SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ALBANY

NATIONAL ENERGY MARKETERS ASSOCIATION; BLUEROCK ENERGY, INC.; BOUNCE ENERGY NY, LLC; DIRECT ENERGY BUSINESS MARKETING, LLC; DIRECT ENERGY BUSINESS, LLC; DIRECT ENERGY SERVICES LLC; ENERGETIX, INC.; GATEWAY ENERGY SERVICES CORP.; NORTH AMERICAN POWER & GAS, LLC; NYSEG SOLUTIONS, INC.; RESIDENTS ENERGY, LLC; and VERDE ENERGY USA NEW YORK, LLC, Petitioners/Plaintiffs, against NEW YORK STATE PUBLIC SERVICE COMMISSION, Respondent/Defendant.	Index No. 868-16 IAS Part

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ALBANY, NY

AFFIDAVIT OF CHARLES J. CICCHETTI IN SUPPORT OF PLAINTIFFS/PETITIONERS' APPLICATION BY ORDER TO SHOW CAUSE FOR A TEMPORARY RESTRAINING ORDER, PRELIMINARY INJUNCTION, AND EXPEDITED DISCOVERY

CHARLES J. CICCHETTI, Ph.D., being fully sworn, deposes and states:

INTRODUCTION AND QUALIFICATIONS

1. I am co-Founder of Pacific Economics Group, Inc. (PEG), 1341 Hillcrest Avenue, Pasadena, California, 91106. I am an economist with 46 years of experience in matters related to electricity, energy, and the environment. I have studied and provided expert testimony before regulatory commissions and courts on matters related to determining the marginal cost, pricing, regulation, financing, valuation, and more, for electricity.

2. I was the principal economist for the Environmental Defense Fund (EDF) in the very important Madison Gas and Electric rate design proceeding before the Public Service Commission of Wisconsin (PSCW), as well as complementary proceedings in Michigan, California, and New York in the early 1970s. I also served as the Chair of the PSCW starting in 1977, and served as a Commissioner until 1980. During this time, the Commission addressed time-of-use (TOU) pricing, marginal cost pricing, and held the first statewide long-range planning proceeding. I was a member of the Executive Committee of the National Association of Regulatory Utility Commissioners (NARUC) and was Chair of NARUC's Committee on Implementing the National Energy Act of 1978 that included the Public Utility Regulatory Policies Act (PURPA).

3. I earned a B.A. in economics in 1965 from The Colorado College and a Ph.D. in economics in 1969 from Rutgers University. After earning my Ph.D., I spent three years engaged in post-doctoral research at Resources for the Future (RFF) in Washington, D.C.

4. In 1972, I joined the faculty at the University of Wisconsin-Madison, ultimately earning a tenured full professorship in both Economics and Environmental Studies. In 1987, I became the Deputy Director of the Energy and Environmental Policy Center at the John F. Kennedy School of Government at Harvard University, where I co-directed the Harvard Utility Forum in the late 1980s. Between 1998 and 2006, I held the Miller Chair in Government, Business and the Economy at the University of Southern California (USC). I ended my teaching activities in 2010, except for a series of on-line lectures and class discussions in the Electrical Engineering Department at USC.

5. I sometimes describe the majority of my work as providing economic, finance, and statistical work to "pipes and wires" companies and their customers. These include

companies within the electricity, natural gas, telecommunications, cable, oil, and other related industries. I have written several books based on my work on topics such as utility rate design, marginal cost analysis, quantitative environmental studies, financial matters, energy conservation, and renewable energy. I have written or co-authored seven books on electricity tariffs, cost analyses, policy, regulation and competition. My most recent book was entitled *Going Green and Getting Regulation Right.* I have attached my resume as Exhibit A. It lists my activities, publications, and testimonies before regulatory bodies and courts.

6. I submit this affidavit in support of Plaintiffs/Petitioners' Application by Order to Show Cause for a Temporary Restraining Order, Preliminary Injunction, and Expedited Discovery. I respond to various issues raised by Defendant/Respondent, New York State Public Service Commission (the "Commission"), in opposition to Plaintiff/Petitioners' Application, including assertions made in the Affidavit of Luann Scherer, and discuss matters concerning the Commission's Order Resetting Retail Energy Markets and Establishing Further Process issued on February 23, 2016 (the "Order").

7. I begin with some high level observations. New York Energy markets were restructured and became operational in 1997 because policymakers recognized that electricity and natural gas commodities are not natural monopoly products. Put differently, no one company or small set of companies necessarily had to have a monopoly over electricity and natural gas. That utilities had such a monopoly was the creation of policymakers who then determined that competition could send price signals that would encourage more competitive pricing through economically efficient supply and demand responses. The expectation was that

increased efficiencies would reduce costs and prices over time.[1] Nevertheless, it was also recognized that competitive energy markets would be subject to increased price volatility in response to changes in market conditions and outside factors that affect energy markets.[2]

8. Retail energy marketers like Energy Service Companies ("ESCOs") buy electricity and gas in the wholesale market with the intention to resell the energy to retail customers. Delivery remains exclusively the province of utility companies, which are responsible for delivering electricity and gas into, for example, customers' homes even if the customer opted to have their energy supplied by an ESCO. Unlike utilities, therefore, ESCOs are exclusively energy buyers, which makes them particularly sensitive and at risk for wholesale market price volatility.

9. As compared to ESCOs, regulated utilities have more opportunities to acquire energy and sell the energy that they purchase to a larger and far more diverse number of customers. Each aspect helps full service utilities absorb the volatility that appears at various times in the energy commodity markets. Alternative energy sources act as natural business hedges that are not available to ESCOs. For example, a utility can generate electricity when it is advantageous to do so; ESCOs cannot. Similarly, utilities' larger and more varied customer base (and concomitant increased sales' opportunities) also helps them absorb market volatility. That is, utilities may be able to purchase electricity on a system-wide basis for less than an ESCO can because utilities have a larger and more diverse customer base, a scale and diversity that is reflected in (among other areas) differences in time of use and other patterns.

10. Differences in time and pattern of customers' energy usage are relevant because the typical utility purchases electricity on a system-wide basis for each relevant time period.

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[1] See Case 94-E-0952—Competitive Opportunities Regarding Electric Service, Opinion No. 96-12, Opinion and Order Regarding Competitive Opportunities for Electric Service (Issued and Effective May 20, 1996), at 30-33.
[2] See id, at 30-33, 87.

Larger customers will use relatively more electricity during off-peak hours. An industrial customer operating 24 hours a day, 7 days a week, for example, will have different times of use and different patterns of use than a small residential customer. When utilities retain relatively larger customers with disproportionately more off-peak load and they purchase electricity to satisfy system-wide requirement and make inter-class tradeoffs, this helps utilities keep energy prices lower for residential customers. ESCOs mostly match purchases to specific customer types rather than on a similar system-wide basis, and thus are less likely to be able to match the utilities' scale and customers' diversity advantages. This is why larger restaurants with extensive menus often can provide meals for less money than restaurants that try to provide special meals for a smaller customer base.

11. Periods of extreme volatility, such as during the so-called Polar Vortex of 2013/2014,[3] highlight the differences between utilities and ESCOs. Such high impact low probability ("HILP") events are hard on all market participants, including consumers. HILP events cannot be reasonably anticipated and therefore responses to them cannot be readily planned or made in advance. ESCOs lack the inherent natural hedges (and the flexibility those hedges provide) that utilities have. This makes ESCOs and their variable price customers particularly at risk for any HILP events. While HILP events provide the starkest examples of the

[3] The Polar Vortex has been used to describe the unusually cold winter of 2013/2014. In proceedings before the National Energy Board (NEB) in Canada, for example, the Polar Vortex has been applied to the entire winter of 2013/2014. See NEB Reasons for Decision, TransCanada PipeLines Limited, RH-001-2014, Page 32 (December 2014) (The NEB stated "the first year of pricing discretion coincided with one of the coldest winters in 35 years...".) With respect to geographic area, the term Polar Vortex has been used to describe weather affecting a large area that stretches across the middle and northern states and Canada. The extended area and time period related to the Polar Vortex are very important. This is because the unexpected and extreme drop in winter temperature in much of North America also caused unexpected and wholly unanticipated price increases for natural gas that affected several states, including New York, for an extended time period. Since much of the nation, including New York, uses natural gas at the margin to set wholesale electricity prices, colder weather and higher natural gas prices caused electricity prices to surge unexpectedly.

disproportionate risks ESCOs bear as compared to local utilities, for the same reasons, and as explained herein, ESCOs face disproportionate risks as compared to utilities on a daily basis.

12. Accordingly, because ESCOs and utilities face fundamentally different risks on a daily basis, it is unreasonable to hold ESCOs to a standard where they are expected to guarantee to "beat" or "anticipate" utilities' pricing in competitive energy commodity markets. There may be other things ESCOs can do to reduce costs, but anticipating or insuring against HILP events is not one of them. Changing rules mid-game is seldom wise. Regulating competition and the services provided is even less sensible, especially when (as here) there is no supportable data showing the likely benefits for the mid-game changes. Moreover, the Commission's attempt to tie its Order to the fact that ESCOs use utility-owned pipes and wires is tenuous in my opinion as a former regulator because the Commission has not made any case that there has been a failure of competition that requires heavy-handed regulation to usurp the retail market when wholesale market prices change unexpectedly. Instead, the Order seems to be a thinly veiled attempt to engage in rate-setting in a competitive retail market, imposing further preferences in the regulatory scheme that favors utilities, and imposing risk burdens and guarantees that competitive ESCOs' businesses cannot absorb and remain economically viable.

13. My affidavit is organized as follows.

First, I review electricity prices in New York prior to 2000. I also review energy prices for ESCOs and investor-owned utilities from 2000, the first year for which the Energy Information Administration reports ESCO prices in New York, through 2014.

Second, I explain basic differences between utilities and ESCOs that are relevant to, and important in, this proceeding.

Third, I explain why the Commission's Order related to mandated ESCO guarantees is asymmetrical and establishes a standard for ESCOs that will be impossible for them to meet, and requires their acceptance of unreasonable risks.

Fourth, I explain why the claimed availability of hedges will not sufficiently offset an ESCO's risks and resolve market uncertainty.

Fifth, I explain that consumers have benefited and likely will continue to benefit from ESCOs' participation in the retail electricity market because their participation makes utilities more responsive and imposes downward pressure on utility rates.

Sixth, I explain how the Order's 30% renewable option is likely to cause customers to pay *more* for energy in that there could be less customer incentives for energy efficiency and other improvements on the customers' side of the meters.

I. *ESCOs' AND UTILITIES' HISTORICAL PRICES IN NEW YORK*

14. The Energy Information Administration's (EIA) electricity price data for New York between 1990 and 2014 (the last year the federal government's data was published) shows that New York energy market rates are volatile and that, during some periods, ESCOs offered lower rates than utilities.

15. I reviewed EIA data for both the Residential category and a category called Total, which includes all Rate Categories. I pulled the price data (i) for full service utilities under the NYPSC and (ii) for Restructured Retail Service Providers' (ESCOs) electricity prices, which are not subject to comprehensive utility regulation, and the amounts their customers pay for wires' charges, which are regulated.

16. Table 1 shows that Full Service integrated utilities had an average inflation adjusted residential price of 19.40 cents per kWh, or $0.1940 per kWh, starting in 1997 with

restructuring, as compared to 21.89 cents per kWh, or $0.2189 per kWh, in the previous seven years. I interpret the average residential price reduction starting in 1997 as being consistent with the expectation that retail competition from ESCOs, or restructuring, pressured utilities to reduce costs and increase efficiency.

TABLE 1 RESIDENTIAL			
Year	State	Full-Service Providers	With CPI 2014=100
1990	NY	11.44	21.49
1991	NY	11.97	21.51
1992	NY	12.43	21.56
1993	NY	13.17	22.18
1994	NY	13.55	22.29
1995	NY	13.90	22.30
1996	NY	14.04	21.89
1997	NY	14.12	21.51
1998	NY	13.66	20.48
1999	NY	13.32	19.58
2000	NY	14.03	20.01
2001	NY	13.99	19.46
2002	NY	13.46	18.25
2003	NY	14.28	18.79
2004	NY	14.60	18.55
2005	NY	15.86	19.40
2006	NY	16.91	19.94
2007	NY	17.01	19.51
2008	NY	17.98	19.84
2009	NY	17.16	18.86
2010	NY	18.51	20.00
2011	NY	18.06	18.97
2012	NY	17.33	17.85
2013	NY	18.46	18.70
2014	NY	19.52	19.52
Sum of real prices 1997-2014			**349.23**
Average real price 1997-2014			**19.40**
Sum of real prices 1990-1996			**153.23**
Average real price 1990-1996			**21.89**
Sum of real prices 2000-2014			**287.65**
Average of real prices 2000-2014			**19.18**

17. Table 2 shows the corresponding residential average price data for ESCOs beginning in 1997. The data did not add wires' delivery charges until 2000. This makes direct total price comparisons not meaningful until 2000. I calculated the average inflation adjusted Total price (or combined electricity and wires' charges) for 2000 through 2014 for ESCOs to be $0.2006 per kWh, which is a mere 0.88 of a cent more than the corresponding statewide vertically integrated utility average price for the same period ($0.1918 per kWh), which I estimated in Table 1. There are also year-to-year differences. For example, in 4 out of 15 years from 2000 through 2014 – 2000, 2004, 2005, and 2006 – the ESCO statewide average was less than the vertically integrated utility price for residential customers.

TABLE 2 RESIDENTIAL			
Year	State	Restructured Retail Service Providers	With CPI 2014=100
1990	NY	n/a	n/a
1991	NY	n/a	n/a
1992	NY	n/a	n/a
1993	NY	n/a	n/a
1994	NY	n/a	n/a
1995	NY	n/a	n/a
1996	NY	n/a	n/a
1997*	NY	8.43	12.84
1998*	NY	8.26	12.38
1999*	NY	3.82	5.62
2000	NY	12.30	17.54
2001	NY	15.00	20.86
2002	NY	15.11	20.49
2003	NY	14.81	19.48
2004	NY	13.44	17.08
2005	NY	13.63	16.68
2006	NY	16.65	19.63
2007	NY	17.87	20.49
2008	NY	20.89	23.06
2009	NY	19.64	21.58
2010	NY	20.03	21.64
2011	NY	19.27	20.24
2012	NY	18.83	19.40
2013	NY	20.12	20.39
2014	NY	22.28	22.28
Sum of real prices 2000-2014			**300.84**
Average real price 2000-2014			**20.06**
*** Price does not include wires' charge.**			

18. Table 3 shows the same data as shown in Table 1 for vertically integrated Full Service utilities average Total prices when the EIA combines Residential, Commercial, Industrial, Transportation, and Other customer categories. The average real price starting with retail competition in 1997 through 2014 (the retail restructuring period) was $0.1736. This average real price was less than the average real price for the prior seven years of $0.1771 per

kWh. This is also consistent with the expectations of restructuring. I also observe that starting in 1997 and until 2005 the Total annual real prices were all less than the real average Total prices for the seven years prior to restructuring. These data confirm that utility energy prices fell after restructuring, which is consistent with the Commission's stated expectation that retail choice would reduce delivered electricity prices in New York.

TABLE 3 TOTAL			
Year	State	Full-Service Providers	With CPI 2014=100
1990	NY	9.37	17.61
1991	NY	9.79	17.59
1992	NY	10.19	17.68
1993	NY	10.72	18.06
1994	NY	10.92	17.96
1995	NY	11.06	17.74
1996	NY	11.13	17.35
1997	NY	11.13	16.96
1998	NY	10.71	16.05
1999	NY	10.40	15.29
2000	NY	11.23	16.01
2001	NY	11.29	15.70
2002	NY	10.89	14.77
2003	NY	13.21	17.38
2004	NY	13.54	17.20
2005	NY	15.18	18.57
2006	NY	16.08	18.96
2007	NY	16.16	18.53
2008	NY	17.46	19.27
2009	NY	16.25	17.86
2010	NY	17.56	18.97
2011	NY	17.17	18.04
2012	NY	16.33	16.82
2013	NY	17.40	17.63
2014	NY	18.45	18.45
Sum of real prices 1997-2014			**312.47**
Average real price 1997-2014			**17.36**
Sum of real prices 1990-1996			**124.00**
Average real price 1990-1996			**17.71**
Sum of real prices 2000-2014			**264.17**
Average of real prices 2000-2014			**17.61**

19. Table 4 shows the corresponding data for ESCOs when all of the customer categories are combined as Total. The average Total statewide price (in real 2014 dollars) for Restructured Retail Service Providers starting in 2000 through 2014 was $0.1561 per kWh,

which was $0.02 per kWh less than the average Total vertically integrated utility price of $0.1761 per kWh.

TABLE 4 TOTAL			
Year	State	Restructured Retail Service Providers	With CPI 2014=100
1990	NY	n/a	n/a
1991	NY	n/a	n/a
1992	NY	n/a	n/a
1993	NY	n/a	n/a
1994	NY	n/a	n/a
1995	NY	n/a	n/a
1996	NY	n/a	n/a
1997*	NY	6.59	10.04
1998*	NY	7.38	11.06
1999*	NY	3.83	5.63
2000	NY	12.38	17.65
2001	NY	13.30	18.50
2002	NY	12.56	17.03
2003	NY	10.67	14.04
2004	NY	10.60	13.47
2005	NY	11.91	14.57
2006	NY	13.99	16.50
2007	NY	13.91	15.95
2008	NY	15.17	16.74
2009	NY	14.44	15.87
2010	NY	15.03	16.24
2011	NY	14.47	15.20
2012	NY	13.95	14.37
2013	NY	13.64	13.82
2014	NY	14.27	14.27
Sum of real prices 2000-2014			**234.22**
Average real price 2000-2014			**15.61**
*** Price does not include wires' charge.**			

20. I also observe that the statewide average Total price was less for ESCOs compared to Full Service vertically integrated utilities 80% of the time – i.e., in 12 out of the past 15 years (2000-2014). See Table 5.

TABLE 5 Comparison of Average Statewide Prices for ESCOs and Full Service Providers			
Year	State	Full Service Providers With CPI 2014=100	Restructured Retail Service Providers With CPI 2014=100
2000	NY	16.01	17.65
2001	NY	15.70	18.50
2002	NY	14.77	17.03
2003	NY	17.38	14.04
2004	NY	17.20	13.47
2005	NY	18.57	14.57
2006	NY	18.96	16.50
2007	NY	18.53	15.95
2008	NY	19.27	16.74
2009	NY	17.86	15.87
2010	NY	18.97	16.24
2011	NY	18.04	15.20
2012	NY	16.82	14.37
2013	NY	17.63	13.82
2014	NY	18.45	14.27

21. The price comparisons in the previous tables show that (i) retail choice caused consumer prices to decline compared to prior years, and (ii) at bottom, competitive market prices are volatile. More important, there is no certainty as to whether ESCOs will, on average, beat utility prices, or *vice versa*. For this reason (among others I discuss here), it is unreasonable for the Commission to require ESCOs to guarantee that they prospectively will meet or beat utility prices – the market does not allow for that sort of certainty. It is illogical to assume that reducing the number of choices in the marketplace will make the market more competitive. Furthermore, for the foregoing reasons, the Commission incorrectly assumes that forcing ESCOs out of the

market in New York (by forcing them to operate only under economically unreasonable conditions) will somehow benefit consumers or increase competition. It is also wrong to assume that consumers will somehow benefit from the forced removal of ESCOs from the marketplace – a sector whose addition to the marketplace has historically (and viewed over an appropriately broad period of time) resulted in lower prices for customers as described herein.

II. *THE ORDER IGNORES CRITICAL MARKET REALITIES*

A. The Commission's Flawed Understanding of a "Workably Competitive Market"

22. Market prices can and do move up and down. Competitive markets use the forces of demand and supply to determine market-clearing prices and quantities. Competitive markets are said to be in equilibrium when the quantity of demand and supply are equal. This results in prices equal or close to marginal cost, which the Commission observes in its Memorandum of Law.[4] Nevertheless, competitive markets are not always in equilibrium due to variations in demand and supply over time. It is important to recognize that when demand surges relative to supply, market prices increase relative to short-run marginal cost to clear the market. In effect, the higher cost arising from shortages is factored into the increased price that clears the market. This results in the addition of a concept called marginal opportunity cost to short run marginal cost, and *vice versa* if there were excess supply.

23. The Commission appears to ignore (or misunderstand) how competitive markets respond to market swings, instead coming up with a false conceptual definition of the term "workably competitive" market. The Commission incorrectly defines workably competitive solely with reference to results and the introduction of innovative products. For example, the

[4] Memorandum of Law of Respondent New York State Public Service Commission ("PSC Brief") at 46.

PSC Brief states that in its February 2014 Order, the Commission concluded that the "market was not workably competitive because, *inter alia*, most mass market customers participating in the market did not receive savings, energy-related value-added services, or indeed any benefit comparable to the rate charged."[5] This definition is not correct because competitive markets do not guarantee lower prices – prices in competitive markets move up and down.

24. Rather, a workably competitive market is one that (i) provides for participants to freely enter and exit, and (ii) allows those participants to compete (even in the face of potential monopoly power). Those conditions are "workably competitive" because they advance economic efficiency over time. More specifically, a workably competitive market has the following characteristics:

- The market clearing price and quantity of a good or service exchanged are determined by the interaction between buyers' demand and sellers' supply, along with relatively free access to information.
- An ESCO's net income or loss is a function of the relationship between the competitive market price and the individual ESCO's average total costs per unit.
- If net income is positive, the ESCO would be incentivized to expand (and *vice versa*). This is called a price signal.
- If consumers find the market prices are too high, they would attempt to purchase alternative or substitute products.
- No individual seller or buyer, of group of sellers or buyers, unilaterally would determine market prices by limiting market information or controlling the quantity sold.

25. The Commission's incorrect definition of a workably competitive market ignores the above criteria and focuses almost exclusively on price results for ESCOs' customers. That is a flawed definition of a workably competitive market – one in which all customers benefit greatly from retail choice. The prior discussion relating to Tables 1 through 4 demonstrates that

[5] See Memorandum of Law of Respondent New York State Public Service Commission, page 43 citing February 2014 Order (R. 3343-44).

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[5] See Memorandum of Law of Respondent New York State Public Service Commission, page 43 citing February 2014 Order (R. 3343-44).

ESCOs have generally outperformed utilities when all customer categories are compared, and that Full Service retail prices declined after consumer choice was introduced in 1997 – both positive results of the workably competitive marketplace.

B. The Important Differences Between ESCOs and Utilities

26. Significant differences between ESCOs and utilities help explain why, as discussed further herein, the Order's requirement that ESCO's guarantee to meet or beat utility pricing is an impossible standard. Comparisons are more complicated than simply focusing on average prices.

27. First, utilities have different energy sourcing options that are not available to ESCOs. Utilities previously were vertically integrated regulated monopolies subject to comprehensive price and earnings regulation under the purview of the Commission. Even though the introduction of ESCOs into the marketplace in the mid to late 1990s injected competition into the energy supply side of the market, utilities in New York maintained their monopoly status with respect to the pipes and wires used to deliver natural gas and electricity to retail consumers.

28. Utilities purchase electricity in the organized wholesale market that the New York Independent System Operator ("NYISO") operates. Utilities also can secure electricity from other sources, such as utility-owned resources, swaps, and trades. Natural gas utilities also purchase energy in wholesale markets for resale to retail customers. ESCOs, by contrast, effectively only purchase electricity and natural gas from organized wholesale energy markets, and therefore have fewer energy sourcing options.

29. Utilities thus have different options and can more readily make adjustments to changing market conditions in ways that ESCOs often cannot. These include decisions to self-

generate and trade with each other. ESCOs are exclusively energy purchasers without any participation in the delivery side of the market. This subjects ESCOs to the same price volatility and prospect of price shocks as the retail customers they supply. In contrast, utilities have nearly fixed annual cash-flows from their wires' business regardless of retail customer choices.

30. Second, and significantly, utilities can rely on assurances from the Commission that they will receive a just and reasonable rate. In other words, no matter what, a utility's shareholders and economic viability will be protected.

31. For example, the Commission may seek to protect utility earnings because failing to do so could result in lower utility bond-ratings, which would cause retail customers to pay higher prices due to higher interest rates paid by the utility. Therefore, the PSC might allow a utility to increase rates at a later date to make-up for short term losses because not allowing that sort of rate relief would only wind up causing increased costs to consumers later – the utility would need to take on high cost debt at some later date to maintain and improve infrastructure, a cost the utility would then pass on to consumers anyway.

32. That is precisely what happened in the case of Niagara Mohawk. Due to cold weather and the resulting high wholesale market prices, Niagara Mohawk was faced with the prospect of raising prices for its mass market customers in February 2014, which it asserted would cause a financial hardship for its mass market customers. The Commission issued an Order granting Niagara Mohawk's request for a waiver of Rule 46.3.2 of its tariff and froze Niagara Mohawk's mass market price for February 2014 at January 2014 price levels.[6] In a subsequent Order, the Commission adopted its Emergency Rule as a Permanent Rule and allowed Niagara Mohawk to recover the $33.258 million of deferred costs, plus carrying charges,

[6] State of New York Public Service Commission, Order Granting Request for Waiver, Case 14-E-0026, January 28, 2014.

over a six-month period commencing in June 2014.[7] The Commission does not provide ESCOs with the same consideration because their rates are not regulated in this manner. Indeed, ESCOs have no recourse to the Commission when they provide fixed rate services that are subject to the vagaries of wholesale energy markets. Furthermore, any increase in the utility's "delivery" charges for retroactive under-recovery would be added to both the utility's and ESCO's bills. As purchasers, ESCOs must accept the risks related to reselling energy in the competitive retail markets. The Order also would deny ESCOs the possibility of charging variable ESCO prices that exceed corresponding utility prices. The Order itself suggests that the Commission is more than willing to force ESCOs asymmetrically to undertake losses without the built-in advantages and safety nets that utilities enjoy, which the Niagara Mohawk rate relief order exemplifies.

33. Third, utilities have a larger and more diverse customer base than ESCOs. Utilities buy and secure electricity and natural gas to satisfy their entire load, which includes residential and small commercial (i.e.. mass market customers), as well as larger commercial, industrial, and government customers. This gives rise to a concept of diversity in customer time of use and load factors. The load factor is the ratio of the amount of actual energy used to the amount of energy that could be used, assuming peak use was multiplied by the number of hours in the period being analyzed.

34. Differences in load factor would reflect differences in customers' peak and off-peak consumption patterns. For example, high load factor customers (e.g., industrial entities) take more off-peak electricity and are less costly to supply. Conversely, low load factor customers (e.g., residential customers) likely take more on-peak electricity and are more costly to supply. With significantly more customers of all types, including large industrial facilities

[7] State of New York Public Service Commission, Order Adopting Emergency Rule as a Permanent Rule and Allowing Recovery of Deferral Costs, Case 14-E-0026, April 25, 2014.

operating 24 hours a day, a utility can operate in a way that the amount of energy they purchase more closely approximates the actual energy demands of their diverse customer base. The vertically integrated utility has scale and diversity that will reduce waste and acquisition costs compared to entities that attempt to style their purchases to fit more narrowly defined customer requirements. Further, the burdens placed on the system as a result of wholesale market swings are absorbed across all of the utility's retail customers.

35. ESCOs, on the other hand, serve mass market customers (i.e., small residential or commercial customers) as a class, or sometimes a sub-class, based on the products that ESCOs provide. To the extent ESCOs service customers other than mass market customers, it generally constitutes a far smaller portion of their customer base as compared to utilities. Relative to the utilities' customer base, ESCOs' disproportionate mass market customer base is more costly to supply (in light of their lower load factors) and their usage is more difficult to predict, which often results in less efficient energy procurement at the wholesale level.

36. Utilities spread any wholesale market price changes across their entire system with energy adjustment clauses. These allow the utilities to pass through increases in wholesale energy charges, as well as any reductions from estimated monthly energy costs determined on a system-wide basis. This primarily benefits the utilities' residential and small customers, who have relatively smaller load factors. Given these inherent differences, it is not economically reasonable to require ESCO refunds based on a comparison of ESCO and utility performance with respect to how they pass through wholesale price changes. And, any actual sales tax reductions for wires charges that ESCO customers pay are insufficient to make up the large gap between a utility's ability to absorb wholesale price changes and an ESCO's ability to do so,

contrary to the assertion of Ms. Luann Scherer.[8]

37. Utilities have a duty to maintain their wires' business and to remain in business to serve customers. ESCOs can enter and leave the market. As I discuss below, the Order imposes disproportionately greater risk on ESCOs. While the Commission would take steps to ease a local utility's pain if the utility comes up short – as it did in the case of Niagara Mohawk – the Order shows that the Commission plainly is not willing to do the same for ESCOs. In effect, the Commission would treat ESCOs as competitive firms without regulatory relief if earnings drop significantly. This is the other side of the proposed asymmetry. The different existing light-handed regulatory treatment of ESCOs means the Commission does not regulate ESCOs' earnings and determine appropriate tariffs. Regulation of ESCOs should be symmetric and come with the recognition that the Commission should neither cap ESCOs' upside gains nor seek to curtail and perhaps eliminate ESCOs' earnings through unrealistic and unsustainable guarantees. The likely result of the Commission's attempt to subject ESCO prices to the proposed rate refund regulation without the corresponding protection afforded to regulated utilities is that virtually all ESCOs will be forced to leave the competitive New York residential energy market. That would have an adverse impact on consumers because it would likely result in reduced choices, higher energy prices, and decreased product offerings.

III. *THE ORDER IMPOSES ON ESCOS AN IMPOSSIBLE STANDARD FOR VARIABLE AND FIXED RATE ENERGY SERVICES*

38. The Order requires that ESCOs must "guarantee that the customers will pay no more, on an annual basis, than the customer would have paid as a full service customer of the utility."[9] Alternatively, ESCOs must provide at least 30% of the electricity they supply using

[8] Affidavit of Luann Scherer in Support of Respondent's Answer and Memorandum of Law ("Scherer Aff.") ¶ 25.
[9] Order at 12-13.

renewable energy, assuming customers accept this alternative. Structured in that way, ESCOs face an impossible standard for Variable and Fixed Rate products under the Order for several reasons.

A. Variable Rate Service

39. ESCOs that provide Variable Rate Service ("VRS") cannot succeed under the Order because it places all the risk of price volatility on the ESCO.

40. The essence of variable rate service is that retail customers, like ESCOs that supply the energy, participate in both the "Upside" and "Downside" market risks. If wholesale costs go up, customers pay more, and if wholesale costs go down, customers pay less. But the Order's requirement of retroactive refunds means VRS customers always win and ESCOs always lose. If wholesale market prices go down, ESCOs will purchase energy for less and retail customers will pay less under ESCOs' variable pricing plans. If wholesale prices increase, however, ESCOs will pay more in the wholesale market for the energy they resell to their VRS customers but will not be able to adjust their rate proportionally to reflect their increased costs because the Order would cap any rate at the rate the corresponding local utility charges. That is not the way competitive markets work, nor is it the way they are supposed to work.

41. A similar increase might affect other utility energy sources, which incorporate wholesale energy prices in the amount utilities pay for these other sources of energy that they resell. New York has energy adjustment clauses that pass on movements in energy costs to full service customers. However, the Order caps any increase in VRS prices to the comparable revised regulated utility prices. The corresponding utility retail prices will very likely not increase as much as ESCO variable prices because (i) utilities have a larger portfolio of options such as utility owned resources, swaps, and trades, (ii) utilities have a duty to operate in a least

cost manner that means utilities can be compensated for purchasing hedging insurance, and (iii) utilities have larger and more diverse customer bases that make them better able than ESCOs to absorb any increases. In short, this means that under the Order, ESCOs faced with increasing wholesale prices would lose because they would likely have to issue retroactive refunds to their VRS customers notwithstanding that ESCOs face market challenges that utilities do not.

42. The following two tables demonstrate what would happen to ESCOs' earnings for VRS customers with and without the Commission Order. Table 6 shows the effect of wholesale market price increases on ESCOs. Under the *status quo*, ESCOs do not lose money for VRS products when prices increase – just as they do not make more money for VRS products when prices decrease; that upside benefit and downside risk is borne by the customers who elect to enroll in such VRS plans and who want to bear the upside and downside benefits and risks. However, under the Order, when ESCOs' prices increase more than the corresponding local utility's prices under the Order, ESCOs will lose money because they would be required to pay a retroactive refund of $0.01 per kWh in the example shown in Table 6.

TABLE 6 **Variable Rate Service Example**	
Prices Increase	
Initial ESCO Price	$0.10 per kWh
Wholesale Market Price	$0.12 per kWh
New ESCO Price	$0.12 per kWh
Current Effect	No Loss: $0.12 - $0.12 per kWh
With the Order	
Initial Utility Price	$0.10 per kWh
New Utility Price	$0.11 per kWh
Compare Retroactive ESCO and Utility Prices	$0.12 (ESCO) - $0.11 (Utility) = $0.01 per kWh
ESCO Refund/Loss	**$0.01 per kWh**
ESCO Pays $0.12 per kWh and Charges $0.11 per kwh	

43. Table 7 shows the effect on ESCOs providing VRS when prices decrease.

TABLE 7 Variable Rate Service Example	
Prices Decreases	
Initial ESCO Price	$0.10 per kWh
Wholesale Market Price	$0.09 per kWh
New ESCO Price	$0.09 per kWh
Current Effect	No gain: $0.09 - $0.09 per kWh
With the Order	
Initial Utility Price	$0.10 per kWh
New Utility Price	$0.085 per kWh
Compare Retroactive ESCO and Utility Prices	$0.09 (ESCO) - $0.085 (Utility) = $0.005
ESCO Loss	
ESCO Refund/Loss	**$0.005 per kWh**
ESCO Pays $0.09 per kWh and Charges $0.085 per kWh	

44. Under the *status quo*, ESCOs do not expect to earn or lose money with respect to variable rate products when wholesale energy prices decrease. Under the Order, if utility prices respond to a greater extent than ESCOs' prices to changes in wholesale market conditions for any combination of reasons, ESCOs would face the possibility of a retroactive refund that would cause them to lose money from supplying electricity to their VRS customers. ESCOs could hope to not lose money with respect to their VRS customers only if utility prices in this example decline less than $0.01 per kWh, or not at all.

45. Moreover, ESCOs cannot know the level of current month utility rates, so under the Order ESCOs would have the impossible task of accurately predicting utility rates just to assess whether they are even operating a profitable business.

46. As explained in Section II.B, above, utilities and ESCOs employ very different models for determining prices. For example, utilities have massive balance sheets, can generate power, are larger market participants in purchasing energy, and have statutory protections

through just and reasonable rates. The Commission's position that ESCOs can hedge[10] ignores the fact that ESCOs must absorb any such hedging costs. In contrast, utilities can seek to recover the same hedging costs by smearing those costs across the authorized revenue requirements. If a utility spends money for fuel and energy, it can reasonably expect to recover these expenses through approved regulated adjustment clauses. Variations between the expected amount and actual amount that a utility spends for energy are collected through monthly energy adjustment clauses. Furthermore, under typical utility regulation, a utility can reasonably expect to recover its cost of service through the periodic authorized revenue requirements that the Commission approves. If a utility invests capital, it would recover a return "on" and "of" the investments that regulators find prudent. Operating expenses are also collected through the same periodic authorized revenue requirements. The same is not true for ESCOs.

47. In view of the foregoing, I believe that the asymmetrical standard the Order imposes on ESCOs effectively would make it virtually impossible for ESCOs to continue to offer variable rate products to the millions of customers who opted to enroll in those plans, because the Order would impose an impossible, uneconomic, and inequitable standard for ESCOs to try to meet.

B. Fixed Rate Service

48. The Order also would make unavailable ESCOs' Fixed Rate Service ("FRS") option. Utilities cannot and do not offer FRS, and only ESCOs can offer such options to retail customers who prefer fixed price certainty in exchange for a premium price. Under the Order, those customers would be denied their choice. Fixed rate products especially benefit retail customers concerned about maintaining a budget, such as low income customers and small

[10] Scherer Aff. ¶ 24.

businesses

49. As noted above, utilities have energy adjustment clauses that reflect price changes in wholesale markets due to changes in market demand and supply. Therefore, utility energy prices vary with changes in the market. This makes the ESCO's FRS a very different product because customers can secure price certainty over a period of time. It would be unfair and inefficient to require ESCOs' fixed rate products to beat utility prices, and when they do not, require ESCOs to provide retroactive refunds. That, in effect, would punish ESCOs for providing a valuable choice and service to retail customers in the form of rate certainty.

50. Competitive wholesale markets, like NYISO, experience price increases and decreases. The future is uncertain and FRS thus shifts risks to ESCOs. If wholesale market prices increase, customers benefit because the customer pays the same fixed rate despite the increased prices that ESCOs have to pay for electricity that they resell. The result in those circumstances is that ESCOs lose money. If wholesale energy prices decline, ESCOs' FRS customers pay the same amount and ESCOs benefit. To sustain FRS offerings and absorb wholesale market price increases, ESCOs rely on a combination of gains when wholesale prices decrease and any premiums customers pay in exchange for certainty in their budgeting. However, the Order would upset that model by imposing on ESCOs a new and inappropriate retroactive refund obligation, requiring them to guarantee savings in the face of declining utility energy rates. This is effectively impossible, particularly because the FRS prices already include a premium in exchange for price certainty.

51. Under current conditions without the Order, ESCOs lose money when wholesale prices increase because they must cover the FRS fixed rate. The Order does not change this regardless of any similar or smaller decrease in retail utility rates. When rates decline in the

energy commodity market, ESCOs currently gain from their FRS customers, which offsets the losses they sustain when wholesale prices increase. Table 8 shows how this would work under the *status quo* (pre-Order) with the margins lost under conditions of wholesale price increases potentially being offset by increased margins during periods when wholesale prices decrease.

TABLE 8 **Fixed Rate Service Example**	
Prices Increase ***(Status Quo)***	
ESCO Price	$0.10 per kWh
Wholesale Market Price	$0.12 per kWh
ESCO Loss	$0.02 per kWh
Prices Decrease ***(Status Quo)***	
ESCO Price	$0.10 per kWh
Wholesale Market Price	$0.09 per kWh
ESCO Gain	$0.01 per kWh
Price Decrease ***(With Order)***	
ESCO Price	$0.10 per kWh
Utility Price	$0.085 per kWh
Gain - Refund	
ESCO Loss	$0.01 - $0.015 = **$0.005 per kWh**

52. Table 8 also shows what would happen under the Order for FRS if the corresponding utility's retail prices decrease more than the ESCO's retail price. In this example, the ESCO would purchase electricity for $0.09 per kWh, and, rather than realizing a gain of $0.01 per kWh, the ESCO would pay a retroactive refund of $0.015 per kWh that would result in a net loss of $0.005 per kWh for the FRS electricity sales. ESCOs would be forced to pay retroactive refunds to their FRS customers when wholesale market prices decrease and utilities'

price reductions are greater for whatever combination of reasons. When wholesale market rates increase, ESCOs would lose money on FRS programs just as they did before the Order. Though the Order imposes retroactive refunds to FRS customers when wholesale market prices decline, there is no corresponding adjustment when wholesale market prices increase. This guarantees that ESCOs will lose money on FRS programs whether wholesale energy market prices increase or decrease. In short, the Order would force the ESCOs to assume wholesale market price risks without sufficient offsetting compensation, and therefore, subjects the ESCO FRS option to an impossible standard that will almost certainly eliminate any such offerings.

C. Hedges Do Not Offer Sufficient Protection to ESCOs

53. The Commission contends that ESCOs can hedge and protect themselves.[11] Hedges allow parties to insure against price volatility risk by paying a fee. Hedges only work when they are symmetrical – that is, where a party hedges against price increases and price decreases. As noted above, however, the Commission's proposal is not symmetric, and if wholesale market prices fall, ESCOs will be required to pay refunds to their fixed rate customers. I am not aware of any hedge that can satisfy conditions that asymmetrically require retail refunds to eliminate ESCOs' gains while leaving them to absorb all their losses. If wholesale market prices increase, ESCOs will lose money when they fulfill their obligation to provide fixed price energy. Hedging can reduce ESCO risks of wholesale price volatility only when ESCOs hedge symmetrically against both price decreases and increases. The Commission effectively takes away that opportunity because the Order is not symmetric. Whether ESCOs can hedge in a theoretical sense, therefore, does not solve the asymmetric problem that the Order introduces by requiring ESCOs to pay retroactive refunds when wholesale prices decrease with no

[11] Scherer Aff. ¶ 24.

corresponding ability to collect additional payments from fixed rate customers when wholesale prices increase.

54. ESCOs' hedges are similar to insurance. However, the Order would reduce the payout and value of the insurance aspect of any hedges. Furthermore, ESCOs must absorb the cost of any hedges they secure without a regulatory safety mechanism that would allow them to pass on costs to customers. In contrast, by regulatory design and circumstances, utilities have built-in hedges. Accordingly, utilities face less risk and have relatively lower hedging costs than ESCOs.

55. The true-up, or retroactive refund requirement, in the Order is inherently unfair because it would be applied only to ESCOs. If an ESCO beats a utility's price, there is no corresponding obligation for the utility to refund money to customers in that same locality. The ESCOs would bear the inherent risk in an environment where gauging utility pricing just right (even if they could meet the same cost structure as a utility, which they cannot) will be very difficult, if not impossible.

56. Though the Commission points to an unidentified ESCO that purportedly offered some type of "guaranteed" product even before issuance of the Order,[12] there is nothing in the Scherer Affidavit or otherwise that sets forth the terms of the alleged guarantee, whether it was combined with other product offerings, whether it was, for example, only offered on short-term contracts, whether the alleged guaranteed product offering was profitable for the ESCO, for how long it was offered, and whether that ESCO is still offering a guaranteed product. It is telling that the Commission has remained silent as to all of those relevant factors. Simply put, a single ESCO's ability to meet or beat the local utility in a short-term contract would say nothing as to

[12] Memorandum of Law of Respondent New York State Public Service Commission, page 47, referencing Scherer Affidavit at 26.

whether ESCOs as a whole could maintain sustainable enterprises if forced year after year to guarantee savings as compared to a local utility. For the reasons described herein, the answer to that question is that they cannot.

57. Moreover, though some ESCOs may believe that they theoretically could satisfy the guarantee requirement, as I describe here, the economics are such that it is highly likely that the first significant market pressure will drive a significant number of those ESCOs out of business.

IV. *ESCO PARTICIPATION IN THE MARKET BENEFITS CONSUMERS, AND THE ORDER THUS THREATENS TO HARM CONSUMERS BY FORCING ESCOS OUT OF THE MARKET*

A. ESCOs Provide Consumer Benefits

57. ESCO participation in the market benefits consumers, including (or especially) mass-market consumers. ESCO participation has resulted in innovative energy efficiency improvements, choice to consumers (such as fixed rate plans), and discipline on rates that monopoly utilities otherwise would charge.

58. In addition to the price discipline effect that ESCOs obviously have had on the market, (see Part I and Table 1, above), ESCOs also benefit customers by providing products and services that utilities are not always able to provide as regulated monopolies. The Order would eliminate that consumer choice. The Order operates from the assumption that ESCOs have not provided consumers with value-added services, but that is wrong: ESCOs have provided consumers with value-added services that promote energy efficiency and more. The Order would place additional risks and burdens on ESCOs with the retroactive refund requirement and this would likely reduce or eliminate the market share of ESCOs; reduce or eliminate innovation; and reduce or eliminate customer choices that increase energy efficiency.

59. It is also important to note that an ESCO's customers may exit and rejoin the utility with relatively little or no cost, and certainly without break in service. The *status quo* competitive market regulates ESCOs with this customer exit opportunity. The Order would add impossible-to-satisfy additional conditions and impose retroactive refund risks on ESCOs, which are not necessary given the exit opportunities that ESCO customers are already afforded.

60. The Commission's claim that the Order was needed because the market was not "workably competitive" thus does not make sense, including because: (i) the Commission's definition of "workable competition" is incorrect and (ii) the proposed fix in the Order (guaranteed retroactive customers' savings, or complying with products that guarantee 30% renewable electric service) does not promote a marketplace that will be more "workably competitive." The Order also guarantees that utilities will be awarded a winner's trophy regardless. Worse, it requires ESCOs to pass on savings under Variable Pricing, while eschewing upside gains that would be limited to utility rate increases despite the inherent and fundamental differences in customer diversity and scale, the different business characteristics of comprehensively regulated utilities compared to competitive businesses subject to market discipline and regulation, and the unfairness of changing rules mid-game and granting hometown advantages to the utilities. Indeed, by effectively driving ESCOs from the market and erecting barriers for ESCOs to enter the market, the Order will have a negative effect on a competitive marketplace – the opposite of what the Commission concedes it is seeking to accomplish.

61. The Order is predicated on alleged increases in complaints across the ESCO industry.[13] The Commission's response to these complaints is flawed for the reasons described herein. In addition, fundamental and impossible-to-satisfy changes in the manner that all ESCOs

[13] Order at 12-13.

conduct their businesses is an arbitrary and unnecessary response to complaints that pertain largely to a limited subset of bad apples,[14] particularly where the Commission has tools available to it to redress specific violations of the operative regulations. .

62. The Commission also seems confused in asserting that "restructuring" was done to lower prices.[15] When ESCOs enter the market, the resulting competition reduces the ability of regulated monopolies to collect energy prices that include utility inefficiencies and mistakes. While economists understand the efficiency that competition imposes on incumbent utilities and the inherent benefits of retail choice for consumers, no economist would ignore the observation that commodity prices can both increase and decrease in competitive markets. The Order ignores this fundamental fact. Therefore, if markets so move and price volatility emerges, it does not mean there has been a market failure or that markets are not workably competitive. Very importantly, if the wholesale market has become more volatile and/or marginal opportunity costs are increasingly problematic, it is not ESCOs that have benefitted or will benefit from market power.

B. The Order's 30% Renewable Provision Could Increase Energy Prices

63. The Order's 30% renewable provision is not a viable option for ESCOs, and it may well harm consumers. As a threshold matter, the 30% renewables option is available only for electricity and not natural gas. But, even with respect to electricity, the 30% renewables component is highly problematic and likely to harm consumers rather than helping them.

64. The reason behind the Commission push for an ESCO-provided 30% renewable product is unclear, and the Order does not confront this issue. First, this option does not address the Commission's purported interest in benefitting customers with lower bills. Under the Order,

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[14] See Petitioners Verified Petition, dated March 3, 2016, at ¶¶ 4, 59-63.
[15] Memorandum of Law of Respondent New York State Public Service Commission, pages 6.

an ESCO can enroll a mass market customer and charge any rate they wish (without retroactive refund liability or other guarantee) so long as the enrollment is "based on a contract for an electricity product derived from at least 30% renewable sources,"[16] (at least as far as electricity). This means the ESCO need not guarantee any savings for electricity if it offers a 30% renewable electricity product.

65. Second, there is no analysis in the Scherer Affidavit or anywhere else in the Commission's materials that supports the proposition that a 30% renewable product offering is necessarily more valuable to consumers than other value-added services that ESCOs may provide. Peter Sheehan submitted an Affidavit related to the 30% renewable products available. However, the Sheehan Affidavit does not provide any current information with respect to the availability of renewable energy products that ESCOs operating in New York can acquire. He also does not address whether acquiring "renewable energy credits" from other states or being counted for other purposes would satisfy the 30% renewable product offering. Both raise questions about potential "double counting." Furthermore, there are several ways for customers to become more environmentally friendly and/or save money. Spending money to increase the proportion of electricity from "green" sources should be compared to what the same money could achieve when spent on energy-efficiency improvements and other things on the customers' side of the meter. One size does not fit all. Indeed, one of the many benefits ESCOs provide is the ability for different consumers to choose the value-added services that appeal to them.

66. Yet, the Order puts pressure on ESCOs to market the 30% green portfolio to avoid the draconian and impossible-to-satisfy requirements of the retroactive refund risks (and does so only for electric offerings). The heavy hand of regulation would thus come down on the

[16] Order at 14.

competitive market of ESCOs, who must either go 30% "green" or accept retroactive refund risks that are impossible to avoid. The Commission's argument that this is no more than a regulation of access to utility "pipes and wires" is hollow and extraordinarily misleading.[17] The Order virtually pushes ESCOs out of the Fixed Rate Service market, and imposes asymmetric, intolerable risks on an ESCO's Variable Rate Service. Accordingly, ESCOs are being coerced to go 30% "green" to avoid having to pay retroactive refunds and having to incur intolerably high risks without corresponding adequate compensation, all without any principled or supportable basis showing how a 30% "green" product inures to the benefit of mass market customers. Retail customers would likely be denied access to Fixed Rate Service, and ESCOs will be far less able to offer other environmentally friendly alternatives.

67. Markets and competitive firms can be more innovative than an arbitrary and overly-simplistic 30% requirement; the competitive marketplace can find the sweet spot for customers with different preferences and income. A service providing 30% of its energy portfolio from green sources could be too specific and narrow a choice. Offering a menu of different green portfolio percentages at different prices might achieve more, while protecting customers that might support a greener mix but simply cannot afford to pay to do so.

68. The Order also misses the fact that customers typically value their bottom-line monthly bills, not price comparisons. The Order compares prices and ignores the volume of energy that customers use. If ESCOs help customers use less energy, those customers' bottom-line costs are less. The Order ignores entirely how ESCOs can and do help customers reduce their energy bills, which many customers value more than a comparison of average price difference. "But for" the ESCO, these same customers would purchase more energy – and even

[17] PSC Br. at 3, 4, 18, 24-25, 27, and 58.

at lower per kWh cost, spend more money on energy. Therefore, the appropriate comparison should be between the ESCO bill and a utility-like bill without any ESCO-aided reduction in a customer's use, which is something the Order does not even consider, and the Commission presents no evidence that it even undertook to do so.

Charles J. Cicchetti, Ph.D.
Pacific Economics Group, Inc.

Sworn to before me this
6th day of May 2016

NOTARY PUBLIC

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