forced to bear the financial burden of poor business decisions made by an ESCO. Although an ESCO may attempt to recover its costs through its end-use prices, unlike the utilities, an ESCO does not have captive customers. With restructuring, the default service utilities have become expert in the delivery of electricity and gas, but their ability to manage complex portfolios of energy contracts and markets has waned. Utilities are simply pass-through entities when it comes to the energy commodities. ESCOs are now in the role of managing risk and commodity exposure for customers. ESCOs will commit to commodity positions with wholesale providers of electricity and gas. They will manage customers' retail load and their wholesale portfolios to match supply with

demand. Any deviation from perfect balance is borne by the suppliers. To protect against this risk, ESCOs develop pricing programs, demand management programs, efficiency programs and more to balance, as nearly as possible, supply and demand. If a utility were to engage in this business, imbalances would be borne by ratepayers. Because of the ratepayer backstop, the incentive to manage a portfolio to a high degree of precision would diminish. It would be a tall order to reverse the restructured utility model, and such a reversal would add significant costs and risks to consumers at the same time.

Q42. What do you believe is the state's objective for energy products and services that are available to customers?

A42. In the Notice, the Commission expressed frustration that "there has been little innovation, particularly in the provision of energy efficiency and energy management services."[24] Thus it would appear that energy efficiency and energy management services and perhaps other types of energy-related value-added products are desired by the State.

Q43. How can ESCOs help the state meet these goals?

A43. In the Notice, the Commission correctly noted that "[w]hile a well-designed market could offer these consumer opportunities, it simply does not exist

[24] Notice, at page 3.

today."[25] The well-designed market the Commission is envisioning does not exist in New York today. However, the products that the Commission desires do exist today. They are being offered in other markets around the country. Some are even offered in New York currently. Most notably, the retail electric market in Texas is flush with suppliers, innovative products, energy efficiency products, time of use rates, and products bundled with services such as HVAC tune-ups and insurance policies, smart thermostats, demand response, loyalty points, airline miles, charitable contributions and more. Customers in Texas experience some of the lowest-cost electricity in the country and relatively high customer satisfaction scores. The best option for New York to achieve the goals it desires is for New York to improve the current retail market. Under the right market design, suppliers of gas and electricity could offer real-time energy efficiency and energy management products. For example, customers could be provided with real-time data about consumption and pricing to empower their own conservation decisions. They could be provided energy management products that control devices remotely, either by the customer or a supplier. With real-time metering, a customer could get daily updates by text about the amount of money spent on electricity or gas that day, or a notice about an unusual blip in consumption. The

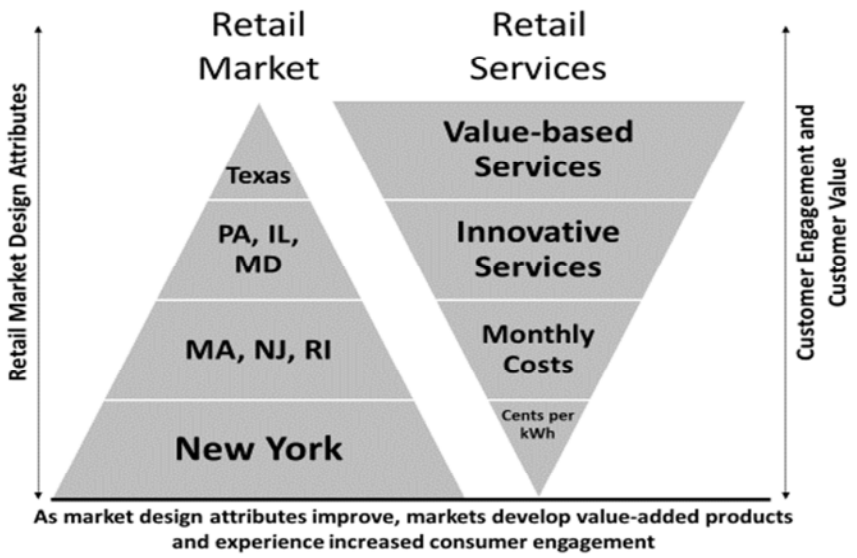
[25] Notice, at page 3.

key to enabling these products is a more robust utility infrastructure and market design.

The New York market, while it may have been innovative twenty years ago when first walking the path to restructuring, has seen little improvement since then. Metering infrastructure and data access is far from state-of-the-art. Utility protocols for data access are cumbersome. The primary billing mechanism for residential customers is still the utility invoice and it still is delivered monthly, well after the electricity is consumed.

Chart FL-3, below, is representative of how New York has stagnated in its efforts to create a robust retail electricity market. Customer engagement and the creation of customer value are directly aligned with electricity market design. New York sits at the bottom of this matrix.

Chart FL-3: Retail Market Attributes Align with the Delivery of Value-based Energy Services



The second tier of states is slightly more advanced than New York. These states have more developed efficiency programs and have a less hostile regulatory environment for retail suppliers. They also offer a fixed price default service product, protecting customers from spot market volatility and offering a slightly more valid (but still not "apples to apples") benchmark against which to compare termed supplier prices. Products improve significantly in the third tier with advanced metering which can be seen in Pennsylvania and Maryland. These states have deployed smart meters and have favorable regulatory climates for

retail suppliers. In Texas, which stands alone at the top of the spectrum, with fully functioning advanced metering, real-time data availability, supplier consolidating billing, and other robust retail attributes, customers are fully engaged with their electricity providers and products, capitalizing on time-of-use products, bundled products, demand response, peak-time rebates, pre-paid energy and more. In Texas, the utilities work in concert with the retail suppliers to facilitate retail choice and supplier consolidated invoicing. Provider of Last Resort ("POLR") service, which is Texas' form of default service, is provided by market participants, not the utilities. Notably, POLR in Texas is not designed to be a competitor or comparison product to ESCO service. Rather POLR is intended only as a backstop service for when a customer's chosen supplier abruptly exits the market. In the Texas market, customers must manage their electricity in the same way they manage cell phones, insurance, leases, and other products and services -- if they want the service, they must choose to receive the service from a service provider.

If the market design is correct, the advanced products will evolve. In the Texas market, consumers actively seek out innovative products and services and they are readily available. In more advanced markets, the participants invest more heavily on what would be considered traditional sales and marketing techniques such as radio, television, and print advertising to reach customers. **Exhibit__(FL-5)** is a

collection of representative marketing collateral showing the traditional marketing channels used in markets around the country.

Q44. What types of changes would be required in New York to create a more robust retail market that can deliver on the state's energy policy objectives?

A44. The utilities need to invest in upgraded infrastructure. For example, advanced metering and customer access to data will be required to achieve a robust deployment of energy efficiency and energy management services. Data sharing platforms will need to be enhanced to deliver the more granular data from smart meters to customers, ESCOs and perhaps, other third parties. Additionally, a much more robust billing framework is needed. Currently, ESCOs serving residential and small commercial customers are limited in all practicality to a utility consolidated invoice providing a rigid format and limited space for the supplier to show its charges. The utility billing systems must evolve, or preferably the Commission should allow supplier consolidated billing such that the suppliers can define the billing interface with customer. Value-added energy services and innovative energy management products will be deeply reliant on communicating with customers and presenting customers with useful and actionable information. This can-not be achieved under the constraints of the current billing paradigm.

VI. OVERARCHING STATE POLICIES

Q45. You have discussed some of the state goals for retail electricity markets. Does New York have other overarching policy issues of importance?

A45. Yes. I see three very important public policy initiatives in motion at the state level where the ESCOs will play an instrumental role in delivering success. These are: (1) the REV initiative – Reforming the Energy Vision – which lays the groundwork for efficient operations of the electric grid in New York; (2) the utility-focused earnings adjustment mechanisms (also known as EAM) that provide significant financial incentives for the utilities to deliver more efficient use of the electric grid; and (3) the "80 by '50" goal – reducing greenhouse gas emissions by 80% by 2050 -- a goal set by the Governor which will largely define the resource allocation for energy consumption over the next few decades. These State policy initiatives are inter-related. The REV goals include: (1) a 40% reduction in greenhouse gas emissions from 1990 levels; (2) an end-state where 50% of electricity consumed in New York will come from renewable sources by 2050; and (3) a 23% reduction in energy consumption of buildings from 2012 levels.[26] The primary goal of the Clean Energy Standard (also known as CES) is to have 50% of all electricity consumed in New York come from renewable

[26] See: https://rev.ny.gov/

resources by 2030, which is a bit more aggressive than the REV goals. Finally, the EAMs, while somewhat more complicated, are an integral piece of the state-wide mix of policy goals. The EAMs include direct energy consumption reduction goals, and they also include outcome-based goals that include a reduction in energy usage per customer (energy intensity), a reduction in peak load, and a system-wide DER deployment goal.

Q46. How do you envision the retail suppliers helping the state deliver on these aggressive goals?

A46. ESCOs are the primary interface between customers who interact with the market and the market operators – currently the NYISO, but perhaps the distribution service providers in the future. Many of the ESCO business models have already developed well beyond delivering the energy commodity only. These companies are now developing and installing solar and other distributed energy resources, developing demand response programs, investing in smart thermostat technologies and other smart home products, offering home comfort systems and home energy services, aligning with energy efficiency companies and others. As discussed above, advanced products and services are being delivered in other retail energy markets around the country and around the world. In those markets, ESCOs deliver the policy goals by developing innovative products while educating customers about those products. ESCOs will not likely be selling

"REV" to an end-user. Most customers will not know or care what "REV" means. However, ESCOs can and will sell specific products and services that can act as conduit for delivering the goals of REV if they are allowed. Similarly, ESCOs won't be selling the fact that the utilities can earn hundreds of millions of dollars with deployment of energy efficiency and DERs. They will be selling energy efficiency and DERs as tools to save the customer money and improve the environment. If the market is structured correctly, all parties win –the utilities, the ESCOs and the State, and most importantly, the customers.

The important aspect for the State and the utilities to consider in this mix of policy initiatives is that ultimately, the ESCOs must develop a stronger relationship with the end-use consumer. The ESCOs already have developed sales channels, marketing pipelines and information systems to communicate with customers in the market. The ESCOs provide the most efficient channel to implement REV and achieve the EAM and CES goals. And notably, the ESCOs will be instrumental in delivering on these goals without compensation from the State or from "ratepayers" and they will not be guaranteed any cost recovery that regulated utilities would demand.

Finally, on the issue of carbon reduction, the ESCOs serve two functions. First, they ultimately are the channel to sell electricity and gas products to the end users. ESCOs can promote fuel switching, including to DERs, to support the policy

initiatives. Green products are already in the mix of products offered and those options can be broadened. ESCOs marketed renewable energy products long before the State adopted mandated portfolio standards. More importantly, however, to achieve the goals set by the State, the ESCOs will need to be deploying solar resources, storage resources and other DERs that decrease the burden on traditional power plants. In addition, they will need to continue to expand their offerings in demand response, energy efficiency and other conservation products and services.

The ESCO community can provide significant assistance in achieving the goals of all three initiatives. The Commission and the utilities simply need to enable them to do so by implementing the market reforms discussed below. The Commission and the utilities need to welcome the "ESCO of the Future" to the New York market.

Today, the Commission has a choice for how it will execute on its future energy policy vision. It can attempt to over-regulate, restrict and even prohibit the products that ESCOs can offer. If it does so, it will risk driving the best partners for achieving the goals of REV, CES, the EAMs and perhaps, other policy goals out of the New York market. Or, it can set in place policies that improve transactional and operational structures for how ESCOs enroll customers initially, and engage with customers on an hourly or daily basis to create an environment

that will attract ESCOs who can deploy new and innovative energy management options for customers, all of which will be required to achieve the goals of REV, CES and the EAMs.

VII. ESCO OF THE FUTURE

Q47. You mentioned the "ESCO of the Future." What does that mean?

A47. As discussed above, ESCOs can offer products and services that deliver significant value to customers and to the markets as the whole. The ESCO of the Future is one that provides innovative gas and electricity commodity products that customers want like fixed-price and other cost-stability offerings, time-of-use products or pre-paid electricity products and more. In addition, an ESCO of the Future will offer its customers incremental services such as energy efficiency solutions ranging from low to high-tech. For example, attic insulation and hot water heater blankets and wrapping of pipes fall on the low-tech end. Smart thermostats and HVAC efficiencies, in-home energy management and direct load control fall on the high-tech side. Some ESCOs will be developing relatively large scale solar and co-gen facilities at commercial and industrial sites or community-based solar projects. They will be delivering grid interaction products and services such as demand response and storage capabilities. Finally, and perhaps most importantly, they will engage with consumers through a variety of communications channels so that customers can and will be engaged in managing

their electricity and gas consumption when needed. An ESCO of the Future will offer other product and service bundles that may not be directly energy related, but nonetheless can help foster customer engagement and achieve the goal of more efficient energy consumption. What today may start as an energy/non-energy product bundle, such as an electricity plan bundled with Cable TV, may tomorrow become a great way to encourage customers to conserve energy. Imagine receiving an alert while watching your favorite TV show that energy prices are expected to spike and encouraging you (or perhaps even an offer to pay you) to change the temperature on your thermostat. This is one small example of the capabilities of the ESCO of the Future for New York.

Q48. Is this a feasible business model for the ESCO community?

A48. Yes. These companies exist today and are operating in other markets around the country and world. ESCOs are keenly interested in delivering on this future energy vision because ESCOs must innovate and engage their consumers to survive in a fiercely competitive industry. The current New York market structure is not the desired end state for competitive energy markets.

As the retail markets have evolved, the agendas for industry conferences have evolved. In the early days of restructuring, the New York restructuring model was often noted as the model to replicate. Then, as the Texas market opened, it took over the stage. Once Texas deployed its smart metering infrastructure,

advanced products and services became the topic of interest for attendees. Today, it is rare for someone to attend an energy conference where the discussions are limited to the commodity component of the market. This discussion is happening only in New York. The agendas for nearly every industry conference are laden with panels, keynote speakers, executive insights and other content focused on ways to deploy innovative and customer-relevant service offerings – products and services that empower the customers and encourage them to engage with the grid. A review of the public ESCO business announcements that are compiled in **Exhibit__(FL-4)** also demonstrates that ESCOs are strategically focused in this direction. These announcements include:

- ENGIE, formerly GDF Suez Energy Resources, has recently completed a restructuring that sold off its merchant generation business and the company is now strategically focused on providing new, innovative and consumer-focused energy solutions.[27]
- TerraPass has executed a partnership with Hertz car rental company to offer carbon offsets.[28]

[27] See: http://www.retailenergyx.com/; http://www.engieresources.com/engie-resources-launches-engie-advantage-to-help-customers-finance-energy-efficiency-initiatives-press-release.

[28] See: http://www.retailenergyx.com/sy.cfm/3027/Hertz-Partners-With-Retail-Supplier-Affiliate-To-Offer-Carbon-Offsets-To-Customers

- Direct Energy's parent company, Centrica, is deploying a global connected homes strategy with its Hive home energy management products.[29]
- An LED lighting and solar development company has recently acquired an ESCO.[30]
- A smart home device company has acquired a Texas-based ESCO and intends to offer integrated home automation and green energy offerings nationwide.[31]

It is clear that the ESCO business desired by this Commission is achievable. It exists in other markets. However, the Commission cannot just wave a wand and make it happen. The Commission must be the leader and direct the utilities to build the platforms upon which the ESCOs can execute the ESCO of the Future business model. ESCOs must be fiduciaries of their investor capital and must be strategic in which markets they pursue. The energy landscape is changing globally and some markets will be more attractive than others. New York was once positioned as a retail energy market leader, and with the REV initiative, has

[29] See: http://www.energychoicematters.com/stories/20170413b.html

[30] See: http://www.energychoicematters.com/stories/20160926aa.html

[31] See: http://www.energychoicematters.com/stories/20170125z.html

the opportunity to again position itself as a leader in attracting this type of strategic investment.

Q49. Why can't the utilities fill this role?

A49. In addition to the issue of aligning risk appropriately as discussed above, significantly more important to achieving aggressive policy goals is the sheer magnitude of the market and the goals of the State of New York. No single company can provide the services outlined above to all the customers in a utility's service territory. The customer count is simply too large and the customers' interests are too varied. For example, ESCO A might thrive in selling solar in upscale neighborhoods but the willingness to curtail load through demand response initiatives in those neighborhoods might be near zero, at any price. ESCO B might offer great energy efficiency and demand response tailor-made for single-family detached homes built in the 1960s with one or two central air conditioning units. ESCO C might focus its products on high-density apartment buildings for all income brackets. It will be much more effective to have a diversified set of competitively motivated market participants actively working to reach customers with new products and services than to rely on the handful of regulated utilities to deploy programs under cost-based regulation to meet the goals that the State's policy leaders have set.

Q50. Do ESCOs offer any advantages in customer outreach?

A50. Yes. ESCOs have already invested millions of dollars in customer outreach including advertising, marketing, and information system development. Their business models are designed to reach thousands of customers annually. They already have direct access to a significant customer base and are generally aware of whom the energy decision maker is within their customer base.

Q51. What do you envision the role of the utility to be going forward as the stakeholders in the state strive to meet the goals you have mentioned?

A51. To incorporate the ESCOs of the Future and to facilitate achievement of the State's policy objectives, the utilities need to evolve to become the "Utilities of the Future." The utilities need to become the facilitator of these ESCO services, and not the provider or the "gatekeeper." Under today's policy framework, the utilities own the tools required to achieve the State's goals, including the metering infrastructure and customer data. The utilities should invest heavily in these pieces of the network with the goal of making real-time energy consumption data readily available to consumers and their third-party representatives. The utilities must also be open to a shift in the billing paradigm to allow ESCOs to directly bill their products and services to customers. This shift from a utility consolidated billing platform to ESCO consolidated billing, where the utility's charges for distribution service are included in the ESCO bill, will be essential. The

challenge of operating the ESCOs of the Future is much greater if the ESCOs cannot directly engage with their customers through the bill.

Q52. Do ESCOs have any experience with Supplier Consolidated Billing platforms?

A52. Yes. In Texas, Supplier Consolidated Billing is required of all ESCOs. Every customer in the competitive areas of the Texas market receives a supplier bill for commodity, wires charges and supplemental products and services, if applicable. The Texan utilities send only several dozen bills every month – to the ESCOs for their wire charges. Additionally, Supplier Consolidated Billing is required in the Georgia gas market. Supplier Consolidated Billing is also required in the Alberta, Canada, gas and electric markets. Many of the suppliers operating in those markets are currently operating in New York.

Dual billing, where a customer receives two bills, one for commodity supply and one for delivery, is allowed in New York. While dual billing is utilized frequently for larger commercial and industrial customers, residential customers have consistently indicated a preference for a single bill. Because of this dynamic, most of the restructured markets, including New York, have defaulted to a utility consolidated billing platform where the utility continues to bill the customer. Unfortunately, the billing capabilities of utilities are extremely limited. This practice limits the products and services available in the market. A retail supplier cannot sell an integrated value-added, market-interfacing energy product or

service if it cannot send the customer an explanatory invoice every month (or more frequently). The billing protocols implemented in New York provide relatively little flexibility and, as a result, the evolution of innovative products has been constrained. The current restriction to utility consolidated billing is a barrier to a more innovative market that offers a wealth of value-added products and services.

VIII. NYPSC NOTICE

Q53. In the Notice that gave rise to this testimony, the Commission has asked for comment on 20 statements or questions. How do you respond?

A53. Because the Commission asked for responses to those questions and statements, I am providing a response. I am including my responses to those questions as **Exhibit__(FL-6)** to this testimony.

Q54. Why are you including them as an Exhibit rather than as the direct content of your testimony?

A54. I am responding to those inquiries because, when the Commission asks specific questions, it deserves specific answers. However, I am including them as an Exhibit because I believe the questions are based on flawed premises and, as a result, are driving to unhelpful answers.

Q55. Why are the premises for the questions flawed?

A55. The questions assume that only certain supplier product offerings offer value (i.e., those that save customers money and those that offer energy efficiency and energy management services).[32] However, as discussed above, there are numerous characteristics that can add value. For instance, a customer may want budget certainty, which can only be achieved through fixed-price product offerings available from ESCOs. Or a customer may desire another pricing arrangement that better suits its needs, such as block/spot pricing, that is simply not available from the utilities. Limiting ESCO product offerings as contemplated in the Notice will significantly reduce, and potentially eliminate, these product offerings in New York.

The questions also assume that ESCOs are "overcharging" customers who pay more than the comparable default service rate.[33] However, as discussed above, this does not reflect an apples-to-apples comparison for numerous reasons. First, the comparison of a variable-rate and fixed-price product ignores the budget certainty value offered by a fixed-price product. Second, the comparison fails to recognize that there are still supply-related costs captured in the utilities' delivery charges which mask the true cost of supply and artificially deflate the default service rates. For example, National Grid "currently recovers the costs to procure

[32] *See, e.g.,* Notice, Question 1.

[33] *See, e.g.,* Notice, Question 2.

electricity to serve its supply customers in ***both*** the commodity ***and*** delivery portions of its rates . . . ."[34] In stark contrast, ESCOs can only recover these costs through their supply prices.

Q56. What are the true costs of default service?

A56. There are essentially three types of costs: (a) wholesale costs; (b) procurement and energy provision costs; and (c) administrative costs. For instance, for electricity, the wholesale supply costs are billed through the NYISO. These NYISO costs can be identified as either billed to electrical load (i.e., billed based on energy) or as billed to transmission (i.e., only billed to transmission customers). If the costs are billed to electrical load, those costs are incurred by both ESCOs and the utilities to provide supply service. However, all of these costs are not currently being billed through the utilities' default service rate; instead, some of these remain in the delivery portion of the bill. Conversely, ESCOs must collect all these costs through their supply charges.

In addition to the wholesale costs of energy, the utilities also incur other costs associated with the procurement and provision of default service, including:

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[34] Docket 17-E-0238, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service;* Docket 17-G-0239, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Gas Service* (collectively, the "National Grid Rate Case"), Testimony and Exhibits of: Electric Supply Panel (Elizabeth D. Arangio, Charles F. Willard), Book 3 (Apr. 28, 2017), at 10 (emphasis added).

- Energy procurement costs, portfolio management costs and incentives;
- Hedging costs, including costs associated with forward hedges placed at the highest point in the market; and
- Renewable Portfolio Standard ("RPS") costs.

The utilities also incur administrative costs to provide default service. For instance, earlier this year, "National Grid added a new employee in the Energy Procurement area whose responsibilities include performing analyses associated with daily and monthly set up plans and reviewing such plans based on actual weather and actual send out."[35] National Grid included the percentage of that cost allocated to Niagara Mohawk in its revenue requirements.[36] Conversely, ESCOs must collect all these costs through their supply charges.

Q57. Are there other costs the Commission should consider in comparing supplier offers with default service rates?

A57. Yes. The default service rate reflects the wholesale cost of supply without any mark-up or margin. Instead, the utilities collect a regulated rate of return in their delivery charges. In stark contrast, ESCOs must collect their margins. In addition, because customers are automatically placed on default service and must

[35] National Grid Rate Case, Direct Testimony of Elizabeth D. Arangio (Apr. 28, 2017), at 32.

[36] *Id.*

affirmatively select an ESCO, ESCOs incur acquisition costs for those customers, that the utilities simply do not.

Q58. How can the Commission account for these costs?

A58. Wholesale costs, procurement and energy provision costs, and administrative costs associated therewith are all costs related to the provision of energy that can be readily identified and easily quantified. Thus, to the extent these costs are improperly captured in delivery charges, they should be added to the default service rate before comparing those rates to ESCO prices.

Q59. Do you have other concerns with the specific questions posed?

A59. Yes. The questions posed in the Notice are focused on how ESCOs should be limited, how ESCOs should be regulated, what ESCO products and services should be mandated by the Commission and what ESCO products and companies are profitable. These questions are not going to give rise to any answers that are going to resolve any of the market issues or help meet any of the State's policy objectives.

Q60. What should the focus be?

A60. The Commission should focus on how ESCOs can help achieve the State's policy goals. To this end, the Commission should be asking two sets of questions – one to the utilities and one to the ESCOs. The utilities should be questioned about their plans to facilitate the achievement of the policy goals outlined by the State

and how other market participants fit into their plans. The Commission should be asking the ESCOs the corollary questions of how the ESCOs can facilitate achievement of the policy goals outlined by the State and what the ESCOs need from the utilities and the Commission to meet those goals. The Commission must inquire of itself what is more important – is it eliminating certain electricity and natural gas products by regulation, or is it achieving the greater vision of REV, CES and the EAMs?

Q61. As you noted in the opening of this testimony, the Commission has opened this line of questioning because there are reports of ESCO charges in excess of what the utilities would have charged. How should the Commission seek to further regulate the pricing and behavior of ESCOs?

A61. As I mentioned above, it is important to separate the issue of ESCO prices from any specific alleged market misconduct by a particular ESCO. I understand and support the desire by the Commission to protect customers. However, proactive market reforms will be more effective in doing so than will sweeping price and product restrictions. The specific and targeted market reforms that I discuss below will go a long way toward correcting any perceived problems with certain ESCO marketing practices. But most importantly, the Commission should address the perpetrators, as was done in Pennsylvania after the Polar Vortex, and let the other market participants continue to improve the market. The policy of

enforcement to dissuade bad behavior from a few companies should be preferred to incremental regulation that will stifle innovation. I support targeted policies to further regulate the behavior and qualifications of ESCOs, but caution against policies to economically regulate ESCO prices or restrict ESCO product offerings or that eliminate certain customers from the market.

Q62. Please explain why broad pricing and product restrictions would be counter-productive.

A62. The Commission's oversight of the market should be designed to weed out the bad players and allow the others to thrive. This will not be accomplished through regulations attempting to economically regulate the products and services of all ESCOs. In fact, such broad efforts will be counter-productive to the goal of protecting customers. It will reduce all output from ESCOs to a common, sub-optimal result. The "good players" – those who invest substantial capital and human resources in compliance and regulatory oversight – will likely flee the market due to the cost, complexity and uncertainty associated with such overly restrictive price and product regulations. By contrast, the "bad actors" will continue to ignore the rules but will likely gain market share as they face less competition.

Q63. What market reforms do you believe are needed to facilitate achievement of the state's policy goals but will also help the Commission in its quest to

correct some of the behaviors in the market that are tarnishing the ESCO reputation?

A63. I will describe several below, but one important issue for the Commission to consider is the default service design.

IX. DEFAULT SERVICE DESIGN

Q64. Can you please describe your understanding of the default service procurement model in New York?

A64. Yes. For electricity, the utility-provided default product is a monthly, variable product that reflects largely a pass-through of short-term wholesale market prices in the NYISO market. The utilities engage in some hedging activities, however, unlike in other states where utility procurements are public and transparent, in New York this hedging activity is not made public.

For gas, the utility-provided default service typically consists of the utility's average commodity cost of gas and the average demand cost of gas plus various monthly adjustments that vary by utility. The utility's average commodity cost of gas mainly includes pipeline variable transportation charges, storage costs, and gas supply costs. Depending on the particular month, gas supply costs may or may not include physical or financial hedges as well as gas withdrawn from storage. The average demand cost usually includes fixed rates and charges associated with pipeline and storage capacity charges.

Q65. Is the New York Default Service Product a good product for consumers?

A65. Good is a subjective word. In my experience, the spot market price will yield a low price over long periods of time, but may be subject to significant volatility. That product could be good for some cost-conscious customers who could withstand big potential swings in the monthly bill, but could be very bad for customers who manage a tight budget from month to month. RESA Exhibit JDM-2 shows the electricity price volatility faced by customers on New York default service. Regulators in several other restructured states have opted to reduce price volatility of default service by utilizing full requirements wholesale contracts procured on a forward basis. This procurement approach is designed to reduce volatility of default service prices, but carries a small price premium for the stability. Mr. Makholm discusses the issue of volatility of New York default service prices in detail in his testimony filed in these proceedings.

Q66. Are there other negative features of New York's default service Structure?

A66. Yes. The variable nature of the utility default price may actually encourage ESCOs to offer a variable priced product. While there is nothing inherently wrong with a variable-priced product, some have raised concerns about ESCO over-reliance on such products. With the utility default price a monthly, variable rate, an ESCO can attempt to mimic the short-term energy default service product and with some of the tax incentives in play early in the advent of retail choice, it

was quite simple to offer some savings compared to the utility rate with little or no technical market expertise. This facilitated the entry of many ESCOs into the New York market.

Because of the simplicity of this market, and the ability for the ESCOs to offer superior products to consumers, this market design was praised by most in the ESCO community at the time and was frequently referenced in other states as a model market design to emulate. The assumption was that a variable-priced utility supply product would be easier to compete against because ESCOs could offer price stability as a selling point. To some extent, this assumption may still hold true, but the New York default service design never addressed other issues for this market to develop properly, such as fully unbundling additional default service related costs and actively educating consumers as to the volatility associated with the utility default model. In addition, in the gas market, the utilities rely on many regulatory support mechanisms such as post-period reconciliations and deferrals that contribute to inaccurate price signals.

Thus, the current market design that includes a non-transparent short-term utility-provided default service, reliance on a rigid utility consolidated billing system and lack of advanced meter technology, communications and other systems to support product innovation is not the right model moving forward. This antiquated market model has left the New York energy markets lagging in the provision of

value-added products and services, which are technologically feasible and being delivered in other markets. However, market reforms should be managed incrementally to allow ESCOs, customers, the utilities and the Commission to adapt to the evolving market design.

X. SUGGESTED MARKET REFORMS

Q67. How should default service be structured in New York?

A67. Dr. Makholm's accompanying testimony on behalf of RESA discusses the problems of retaining the incumbent monopoly utility in the default supplier role, from both an economic and market design perspective. I agree with his opinions and conclusions; however, I am not prepared to give a concrete recommendation on the appropriate default service model for New York at this time. There are pros and cons associated with each potential model. The Commission must first identify its desired goals. At that point, the Commission should convene a collaborative to modify the current default service model (and other energy market design issues) in a manner that will best achieve the State's desired policy goals. In general, any natural gas or electric default service structure should:

1. Encourage and enable retail competition and the development of value-added products and services.
2. Send accurate and meaningful price signals to consumers.
3. Prevent cross-subsidization.

4. Operate as a plain vanilla backstop to competitively supplied service instead of actively competing against retailer provided products.

Beyond these goals, the default service design should allow the markets to achieve the Commission's desired outcomes. In New York, these goals should include, at a minimum, achieving the objectives of REV, the CES and the EAMs.

Q68. Are there changes that should be made no matter what default service model is used?

A68. Yes. No matter what procurement and pricing model the Commission employs, it should require the utilities to appropriately reflect the ***full*** cost of providing default service to end use customers. In order for customers to make informed decisions about their energy supply options, they require accurate and timely price signals. Accurate price signals provide customers with the information they need to understand the value of competitive market offerings and to encourage load shifting, conservation, and energy efficiency.

To make these decisions, customers need to understand what portion of their rates and charges are regulated and non-bypassable (i.e., unavoidable cost[37] if a customer selects an ESCO) and what portion of their rates and charges are subject

[37] The unavoidable cost is a fixed, recurring (monthly or daily) charge that all customers have to pay whether or not they take electricity or gas supply from the utility or an ESCO. This unavoidable charge is the same for all customers, independent of the supplier of electricity or gas.

to competitive market forces and can be avoided if a customer selects an ESCO. To accomplish this, utility rates must be fully unbundled with costs properly allocated between the avoidable and non-avoidable portion of rates. To this end, the Commission should require the utilities to appropriately reflect the full cost of providing supply to end-use customers by maintaining an accurate allocation of costs between generation (i.e., avoidable) and delivery (i.e., non-avoidable) rates. The underlying decision of which costs are properly included in the utilities' avoidable rates and which are properly included in the utilities' non-avoidable rates should be cost-based and determined on cost causation principles. In particular, all of the supply-related costs discussed above should be allocated to the avoidable portion of rates. Indeed, an improper allocation of supply-related costs to non-avoidable rates is patently unfair to customers who choose competitive supply because they are paying duplicate costs and subsidizing the supply costs of those customers who choose to stay with the default service option. Further, because such an improper allocation results in "hidden" costs, customers are unable to identify the true value of their energy choices. Conversely, when costs are appropriately allocated between the utilities' avoidable and non-avoidable rates, consumers can properly evaluate the cost of supply services and avoid paying costs for which they are not responsible.

Q69. Can you briefly explain some of the different default service models that have been implemented in other markets to serve residential customers?

A69. Yes. There are several different electricity default service models that have been implemented or are under consideration. The most common default service model in the electricity markets is the theme of blending fixed price, full requirements wholesale contracts over a period of time so that the customers see a bit of price movement from period to period, but monthly volatility is minimized or eliminated. Some of these models include a portion of the load being procured in the spot market. The default service price change intervals range from quarterly to twice a year to annually. I am not aware of any default service plan that implements a static price for more than one year. This is essentially a wholesale default service design. In most states, the incremental costs associated with procuring the default service and managing the portfolio are passed through to default service customers but the preponderance of the costs associated with providing the retail service aspects are still borne by the distribution company and remain in base rates. In these markets, default service is effectively subsidized due to the failure to fully allocate and reflect all costs related to the provision of default service in the avoidable default services supply rate. Some ESCOs are not particularly fond of this model as it can perpetuate a comparison to the utility's seemingly fixed default service supply rate and may also lead to "boom/bust"

sales cycles, especially when the static pricing period is on the longer side. On the other hand, customers and suppliers can easily see and manage "savings" compared to the default price. This model produces a default service product that is in many ways more analogous to the types of hedged fixed-price commodity-only offers that are commonly marketed by ESCOs. However, these default service products, like the New York default service products, should not be mistaken as comparable to ESCO products.

Another default service model is the "retail" default service model. This model is used in Maine electric market and Ohio natural gas market. Default service is competitively bid as in the model above, but the service is a retail-level service. The host utility still provides the billing, but the retail provider performs the EDI transactions and billing transactions to facilitate the development of the bill and may handle some customer service functions. One advantage of this model is that, if properly implemented, it can address some of the cost-allocation and cross-subsidy concerns noted above. This is because as a retail product the supplier must account for its retail servicing costs in its bid price. The challenge with this model is that the default product still enjoys an advantage in the avoidance of customer acquisition costs. The default supplier also benefits from economies of scale when bidding for large blocks of customers, but also bears migration risk of customers moving to other suppliers. A problem with both the

wholesale and retail models is that the default service supplier selection is entirely on price. While price is a very objective criterion upon which to evaluate bids, such an exclusive focus on price may not align with other energy policy goals such as carbon reduction, deployment of value-added products and services or a greater deployment of renewables.

As an example of yet another model, Texas has adopted a true Provider of Last Resort (also known as the POLR) service. The electric utilities in Texas do not offer a "default" service or a "make no choice" service. All customers in Texas[38] are now on a competitive retail supply service. If for some reason a retail supplier can no longer support its customers (for example if the supplier suddenly exits the market), those customers are transferred immediately to the POLR provider, who is also a competitive retail supplier, until the customers can find a new supplier. In ERCOT, the Public Utility Commission ("PUC") of Texas appoints POLR providers on a non-voluntary basis. According to the Texas PUC, "POLR service is relatively high-priced, due to the costs associated with planning and the risk of serving an uncertain number of customers with uncertain electricity loads. POLR service is a safety net for customers whose chosen Retail Electric Provider (REP) is unable to continue service. This service is intended to be temporary and used

[38] Certain areas of Texas do not offer competitive choice, including the geographic areas outside of the ERCOT footprint and within some of the municipal and cooperative utilities within the ERCOT footprint.

only under rare circumstances when a REP is unable to provide service, or when a customer requests POLR service."[39] This model best facilitates the end-state (assuming it is coupled with other technological needs such as advanced metering and communications of meter data) goals of REV, EAMs, 50% by 2030 and 80% by 2050. However, it required a leap of faith in the market and a fundamental change in thinking by regulators. Texas took that leap in 2002 and it has proven to provide significant benefit to consumers in Texas. Other default service models that would blend attributes of the above are also viable.

Regardless of the end-state default service design, one immediate attribute that the Commission should consider implementing is a program wherein customers are prompted to affirmatively select their supply option. If a default supply option remains in the end-state market design, customers should be required to affirmatively choose this option instead of being placed on it automatically. As a quick reference tool, Table FL-4 summarizes the default service models discussed above, shows which states have incorporated each of the models and then summarizes the pros and cons of each default service model;

Table FL-4: Summary of Utility Electricity Default Service Models Used to Serve Residential Customers

[39] See: https://www.puc.texas.gov/consumer/electricity/polr.aspx.

Default Service Model	States	Market Attributes	Market Outcomes
Utility Procured Wholesale with fixed retail prices for multiple months	Maryland Wash, DC Pennsylvania Delaware New Jersey Massachusetts Rhode Island Connecticut Illinois Ohio	• Fixed Price to Compare • Stable price	• Effective Comparison Price (but still not apples-to-apples) • Boom/bust cycles for retail companies • Subsidization by distribution company • No margin for utilities, so pricing advantage to default service. • Delayed market signal
Retail	Maine	• Fixed Price to Compare • Stable Price • Retail Components Included	• Effective Comparison Price (but still not apples-to-apples) • Boom/bust cycles for retail companies • Less Subsidization by distribution company
POLR	Texas	• Last Resort Service • High Priced • Immediate movement on and off POLR (not meter cycle constraints)	• Nearly 100% of customers on competitive service • Product innovation • High Customer Satisfaction
Utility Regulated Price	California Michigan	• Regulated or negotiated price	• No market signal at all • Price to compare is opaque • Difficult regulatory processes
Monthly Variable	New York	• Monthly variable price	• Strong market signal (although delayed due

Table FL-4: Summary of Utility Electricity Default Service Models Used to Serve Residential Customers			
Default Service Model	States	Market Attributes	Market Outcomes
Price			to lack of metering infrastructure) • Lowest default service costs possible, over time • Most volatile default service price. • No valid price comparisons • Subsidization of default service • Drives to market commoditization

Table FL-4 describes various attributes of electricity default service across different restructured markets. Gas default service is generally not hedged in advance. The price for natural gas default service is generally a pass-through of market costs. In some instances, the commodity cost may be the cost at an indexed hub and the differential to deliver the gas from the hub to the utility is competitively bid and fixed.

Q70. Do you believe that a default service is needed in the market as a benchmark to measure other products?

A70. I do not. Like any other competitive market, the products and prices available from other ESCOs create the best benchmark to compare against because they sell

similar products. New York customers have ready access to over 140 offers for electricity and 120 offers for natural gas available on-line at the New York retail choice website, www.newyorkpowertochoose.com. A list that includes well over 100 valid offers in a competitive market is going to give the customers all the information they need to make a purchasing decision. I propose enhancements to the website below which will give customers even more information than what is currently available.

Customers are intelligent. Only a customer knows what is in its best interests. Customers purchase very complex products every day, including cell phones, insurance, stocks, school loans, home mortgages, etc., and associated term contracts with long-term financing, long-term leases and/or extended warranty periods. By comparison in many respects the electricity and natural gas markets and market pricing are more transparent with scores of data available from shopping websites (including the PSC's own www.newyorkpowertochoose.com site), supplier websites and even the federal government. Customers do not need their local utility to tell them what a "standard" product is worth or how it should be priced. JD Power has done a survey of customer satisfaction in the electricity markets in each of the last few years and customers in Texas have consistently rated that market higher for customer satisfaction than any other market. It is

clear from this survey that customers do not need a utility benchmark to be satisfied with their energy choices.

Some will argue the energy industry is complex so customers need to be protected. The energy market is no more complex than the cell phone market. Energy customers might not fully understand the ancillary services, capacity markets, pipeline reservations or other intricacies of the electric and gas markets. Similarly, most cell phone customers don't understand bandwidth auctions, cell tower contracts and communications technologies. Similarly, most customers buying cookies at a grocery store don't understand the underlying labor contracts, sugar import regulations, manufacturing requirements, emissions laws, packaging and transportation intricacies, bar coding and the other requirements that are required to get cookies in a grocery store. But they are comfortable buying cell phones products or cookies every day.

Q71. What other changes to the market should the Commission consider?

A71. In addition to the market design changes to default service discussed above, I would recommend changes that fall into five distinct buckets;

- Bonding and registration requirements;
- Transactional reforms;
- Reforms to the current set of Uniform Business Practices ("UBP");
- Market enhancements; and

- Investments in technologies related to the utilities' retail markets infrastructure.

Q72. Could you please describe your proposed changes to the bonding and registration requirements?

A72. The eligibility standards for participation in the gas and electric markets should be strengthened to encourage reputable ESCO behaviors. New York has been a market where new suppliers could enter to learn how to become a retail energy supplier. New York is moving to a very sophisticated market model under REV and no longer needs to be the market for startups to learn the retail energy business. Specifically, I recommend that the State impose a bonding requirement for all ESCOs. The amount could be fixed or could vary based on some objective measure of customer exposure.

Q73. How should the Commission determine the bond requirement?

A73. The Commission must first determine its goals for the market and then determine the types of companies it wants to serve in the markets. Other states have imposed bonding requirements on ESCOs. Some are relatively modest, fixed amounts as low as $50,000. Others like Pennsylvania, have been tied to the suppliers' in-state revenues. The Commission should convene a collaborative proceeding to assist in the determination of the appropriate dollar amount or methodology for deriving the financial assurance required. Regardless of the

amount, ESCOs should be allowed to utilize any of the commonly used assurance instruments, including surety bonds, letters of credit, cash collateral or parental guarantees from companies with a credit rating worthy of supporting a guarantee. I have included **Exhibit__(FL-7)** to this testimony, which is a summary of surety requirements imposed on ESCOs in other states.

Q74. Could this financial security requirement be utilized as an enforcement mechanism?

A74. Yes. This bond or other surety could be utilized as part of the Commission's enforcement toolbox as well. If a supplier was not acting in a manner consistent with the regulations, it could be required to forfeit some or all of that collateral. Additionally, if the Commission found through proper due process that an ESCO violated its regulations, the Commission could require a larger security obligation. These measures would incentivize compliance and reputable ESCO business practices.

Q75. Would you also recommend additional experience requirements as part of the ESCO eligibility process?

A75. Yes. The ESCO eligibility requirement should also ensure that ESCOs have demonstrated experience with wholesale energy procurement, energy risk management and hedging. For example, Illinois requires retail suppliers to demonstrate detailed managerial and technical experience by identifying at least

three management personnel with at least four years of experience with enterprise financial and administration responsibilities and buying and selling power in wholesale energy markets.[40] This type of provision will not keep a startup business out of the market. Rather, it would force a startup business to show that is was relying on experienced energy market practitioners to run key aspects of its business.

Q76. Should the Commission also review an ESCO's ability to offer energy-related value-added products and services as part of the eligibility review process?

A76. Yes. As part of an ESCO eligibility process, ESCOs should also provide information on their experience developing and offering energy-related value-added products and services such as demand response, energy efficiency, energy management or other services. If the ESCO had no experience in this area, it should be required to develop and present to the Commission a plan to develop these capabilities. Rather than a mandate for ESCOs to offer such products, these criteria would be added to the PSC's overall review of the ESCO's eligibility application. The PSC could consider the level of experience in offering such products (or the level of detail shown in the plan) as part of its determination of

[40] See: Subpart D of Part 451, Certification of Alternative Retail Electric Suppliers. http://www.ilga.gov/commission/jcar/admincode/083/08300451sections.html.

whether the ESCO has sufficient managerial and technical competency to be approved as a market participant in New York.

Q77. Could you please describe your proposed transactional reforms?

A77. Yes. I have several recommendations for retail market transactional improvements. The Commission suggested in the Notice that it expected "insistence from serious participants on rules that govern against consumer fraud, maturity beyond door to door selling, and a consumer base with a much greater degree of satisfaction."[41] RESA shares in this goal. However, current regulatory and operational protocols contribute heavily to the overall customer satisfaction level and also drive ESCO business decisions around marketing. For example, the customer shopping experience with ESCOs is constrained by the utility switching protocols, which are entirely out of line with customer expectations for on-demand service. Additionally, suppliers are attracted to door-to-door marketing because utility account numbers are required for enrollments and most customers only have access to such information while at home.

The best response to improve the market should be to develop policies that enable and encourage educated and empowered consumers who can easily and

[41] Notice, at p. 3.

proactively shop around for the best ESCO products. To accomplish this objective, the Commission should allow for the following market reforms:

1) Accelerated Switching: The Commission should adopt a true accelerated switching model – not one that is dependent on the meter read date. The last electric policy adjustment -- moving to a 5-day switch lead time – did not significantly improve the shopping experience for customers because they are still limited to switches on a meter read date.[42] Under this proposed framework, a customer who perceives itself to be in an unfavorable supplier arrangement can get new service in just a few days. Under the current model, if a customer finds itself in an unfavorable contract, the customer could be stuck in that arrangement for 35 or more days. If that customer decided to get out of its contract today, it is likely that the customer would not see the first bill from its new supplier for at least 40 days. If the switch request happens to fall inside that 5-day enrollment window, the customer may not see its first invoice from the new supplier for approximately 70 days. On average, about one-sixth of all transactions will happen within that five-day window, which means about 17% of all switching customers will wait approximately 70 days for the first invoice referencing the

[42] For natural gas, the Commission most recently decreased the on-cycle gas switching timeline of 15 calendar days to 10 business days effective 3/1/16. Due to capacity release in the gas industry, the accelerated gas switching collaborative did not recommend further reductions to the timeline or off-cycle switching at that time.

new supplier. In addition, there were several problems identified when trying to accelerate the gas switching times –mostly due to constraints dealing with the timing of monthly capacity releases.

2) Enroll with your Wallet: The Commission should direct stakeholders to develop a platform that will allow a customer to enroll with a supplier using simple customer-identifying information such as name and service address. Today, the rules require customers to know their account number to switch to a new supplier. (As stated above, the requirement to know the account number is one of the primary drivers of door-to-door marketing, as the account number is on the utility invoice.) The utility account number, which is completely unrelated to anything personal about the customer, should not be required. A picture ID or social security number that links to the service or billing address should be sufficient. Immediate access to historic usage information should also be made available for this scenario so that the suppliers could tailor a product based on the customers' needs as shown with the historic usage data. For example, the data might indicate that an efficiency product could be of high value to a particular customer. While all legal forms of marketing should continue to be allowed, including door-to-door and telephone-based sales, enroll with your wallet will allow the industry to rely less on "in-home" customer interactions (where the customer may be able to access its utility account number) and move to more

traditional types of retail customer engagements such as retail stores and kiosks. This model works very well in the cellular industry and is beginning to be deployed in the electric and gas industry in more evolved markets.[43]

3) Seamless Moves and Instant Connects: Allow customers to transfer their ESCO service to another service address and to establish service at utility turn-on instead of first going on default service for a month. Customers who have previously contracted with an ESCO did so with some intent. If they request to move their contract to their new residence, the utility should heed that request. The summer months, which see moving activity, coincide with what are among the highest priced and most volatile market for electricity. If a customer has protected itself from market fluctuations though a fixed-price ESCO contract, the customer should be able to keep that protection, even when the residence changes. Instant connect/seamless move will allow customers to keep the benefits and protections of ESCO products that they have already contracted for. This is the norm now in cable and even in the telecommunications industry, where a customer can now take a land-line phone number to a new address. There is simply no reason energy service should not be portable like cable, internet or telecom services.

[43] http://www.energychoicematters.com/stories/20170214a.html

4) Affirmative Choice on Enrollment: when a customer enrolls for distribution service with a New York utility, the customer should be prompted to make a choice of supplier, even if their choice is utility default service. The utility should be required to offer information about different offers from different suppliers and, if providing information about default service, the representative should be required to inform enrolling customers that the default rate is an option but is priced based on the short-term energy markets. It is not guaranteed and the price changes from month to month. This change would also incentivize marketing behavior beyond door-to-door interactions as suppliers would be able to focus marketing on move-in related activity. For example, in Texas it is common for ESCOs to market through various referral services through partnerships with real estate agents, moving companies, and other home service providers.

5) A Better Shopping Website: The current shopping comparison website (www.newyorkpowertochoose.com) was the second of its kind when first deployed many years ago. This website was recently updated (just a few days before testimony in this proceeding was filed).[44] The updates are an improvement

[44] RESA members were informed of the website update as a result of a trade publication article. See http://www.retailenergyx.com/sy.cfm/3301/New-York-Power-To-Choose-Site-Redesigned for article published on September 13, 2017 announcing the redesign. To my knowledge, neither RESA nor RESA member companies were asked to contribute to the redesign efforts. As stated elsewhere in this testimony, the RESA members (and other ESCOs) are well positioned to help the state meet its energy policy objectives. The state should be working with RESA members, calling on their collective market expertise, to help achieve the state's energy policy objectives.

over what was in place, however, for some reason, the updates to this website were made with no input from retail suppliers. Because the DPS Staff proceeded without input from suppliers, whose products the website is providing information about, the website is still insufficient.

It should be updated similar to Pennsylvania's www.papowerswitch.com, which provides information about companies' specific offers. Additionally, the Pennsylvania website provides direct links to suppliers' websites where customers can easily and rapidly enroll with a supplier and while it shows the default service option, it also shows the volatility of the default service option. The Pennsylvania website has proven to very successful, receiving a commendation from the Governor's Office of Transformation, Innovation, Management and Efficiency ("GO-TIME") for the use of technology to promote increased citizen engagement. According to the Pennsylvania PUC, its shopping websites attract nearly one million visitors per year. The PUC also noted that a survey conducted about the energy market revealed that 90% somewhat or strongly agree that the website provides helpful information; 87% of respondents are very or extremely satisfied with the website; and 70% say that the website is very or extremely easy to navigate.[45] Massachusetts recently deployed its own shopping website,

[45] Pennsylvania Public Utility Commission, Press Release*: PUC Websites for Natural Gas and Electric Shopping Receive GO-TIME Award for Promoting Increased Citizen Engagement,* August 14, 2017.

www.energyswitchma.gov. This site offers its viewers the same type of valuable content but the offers can be sorted by price, term length or renewable energy content. Additionally, a customer can request that either energy-related products and services and/or non-energy-related products and services be shown as well. Inclusion of this type of attribute in the website redesign could facilitate more rapid deployment of rooftop solar and/or energy efficiency products. Had ESCOs been invited to assist in the redesign, this attribute might have been included in the recent redesign.

In addition to simply updating the website, the Commission should actively promote the website and encourage the utilities to do the same through bill inserts, bill messages, public service messages and other media. Again, a better shopping comparison website could encourage different marketing behavior by suppliers by encouraging more web-based enrollments. The Commission could also leverage this website to encourage reputable ESCOs. Listing offers on this Commission-sponsored website should be a privilege, not a right. ESCOs with an unsatisfactory track record should forfeit this privilege.

6) Customer Referral Program: The Commission recently eliminated the utility customer referral programs. This was due to a concern that the programs exacerbated perceived problems with the market by funneling customers into a short-term product (two-month, seven-percent discount) which would renew onto

a variable rate product. The Commission should bring back the program but model it after the Pennsylvania Standard Offer Program which allows referred customers to be placed on a 12-month, fixed-price offer product that provides a discount off the current utility price to compare. I suggested above that the Commission consider moving to a different default service model. A customer referral program should be designed to complement the chosen default service model and then be re-introduced into the market.

Q78. How will these suggested transactional improvements address the Commission's concerns?

A78. A motivated and empowered customer is the best form of consumer protection. While there may be a role for regulations and oversight in the ESCO market, the best way to incentivize consumer-friendly business practices is to ensure that customers have abundant choices they can quickly and freely exercise. Transactional improvements that empower customers to more easily switch suppliers will result in better ESCO behavior as ESCOs must provide real value and good customer service to retain their customers.

The market participants, through complicated rules, regulations and utility protocols, continue to make the energy industry complex. The industry should endeavor to streamline the process to make market transactions easier for customers. There is simply no valid reason to hold customer data captive. There

is no valid reason to not allow a customer who moves to take their energy contract with them. There is no valid reason to require up to 35 days for a customer enrollment with a new supplier. These problems are all of our own making. They are all readily fixable.

Q79. Could you please describe your proposed UBP Improvements?

A79. Uniform business practices are in a state of flux currently. Staff has recently issued a set of proposed UBP changes that would materially alter the current set of rules and sought comments from the energy industry.[46] Staff has also recently proposed a set of UBPs that will be relevant to the DER market participants and sought comments.[47] The proposed sets of new regulations may not align with the goal of innovation in the delivery of value-added energy products and services. Instead of allowing a piecemeal approach to regulating the energy industry, the Commission should instead take a proverbial step back, identify the market results it would like to achieve, then convene stakeholders to develop a comprehensive

[46] Case 15-M-0127, *et. al., supra*, Notice Seeking Comments on Revisions to the Uniform Business Practices (Issued March 8, 2017).

[47] 15-M-0180, *In the Matter of Regulation and Oversight of Distributed Energy Resource Providers and Products.* Notice Seeking Comments on Proposed Standards (Issued April 12, 2017).

set of rules governing the energy markets.[48] The types of rule changes that will improve the market and customer experience include:

Contract Renewal and Price Change Rules: The Commission should review and update the current UBPs to ensure that customers receive adequate notice at the time of contract renewal, when the customer experiences a significant rate change, and when products convert from one pricing structure to another (such as fixed or introductory prices converting to a variable price). The pertinent UBP provisions are:

- **Section 5.B.5.d:**

  …Regarding contract renewals, with the exception of a rate change, or an initial sales agreement that specifies that the agreement renews on a monthly basis with a variable rate methodology which was specified in the initial sales agreement, all changes will be considered material and will require that the ESCO obtain the customer's express consent for renewal.

- **Section 5.B.5.g:**

  When a fixed-price agreement is renewed as a fixed-price agreement, the ESCO shall provide the customer with an additional notice before the issuance of the first billing statement under the terms of the contract as

[48] For further discussion, please see the comments filed by RESA in response to the proposed UBP changes, Case 15-M-0127, *et. al., supra*, RESA's UBP Comments (May 12, 2017). Similar comments were filed by RESA in the DER docket, Case 15-M-0180, *supra*, RESA Comments (June 9, 2017).

> *renewed, but not more than 10 days prior to the date of the issuance of that bill. This notice shall inform the customer of the new rate and of his or her opportunity to object to the renewal, without the imposition of any early termination fees, within three days of receiving the first billing statement under the terms of the contract as renewed.*

There are a few issues with these rules. First, the requirement to obtain express consent from the customer upon renewal, except when the agreement renews to a variable rate actually encourages ESCOs to place customers on more volatile variable rate products. Second, the renewal requirements for fixed price renewals require a second notice, which further discourages fixed-price renewals. Finally, these rules do not directly address other scenarios such as introductory prices, or mid-term pricing/product conversions from one pricing structure to another, or significant price changes that occur under a month-to-month variable product. RESA supports the continued ability for ESCOs to offer month-to-month variable products and auto-renewal products. However, rather than continuing the current UBP construct of defining what constitutes and does not constitute a "material change," the Commission should implement a more direct approach that requires 30-days advance notice to the customer of any of the following:

- Renewal of a fixed-price agreement to a new fixed-price agreement
- Renewal of a fixed-price agreement to a variable-price agreement

- Expiration of any introductory price period that is greater than one month
- Any price increase exceeding 30 percent, including for month-to-month variable products

The Commission should also clarify in the UBP that no price change notice is required if an ESCO lowers a customer's price.

Q80. Do you have any recommendations regarding variable ESCO rates?

A80. Yes. I recognize that variable rates have been a point of concern in the New York ESCO market, largely driven by the experience during the Polar Vortex that left both ESCO and utility supply customers facing significant rate increases. Before turning to any recommendations, let me first discuss why ESCOs offer variable rates and why customers may choose them.

Q81. Why do ESCOs offer variable rates?

A81. There are several reasons. First, as noted above, the regulatory requirements in New York provide a strong incentive for ESCOs to renew customers onto a variable-rate product. Second, for an ESCO to offer a fixed-rate product, prudent operations would dictate the company execute accompanying wholesale energy hedges to support the retail price to which it has committed. A variable-rate product allows the ESCO to acquire customers without undertaking expensive wholesale hedges that can become divorced from prevailing market conditions.

Finally, I believe that the monthly variable nature of the utility default product is a further incentive for ESCOs to promote variable products.

Q82. Why do customers choose variable rates?

A82. A variable rate may be appropriate for a customer for a range of reasons. First, a customer may be able to find a lower price from a variable-rate offering. Second, a customer may not want to make a long-term price commitment that could carry a significant early cancellation fee. A variable product can be a useful bridge product for a customer in between suppliers. For example, if a fixed contract ends during a high price seasonal period (peak winter or peak summer), a variable rate for 2 or 3 months may be a good way to transition until a more attractive fixed-rate offer is available. Finally, as technology improves and smart meters are deployed, I would expect more and more product offerings to leverage variable or index-based pricing. For example, a customer may be able to maximize the value of a distributed energy resource if the excess supply were sold at high-priced peak periods and off-peak consumption were billed at lower off-peak hourly rates.

Q83. What are some of the concerns around variable ESCO rates?

A83. Following the Polar Vortex, many utility default service and ESCO customers experienced unexpected and significant price increases. Customers who enrolled onto variable rates may not have fully understood the potential price volatility involved. I acknowledge that many ESCOs may have over-relied on variable-rate

offerings, although this was driven in part by the regulatory requirements in place. Additionally, there are different business models for variable rates. While some suppliers may tie a variable rate to some type of published market index, many ESCO variable-rate products, particularly for mass market customers, are not directly tied to a market index. Rather the ESCO retains the contractual ability to change the rate on a monthly basis, but the factors that influence the price change are largely at the discretion of the ESCO. This can benefit the customer as it allows the ESCO to actively manage its variable book and its wholesale procurement costs to smooth out some price volatility for customers. For example, whereas a fully index-based price may jump from 8 cents per kWh in June to 18 cents per kWh in July (if there is an unusual heat wave), the ESCO may choose to only raise its variable prices to 12 cents, in order to mitigate extreme price spikes for customers. Of course, the ESCO would then need to maintain the 12 cents per kWh rate level beyond the peak price month in order to recover costs and maintain profitability. While this does have benefits for customers, some may criticize the lack of transparency into the ESCO's variable rate changes.

Q84. What regulatory reforms are needed to address these concerns?

A84. RESA supports targeted UBP revisions to address the concerns around variable ESCO rates for mass market customers. Given the complexity of the issues

involved, RESA would recommend a collaborative stakeholder process to develop and iterate specific UBP revisions to address this issue. I would note that these issues have been adequately addressed in other states that have recently revised consumer protection rules in response to similar issues. These variable rate policies generally fall into the following categories:

Additional Contract and/or Marketing Disclosures at Enrollment: States such as Pennsylvania and Maryland have developed rules requiring clear and consistent up-front disclosures in contracts and marketing materials to inform consumers they are electing a variable-rate product. These states adopted contract summary documents, similar to the required New York Customer Disclosure Statement, that requires the supplier to indicate in a simple contract summary chart whether the pricing structure is fixed or variable. However, supplier contracts and contract summaries must provide additional disclosures informing customers of the potential volatility involved:

> ***Code of Maryland Regulations, 20.53.07.08.***
>
> *(d) A clear and concise price description of each service, including, but not limited to, any condition of variability or limits on price variability;*
>
> *(i) if there is a limit on price variability, such as a specific price cap, a maximum percentage increase in price between billing cycles or minimum/maximum charges per kilowatt-hour for electricity during the term of*

> *the contract, the supplier shall clearly explain applicable limits;*
>
> *(ii) if there is not a limit on price variability, the supplier shall clearly and conspicuously state that there is not a limit on how much the price may change from one billing cycle to the next.*
>
> http://www.dsd.state.md.us/comar/comarhtml/20/20.53.07.08.htm

Pennsylvania has regulations[49] nearly identical to those noted above for Maryland. Texas has similar rules, however the Texas requirements clearly differentiate between index-based products and variable rates not tied to an index.[50] The Texas rules also require specific disclosure of any limits applicable to variable rates and if there are no such limits, a standardized disclosure statement must be provided informing the customer that the rate can change at the discretion of the supplier.

> *Texas Substantive Rules* §25.475. General Retail Electric Provider Requirements and Information Disclosures to Residential and Small Commercial Customers. Excerpt from (g) F (iii).

[49] http://www.pacode.com/secure/data/052/chapter54/chap54toc.html#54.5.

[50] See definitions for "index" and "variable" in Texas Substantive Rules §25.475. General Retail Electric Provider Requirements and Information Disclosures to Residential and Small Commercial Customers, http://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.475/25.475.pdf.

> *For all other variable price products, a notice in bold type no smaller than 12 point font: "Except for price changes allowed by law or regulatory action, this price is the price that will be applied during your first billing cycle; this price may change in subsequent months at the sole discretion of {insert REP name."*

Notice Requirements: Other states have promoted greater customer understanding and awareness of variable rates by adopting new notice requirements either at the time the product renews or converts to the variable pricing structure or when there is a substantial rate increase in the monthly rate. These notices alert customers of the upcoming change enabling them to take action, such as switching to a different supplier or returning to default service if the new variable rate is untenable. I discussed above how the UBPs could be improved with additional clarity on notice requirements in specific renewal or product conversion scenarios. Below are examples of how other states have addressed notice requirements specific to variable rates.

Maryland Rules for Price Changes[51]

13 Notice of Change in Rate.

A. When a customer's rate changes, a supplier shall make available to a customer his or her rate for the next billing period:

(1) The rate shall be made available at least 12 days prior to close of the customer's billing period;

(2) The rate shall be made available in a clear, easy to access format prescribed by the supplier;

(3) The supplier shall promptly provide the customer written directions on how to access the rate:

(a) At the time of contracting;

(b) In the Contract Summary;

(c) When sending any notice as required in this title;

(d) Upon request; or

(e) If the supplier changes the directions for accessing the rate.

B. A supplier may provide an estimated rate for the customer's next billing period, provided the estimated rate is made available at least 12 days prior to the close of the customer's billing period. If the supplier provides an estimated

[51] See: http://www.dsd.state.md.us/comar/comarhtml/20/20.53.07.13.htm.

rate for the customer, the supplier shall not use a rate for billing purposes that is higher than the estimate.

C. Written Notice Requirement.

(1) If a contract with a fixed rate for three or more billing cycles changes to a variable month-to-month price and a change in the contract rate will be equal to or exceed 30 percent of the supplier's current supply rate, the supplier shall provide written notice of the new rate to the customer at least 12 days prior to the close of the customer's billing period.

(2) The written notice shall be provided by mail, or with the mutual consent of the supplier and customer, by email, text, automated phone message or other manner.

(3) The supplier shall maintain records that such notice was provided to the customer.

Similarly, Connecticut has adopted multiple methods of providing notice of upcoming rate changes to consumers, including requiring: (1) an end of fixed rate notice 30 to 60 days before the end of a residential fixed-price term,[52] (2) a specific variable rate notice 45 days before converting a residential customer to a

[52] Conn. Gen. Stat. § 16-245o(g)(1).

variable rate,[53] (3) a separate rate increase notice 15 days in advance anytime a residential customer's rate will increase by 25% or more;[54] and (4) the utilities and suppliers to develop an EDI-based process for the supplier to transmit upcoming rate changes on the consolidated utility bill.[55]

Price Reporting/Posting Measures: Some states have also required suppliers to publicly post historical pricing information to help inform customers about the potential pricing volatility associated with variable rates. In Connecticut, suppliers are required to post their highest and lowest variable rates charged to customers on a public website.[56] In Texas, suppliers must post a one year price history for variable products.[57]

Q85. Should New York consider similar measures as those noted above to address concerns regarding variable rates?

A85. Yes. I present these examples not to necessarily suggest that New York adopt any specific set of rules that have been adopted in other states, but rather to show that

[53] Conn. Gen. Stat. §16-245o(g)(2). This provision was passed and implemented prior to Connecticut prohibiting variable price offers to and renewals for residential customers.

[54] Conn. Gen. Stat. § 16-245o(g)(3).

[55] Conn. Gen. Stat. § 16-245d(a)(2). The EDI rate change notice requirement was very technically challenging for both the utilities and suppliers to implement and may not be replicable for the New York market.

[56] Conn. Gen. Stat. §16-245(g)(14).

[57] Public Utility Commission of Texas, Electric Substantive Rules, Chapter 25, §25.475. General Retail Electric Provider Requirements and Information Disclosures to Residential and Small Commercial Customers, Section (c)2G.

other states have tackled similar issues and have arrived at regulatory reforms that preserve the opportunity for customers to receive the benefits of competitive energy supply and associated products and services from ESCOs and allow them to be protected by consumer safeguards. As stated earlier, I recommend that the Commission convene a stakeholder collaborative, perhaps as part of the Track II phase of this proceeding, to explore these solutions that have been adopted in other states and arrive at workable reforms for New York.

Q86. Have some states sought to ban variable rates for residential customers?

A86. Regretfully, yes. In 2015, The Connecticut legislature voted to ban variable rates for new and renewing residential customers.[58]

Q87. Would you support a similar ban for New York?

A87. I would advise against a ban on variable rates, or any specific pricing structure for that matter, as it would be at odds with the type of innovation that the Commission expects through its REV and other energy policy goals. In particular, consumer value will be maximized when a customer can take advantage of lower real-time rates, and then, coupled with real-time meter data, communications technologies and enabling control technologies, can modify consumption during high-priced periods. This type of active energy management and consumer

[58] Conn. Gen. Stat § 16-2450(g)(4).

engagement is what is needed to achieve the goals of REV, the CES and the EAMs.

Q88. Why do ESCOs utilize door-to-door marketing and sales practices?

A88. ESCOs utilize the door-to-door marketing channel for a few reasons. First, and as discussed elsewhere in this testimony, the utilities require the use of a customer's utility account number in order to access historic usage information or to facilitate a switch to the supplier. The most likely place where a customer will have access to the utility account number is at the home. Also, because the market is relatively young, there is still an education effort that needs to be made, informing customers of their options for gas and electricity.

Q89. How could these problems be overcome?

A89. An "enroll with your wallet" program was discussed above. This would remove a tremendous barrier to sales in the market. Suppliers could set up kiosks at malls, sporting venues, airports and other high-traffic areas in lieu of knocking on doors. Also, the utilities could engage in comprehensive market education, informing customers holistically about their options. This could be accomplished through the programs discussed above, such as the seamless moves, customer referral programs, affirmative choice on enrollment and a better shopping website. It could also be done through a comprehensive media campaign, including radio, television, internet and other communications channels. While these changes will

likely reduce the level of door-to-door marketing, I am not suggesting that it will stop the practice altogether.

Q90. Given that it is possible the practice will continue, what changes can be made to protect consumers?

A90. Door-to-door marketing, unlike some of the other issues discussed above, crosses many industries, and as such there is a combination of federal, state and perhaps even local laws and regulations addressing door-to-door marketing. With that in mind, the Commission need only consider issues that are unique to the ESCO industry. For example, U.S. Federal Trade Commission ("FTC") regulations require that all contracts be written in the language in which the sale occurred. The customer must be given a three-day rescission period and must be informed orally, in addition to within the contract, of the right of rescission. The FTC also requires that if a customer signs into any type of financing arrangement or indebtedness, that the selling company not transfer or assign that note of indebtedness until the end of the fifth day after the contract is signed.[59] States have added to these provisions, requiring certain information to be made known to the customers, as well as the inclusion of precise forms of identification, including dress codes and branding on outerwear. States have also incorporated

[59] See 16 CFR §429.1.

business training, marketing training and background checks into their door-to-door marketing regulations. In considering how to proceed, the Commission must first consider what it perceives to be problematic with regard to the particular implementation of door-to-door sales by ESCOs that might warrant incremental requirements to the federal rules already in place, then implement rules to protect against that (or those) problem(s).

Q91. Are you aware of any best practices that RESA members employ that might be useful in the New York Market?

A91. Yes. Several of RESA members require training courses for their door-to-door representatives. The training includes product and market training as well as sales and marketing training. Some also include in-field compliance personnel who will oversee the practices of the sales representatives in real time. Others even will track, with geolocation technologies, the locations of their sales agents. As I mentioned above, I am not suggesting that the Commission enlist these practices as requirements. I suggest that the Commission take full stock of the goals of the State and the shortfalls in the market today, and then lay out a road map that outlines a path forward for the markets that corrects the problems with the market and enables achievement of the goals of REV, the CES and the EAMs.

Q92. Could you please describe your proposed market enhancements?

A92. Yes. The current Purchase of Receivables ("POR") mechanism should be modified. Under the current model, it is possible for an ESCO to implement some distasteful business practices. POR provides ESCOs with full payment (less a discount rate) whether a customer pays its bill or not. Therefore, an undisciplined ESCO might have little incentive through the POR mechanism to engage in disciplined pricing behavior. ESCOs do, however, have numerous other incentives to engage in disciplined behavior. For example, an ESCO risks losing its customer if it does not offer attractive rates. Nevertheless, I recommend that the Commission remove the incentive for undisciplined pricing that may occur under the current POR mechanism, such as implementing POR controls like a claw back provision exercisable under certain conditions. In Pennsylvania, FirstEnergy has implemented a claw back rule which would impose a penalty if 1) the ESCO's actual bad debt rate exceeds 150% of the residential class average bad debt, and 2) the ESCO charges rates that are above a pre-determined pricing threshold. In Pennsylvania, the pricing threshold used is the utility default rate, which is not a valid threshold in New York. In New York, it could instead be determined by the utility and stakeholders, and be based on a metric such as the class average ESCO price over a certain period. If New York moved to a new default service model, it could be tied to the price that emerged from that new model.

This test in the FirstEnergy market reveals two behaviors – whether or not the supplier has unusually high levels of bad debt and whether or not the supplier was charging what may be perceived to be excessive or abnormally high rates. If these two measures are exceeded, the utility would impose a claw back penalty that would charge the ESCO the difference between its actual bad debt amount for its mass market customers and the class average threshold. Any funds collected from the imposition of penalties should be used to reduce the overall ESCO-related uncollectible amounts that are used to derive the POR discount rates. In other words, the actions (and payments) of the "bad actor" will result in a positive market improvement (lower POR discount rate) for the other suppliers in the market.

These POR modifications can be achieved in short order, but should also be considered only a short-term solution. The PSC should require certain changes to the billing approach in the market aimed at encouraging more direct engagement between ESCOs and their customers. The PSC should establish an end-state goal of developing supplier consolidated billing ("SCB"). SCB is the same concept as Utility Consolidated Billing, and would include a POR provision. The difference is that the ESCO would create and deliver the invoice instead of the utility. Under this market construct, suppliers would build out a billing system that would capture their own full array of value-added services and save a line on the bill to

pass through the utility distribution costs. It would be a significant task for a utility to build a system that would incorporate all suppliers' value-added products and services. The utilities have implemented streamlined billing systems that are built for disseminating millions of distribution bills every month. Currently, the distribution bills have limited line items to capture what are potentially complex supplier goods and services. Moving forward, it will be more efficient for suppliers to build complex billing systems that will accommodate their respective suites of goods and services, that can be used across multiple markets, and that add a line for the more basic distribution services.

Utilities in New York offer a range of billing options. Some utilities offer bill-ready billing (where the supplier can display a total dollar amount); other utilities offer rate-ready billing that requires the pre-programming of rates in accordance with certain rate formats such as fixed customer charges and $/kWh or $/dth or MCF charges. Under either model, the current system is not conducive to billing innovative products and services. A utility could build a billing system to accommodate certain value-added products and services. However, if a utility fixes its billing system to accommodate only certain value-added products and services, only those products and services will be offered in the market. The utility billing construct is one of the primary constraints to innovative products and services today. If the market continues to move forward with a singular

utility billing platform, that platform will continue to be a constraining factor on the market.

SCB solves other problems as well. It will not only enable new product and service offerings but will enhance the likelihood that suppliers have made a significant investment in the market, increasing their commitment to a long-term business model. Additionally, under SCB suppliers are taking on financial risk of customer non-payment, which creates an incentive for suppliers to charge fair rates for their services. SCB creates a framework where suppliers can functionalize the tools needed for the State to meet the REV goals. Of course, once the products are functionalized, they empower the customers with the tools to better understand their energy usage, which in turn empowers the customers to take action to lower consumption and overall bill spend, facilitating achievement of the REV and EAM goals. Finally, SCB allows suppliers to differentiate themselves in ways to become more relevant to the consumer. Today, all suppliers are represented by a few lines on the utility bill. Suppliers and their unique competencies are marginalized in the eyes of the customers by utility consolidated billing.

The implementation of SCB will present certain technical, regulatory and business issues to address. Regardless, the Commission should set this as one of the fundamental end-state market design goals, so that value-added products and

services can be effectively developed, sold, managed and invoiced. SCB can be deployed first as a pilot program to gain valuable experience and can then be expanded statewide. The utilities could be incentivized to implement SCB pilot programs through the EAM process.

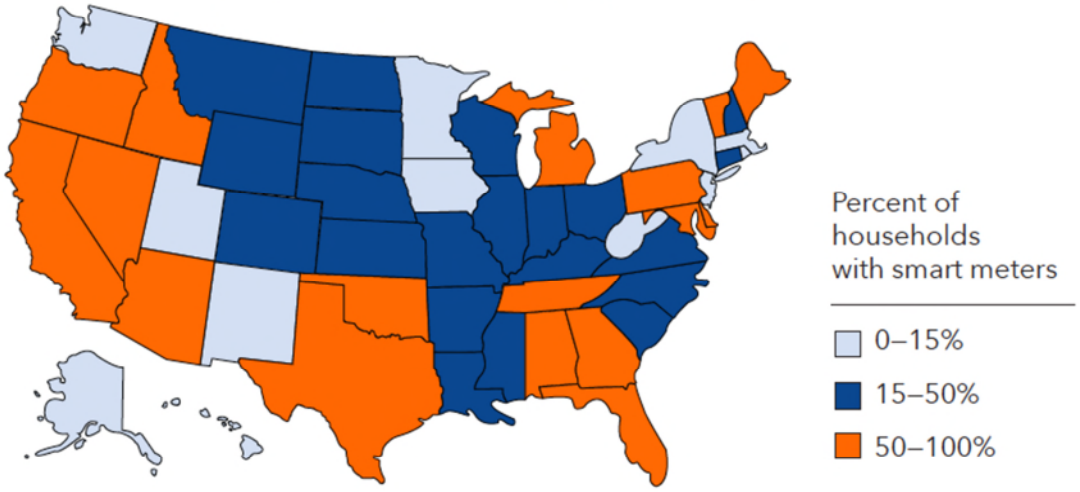
Until SCB is fully deployed, the Commission should compel the utilities to expand the current utility-consolidated billing model to allow for the placement of non-commodity charges on the bill. It is specifically the types of products that the Commission is seeking that are being choked out of the market by utility billing protocols. The current billing arrangements don't allow for these value-added products and services to be billed to the customer. Some have offered dual billing, an unattractive option to most consumers, as a compromise solution. Customers should not be compromised. It is the customers who will ultimately be engaging with the market under the REV framework. Customers should be given every incentive to participate in the market, because it is only under that end state where the State's goals are met. The dual-bill option for residential customers has virtually zero participation by residential customers in any market around the country, and it won't work in New York.

Q93. Could you please describe your proposed technology and utility infrastructure improvements?

A93. Yes. As stated before, the Commission has expressed frustration with what it views as limited product innovation from the ESCO community. The Commission is seeking market penetration of ESCO product offerings that are inclusive of energy efficiency and other value-added energy management products. The Commission can stimulate this type of product development by mandating the deployment of smart meters, advance metering infrastructure, and the requisite communications capabilities to ensure customers and their market representatives have access to real-time energy consumption data or near real-time consumption data.

According to the Edison Foundation, between zero and 15% of the homes in New York have advanced meters installed.

Figure 2: Smart Meter Deployments by State 2015 [3]



Source: Edison Foundation Institute for Electric Innovations

As can be seen from this Edison Foundation map,[60] New York is in the small minority of states with such a low deployment of smart meters. According to the report, the New York investor-owned utilities had only installed 12,500 advanced meters by the end of 2015. The municipal and cooperative utilities in the State, by comparison, had installed almost 29,000 by that time. The report acknowledged Consolidated Edison's plans to deploy 3.6 million advanced meters by 2022, but also noted that only 4,100 had already been installed. Notably absent from the report were the advanced meter deployment plans of the other New York utilities.

There are some value-added products and services that could potentially be rolled out without the benefit of advanced meters, but they are few, and their value will not be maximized in the absence of advanced metering and data availability. The Edison Foundation report concludes by saying "Investing in smart meters is one of the first steps in building a smarter energy infrastructure."[61] The Foundation also concludes that the report shows that "smart meters are the building block for improving grid operations, integrating distributed energy resources, and offering

[60] Adam Cooper, The Edison Foundation Institute for Electric Innovation, *Electric Company Smart Meter Deployments: Foundation for a Smart Grid*, October, 2016, p. 3.

[61] *Id.* at p. 7.

customers more choices."[62] The report also acknowledges that "Building a solid, smart foundation for a more distributed, increasingly clean, and increasingly digital energy grid allows electric companies to deliver new services to customers." The Commission should heed this guidance and facilitate a network that will accommodate and enable the types of energy products and services it is envisioning for the New York market.

XI. CONCLUSION

Q94. Could you please summarize your testimony?

A94. Yes. At one time, New York was a leader in the development of competitive retail markets. Many of the tools the State and utilities implemented to facilitate retail choice nearly two decades ago were cited by RESA and others around the country as the model to replicate. The New York model, however, has not progressed with technology improvements and product innovations. Recently, the Commission undertook an exercise to compare the price that ESCO customers paid for electric and gas service to what those customers presumably "would have paid" had they remained on utility default service. That analysis was flawed in several ways, most notably, by comparing the prices of dis-similar products. Despite the flawed analysis, the results prompted regulators to take

[62] *Id.*

action against the ESCOs operating in the market, including establishing evidentiary hearings to examine the ESCO markets, in which this testimony is being submitted.

This Commission now sits at a cross road. It can pursue a path of heavy-handed economic regulation, banning products and services and restricting pricing, or it can develop a market that will deliver the products and services it desires and one that will help achieve the goals of the Clean Energy Standards, REV and the EAMs.

The key that will enable New Yorkers to experience the products and services that the Commission envisions for the market is to have the New York market evolve to one that will accommodate those same products and services. Those products and services already exist and are being delivered to varying degrees by competitive energy suppliers in other markets around the country. It simply does not make sense to believe that a supplier would not deliver its successful products to New York if the New York model could accommodate them. Without the market improvements, such as advanced metering and communications, no entity will be able to deliver the products and services desired by the Commission.

Perhaps most enlightening is the fact that customers don't appear to be any more unhappy with ESCO products and services than they are with utility products and services. A review of customer complaints from 2016, the most recent year for

which data is available, shows that the customer complaint rate for ESCOs is virtually identical to the customer complaint rate for utilities in New York. It is likely that comprehensive reforms at the utilities will lead to more engaged customers and fewer complaints.

The Commission should not seek to regulate the products, services and pricing of the ESCO community. Instead, the Commission should take this opportunity to develop the market tools and infrastructure to create the Utility of the Future that will empower the ESCO of the Future to deliver the products and services desired by the Commission. The ESCO of the Future already exists and other states' energy markets are exhibiting the deployment of advanced energy products and services.

New York should endeavor to transform its retail model and regain the leadership status it once had in these markets. It is only with this kind of leadership that the policy goals with respect to REV, the utility EAMs and the 80 by '50 initiatives will be achieved.

Q95. Does this complete your testimony?

A95. Yes.