NRG Response To Track One Policy Questions and Issues Surrounding the Rethinking the Energy Vision Proceeding

NRG Energy, Inc. ("NRG") appreciates the opportunity to provide comments on the eight questions posed by the Commission in the Rethinking the Energy Vision ("REV") proceeding.

A. Initial Comments on the REV Proceeding Process.

1. NRG's Involvement in the REV Proceeding.

NRG was actively engaged in Track One of the REV proceeding. NRG and its advisors (E Cubed LLC) have participated in all committees, served on the leadership groups for Work Group 1 (Steering Committee for Markets and Pricing) and the Work Group 2's Microgrid Sub-Committee (Lead for the Values/Worth of Microgrids Sub-Group). We also served on a number of sub-groups (WG2 Platform Technology – Functionalities of Platform Technology, WG 2 Microgrid Sub-Committee sub-groups on Interconnection and Economics), and attended or provided input on other committees.

NRG appreciates this opportunity to add several proposals to the record of this proceeding that were not incorporated into the summary presentations of the working group progress. Therefore, we take this opportunity to re-introduce several ideas and facts that were not presented in the formal report from the committees we were involved in.

Question I. Potential REV Outcomes:

> *Please comment on whether the anticipated outcomes identified in the outcomes matrix are the appropriate results that the Commission should be striving for in this effort. Once the Commission has established the appropriate outcomes, parties will be asked to weigh in on the metrics to be used to most effectively achieve those results.*

The REV proceeding's Outcomes Matrix identified many laudable goals, including improving the environmental attributes of energy consumed by New Yorkers, improved

customer engagement and other system benefits. NRG generally supports improving the competitive framework to bring Distributed Energy Resources ("DERs") to market.

In addition to goals stated in the Outcomes Matrix, NRG suggests that "Transparency" should be added as a major REV goal. Successful customer engagement requires a level of access to information that is, at times, sorely lacking under the existing utility model. "Transparency" should manifest itself in a variety of different specific sub-goals, including:

- Increased information from the utility about where distribution investments are most needed;
- Access to clear price signals for DER investments; and
- Clear and speedy access to meter information rightfully "owned" by the customer, but gathered and largely made inaccessible by the incumbent utilities.

As DERs continue to increase penetration in the New York energy marketplace, transparent access to data will be critical to managing and aggregating distributed resources from across the grid to bring innovation and new energy products to the market.

Question II Optimal Ownership Structures for Distributed Energy Resources:

Please comment on the framework of analysis presented in the Staff Report, see pages 26-28, and discuss which of the potential approaches to utility engagement in DER and other models is preferable to ensure a robust DER market, and why.[1]

The most important step that the Commission can take in this proceeding is to ensure that DER investment continues to be made by private parties. Allowing utilities in New York to ratebase DER investment will be incredibly corrosive to the DER marketplace and set innovation

[1] In this context, we are interested in party comments on the implications of the D.C. Circuit Court of Appeals decision on May 23, 2014 (*Electric Power Supply Association v. FERC*, Case No. 11-1486) (*"EPSA"*) concerning state jurisdiction with respect to demand response.

in New York's distribution system back immeasurably. DER investment decisions should be driven by end-users and their designated agents, with shareholder dollars at risk.[2]

A system of private ownership has key advantages over a utility-owned model, including: (1) eliminating ratepayer risk, because private investors bear the risks of their investment decisions; (2) preventing cross-subsidization by various utility ratepayer classes, including low-income customers; (3) allowing customers to work with third-parties to deploy technology in an innovative and customizable manner; (4) promoting robust competition in order to speed technological progress and drive down prices; and (5) limiting the exercise of vertical market power by the regulated utilities.

The vertical market power issues associated with utility control over DERs should not be ignored. As the Commission recognized in its seminal order restructuring New York's energy markets, utilities already have an enormous amount of control over both customer information as well as operation of the sub-transmission system.[3] Allowing additional vertical integration would give the regulated utilities a virtual blank check to favor their own (or their affiliate's own) DER projects over those owned by competitors. This type of market power will be extremely difficult for the Commission to police. And while rate design reforms can help reduce the opportunity and incentive for utilities to abuse their enhanced monopoly position, the type of vertical integration proposed in the Staff Report is structural in nature and very difficult to mitigate.

[2] We discuss several of these issues in the Track II Comments submitted concurrently with these comments, but largely avoid repeating the arguments in both dockets.

[3] Cases 94-E-0952 et al., In the Matter of Competitive Opportunities Regarding Electric Service, Opinion and Order Regarding Competitive Opportunities for Electric Service, Opinion 96-12 (May 20, 1996) at 64-65 ("Opinion 96-12").

1. Implications of *EPSA*.

The implications of the *EPSA* case bear special consideration. NRG and its affiliates are key players in the existing demand response ("DR") framework in New York. One thing is clear: post *EPSA*, New York and other states will need a way to compensate and attract demand reduction, which currently largely rely on energy and capacity payment from the NYISO to be viable. Assuming *EPSA* is upheld, the Commission should consider what short-term steps it can take to ensure that existing demand-side resources transition from supply-side to demand-side. As an end-goal, the Commission will want to ensure that it has a robust and competitive market framework that allows DR aggregators to continue their successful efforts to bring DR to the market.

As a means of getting to this goal, NRG recommends that the Commission expand the ConEd Distribution Load Relief Program ("DLRP") to fill any regulatory gap created as a result of this decision.[4] The DLRP has several key attributes that make it an obvious choice for expansion across the State of New York in distribution systems operated by regulated utilities, authorities and municipalities.

First, the Commission will need to replace the revenue DR providers currently earn from the FERC-jurisdictional markets. This access to revenue is key to the flourishing of DR we have seen over the last decade. Again, a structure that provides a stated-rate that varies by location on the system can help. A DLRP-like approach gives the Commission a tested means of providing adequate compensation to demand response entities and third-party DR aggregators currently operating in the New York market.

[4] Con Ed also administers a very similar program called the Commercial System Relief Program which we will include here under the umbrella of the DLRP for the purposes of these comments.

Second, the DLRP embodies the transparency goals identified by NRG as a top goal of the REV proceeding. NRG recommends starting with the DLRP as a model largely because it provides access to transparent information about the value of DER options in a particular geographic location and in an incredibly transparent and easy-to-understand fashion. The DLRP requires the utility to identify the areas on its distribution system where the value of DER adoption is the highest (Tier-1/Tier-2 target networks). Once the utility provides that information, third-party competitive suppliers and end-use customers will be able to direct their efforts to the areas on the system where DERs have the greatest value. Because the utility identifies (on plain, easy to read street maps that show which side of the street is within what map area) the areas where DER adoption provides the most value, customers will be able to respond more easily.

Third, the DLRP provides a transparent price signal, which includes both a reservation payment (with a stated per kilowatt of capacity rate) and an energy payment (per kilowatt-hour of actual energy provided). This transparent suite of prices greatly aids in customers' understanding the system and the ability of third-party suppliers to finance investment in energy infrastructure.

Fourth, the DLRP could be replicated quickly across the State of New York. Utilities know best <u>where</u> on the system investment is needed, even if they are unsuited to determining the <u>what</u>. By quickly identifying where investment is needed, utilities will bring an unprecedented level of transparency onto its system. This transparency will enable additional investment, reduce grid investment needs, and create a highly-competitive framework for attracting and retaining DR resources.

Fifth, the DLRP is competitively neutral. Any end-use customer or third-party solutions provider can own and operate the DR resource on the customer side of the meter and qualify for an extra revenue stream.

Question III. DSPP Identity:

Please address the analysis contained in the Staff Report, see pages 24-26, as related to the question of whether incumbent utilities, or an independent entity, should serve as the DSPP.

A unified DSPP/market participant would have a variety of advantages over third-party investors, which creates an inherently anti-competitive market structure that jeopardizes the REV goals. We see only two options that are compatible with a fully-competitive market for the type of distribution-level non-essential value added services imagined in the REV Staff Report:

(1) create a fully independent manager to determine distribution market outcomes; or

(2) mandate that the DSPP and its affiliates have no financial interest in DSPP outcomes.

Without one of these two options, innovation in New York's behind-the-meter markets is likely to lag as competitive firms deploy scarce capital into markets with a more favorable competitive structure.

1. Vertical Market Power Concerns Require Separation of the DSPP & Utility Functions.

A system where the DSPP has the authority and ability to frustrate competitors in favor of its own affiliates is the *sine qua non* of vertical market power. Several of the structures discussed in the Staff Report appear designed to give utilities both the opportunity and incentive to engage in anti-competitive activities, and would reverse many of the benefits brought about by

deregulation.[5] By contrast, an independent DSPP would create both the appearance and reality of competition and fairness that are critical to successful markets.

There are several easy examples of potential abuse by the utility under the guise of operating as the DSPP that would enshrine non-competitive outcomes, but be incredibly difficult for the Commission to successfully police:

- ***Interconnection:*** Allowing the utility to serve as DSPP enables it to slow down interconnection requests from competitors, while providing a smooth path for its affiliates. The New York distribution system (particularly in New York City) is complicated, and thus anti-competitive behavior would be incredibly difficult to indemnify and police. While the Commission can ameliorate interconnection concerns by adopting strict process controls (firm time lines and cost protections), there is no substitute for structural independence.

- ***Dispatch Decisions:*** The DSPP, by necessity, will have a great deal of operational control over the distribution system and the dispatch (and therefore, the earning power) of competing resources. Importantly, a unified DSPP/market participant does not have to actively violate functional separation rules in order to favor its affiliates. The DSPP may very well have better telemetry or visibility into the operations of its affiliates, which by itself could lead to distorted outcomes.

- ***Cross-Subsidization:*** It is virtually a certainty that there will be cross-subsidization between the DSPP/utility functions and the utilities' unregulated affiliates. The ability to lean on captive customers for partial cost recovery is incredibly damaging to competition.

2. The Staff Report Overestimates Costs and Underestimates Benefits of Separation of the Utility and DSPP Functions.

In recommending a utility DSPP, the Staff Report suggests that it would be too difficult and expensive to warrant creating an independent DSPP. However, it is not clear that the Staff Report is correct that the additional costs of having a separate DSPP outweigh the benefits. *First*, on the cost side: An independent DSPP structure does not have to break the bank. It is reasonable to expect that an independent DSPP could be designed and operated at significantly

[5] A structural lack of competition can warp competitive outcomes for decades. Once given, it will be extremely difficult to reverse course and re-invigorate competition due to stranded cost and other concerns.

less cost than a full-fledged ISO with its extensive market, transmission planning, and stakeholder engagement functions. ISO operating charges generally represent less than $1 per megawatt of delivered power in the wholesale organized markets.[6]

Further, the Staff Report overstates the level of redundancy that would be required to create an independent DSPP. As we have learned at the wholesale level, the ISOs are adept at leveraging existing utility resources, and many grid planning and operations tasks continue to be done by the regulated utilities with oversight from the ISO.

Second, on the value side: it is not clear that the Staff Report appropriately appreciates the value of independent decision-making on the ability of the DSPP to attract private capital at a reasonable cost. To attract private capital into this developing market, investors must have confidence that the DSPP is a fair market arbiter. Otherwise, private investment is unlikely to show up in significant amounts, and what investors do show up will be forced to include a higher risk premium that they would otherwise charge. In addition, the comingling of a DSPP under utility ownership will make it virtually impossible to distinguish all costs associated with the DSPP function and impose further cross subsidization concerns between traditional utility functions and the DSPP.

3. The Wholesale Market Experience Provides Guidance on the Importance of Independent Decision-Making.

Successful competition in the US power sector has been wholly dependent on policies that enforce open access and common carrier requirements on incumbent monopoly network providers, while assuring the independent, competitively neutral operation of those networks. At the wholesale level, FERC recognized that integrated utilities were actually erecting barriers to entry and dictating uneconomic outcomes. In exchange for rate benefits, FERC insisted on

[66]For example, the NYISO's Rate Schedule 1 charge is currently $0.956 per MWhr which funds an overall annual operating budget of $160 million in a market that clears energy related transactions averaging $7.5 billion annually.

having market outcomes determined by an independent arbiter with no commercial stake in the outcome and the ISOs and RTOs were born. And while the Commission may have concerns about whether the existing ISO structure in New York benefits consumers, there is no question that an independent DSPP, created by and subject to PSC regulation, would be responsive to the Commission's mission.

Indeed, the independent manager option is used internationally as well, including in most of Europe, the United Kingdom, Australia and in other locations. We see no reason why the equities at the distribution level would warrant a different outcome. The other option would be to require that the DSPP and its affiliates divest any interest in DER investments, and confine their endeavors to administering the distribution system with no economic interest in energy outcomes.

While the Staff Report touches on these concerns, it is not clear that Staff appreciates the enormity of the challenge that faces investors trying to compete against a fully-integrated monolithic utility. The development of the demand response market over the past decade is a great example of how a fair, level playing field with transparent access to information and revenue streams can bring an incredible number of customers into the market. The nation's fully competitive markets have been enormously successful at attracting DR resources into their markets, while areas outside of the organized markets have struggled to attract even nominal levels of demand response.

4. Rate Design can Partially Address these Concerns.

In our Track II comments submitted concurrently with these comments, NRG makes a variety of suggestions on how the Commission could employ innovative rate design elements

that will help mask the anti-competitive impact of a unified DSPP/utility. While these rate design elements are only a Band-Aid, they will certainly help.

Question IV. Benefits and Costs:

> *Discuss the preferred analytical framework to assessing benefits and costs, with particular attention to the different ways that benefits and costs may need to be considered in various stages of this initiative, and the methodologies and tools that may be appropriate to each*
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> *For example, what benefits and costs related to environmental externalities should be monetized in considering DER pricing? Consider that the outlook on broad, long-term benefits and costs that informs a Commission policy decision may be different from the business case supporting a utility investment plan, which may in turn differ from the analysis supporting a particular investment, or supporting the pricing of products and services that contribute to DSPP objectives.*

We echo the storage-related comments of presenter Bill Acker who strongly emphasized that DER investments largely require multiple benefit streams that are relatively secure in order to merit financing. These needs are equally applicable to technologies other than storage.

As discussed above, an important first step would be for the Commission to mandate that its utilities identify the value of DER solutions on a locational basis, publish that value, and then invite competitive suppliers to bring forward the least-cost solutions for the identified need. The Commission can decide at a later date whether it wishes to include externalities in its determination of value.

Publishing a transparent price has two benefits: first, it allows the Commission to determine an all-in price that reflects the true value of DER resources to the citizens of NY. Second, it will provide third-party suppliers a "price to beat" that will allow investors to quickly and efficiently determine if a particular DER resource is economic. Where an investor is able to provide the needed products at an effective price, the investment will be made, and society will be better off. The Commission can make this process significantly more efficient by identifying

the value of these products, in advance, both in terms of capacity (also referred to as a "reservation charge") and energy value.

Further, under present policy, a variety of societal benefits charges are paid for by surcharges that appear on the customer's bill, with very little transparency to the customer. Indeed, as these benefits charges move inside the rate base and become part of bundled rates they become even less visible to the customer. Customers interested in making a capital investment in their own energy infrastructure need to be able to disaggregate these various charges in order to truly understand whether an energy investment makes sense for them. If the Commission unbundles the various benefits charges, customers will be able to shop for competitive energy services and DER providers more easily.

1. Low Cost Ideas with a High Immediate Payoff.

Information Availability: Improving availability of customer information is an extremely low-cost improvement. Customers in New York often have a great deal of trouble accessing their own historic meter data, which is incredibly frustrating to customers who want to actively manage their energy consumption. Enshrining a customer's right to its own data, including the right to share that data with designated agents, would be a simple first step to driving innovation in the way energy is purchased and consumed in New York.

Price Signals: Another low-cost step the Commission can take that would drive adoption of DER systems is to ensure that the DSPP provides a transparent forward price signal to customers. The DSPP should establish a standing offer to purchase various products, including capacity and energy, from DERs. For example, a DER installation can often serve as an alternative to traditional transmission and distribution investment. The Commission could even require its utilities to identify stated rates that include externalities that may not be priced into

traditional wholesale energy rates and reflect local realities on the distribution system. Again, creating a locational "price to compare" that is easily visible to all would allow end-use customers and their designated agents the ability to bring sound projects to market.

Question V. Transition for Clean Energy Programs:

> *The Staff Report (see page 21) envisions the integration of distributed energy resources into DSPP system planning to maximize system value, with NYSERDA's portfolio expected to refocus on market and technology transformative strategies to provide temporary intervention to overcome specific market barriers while continuing to provide access to clean energy for low-income customers. How can we ensure the transition from current renewable and energy efficiency programs without backsliding on the State's environmental goals?*

Ultimately we should be solving for the lowest cost to the consumer with the greatest reliability and the least environmental impacts. As solar power, wind power, and energy storage continue on the path of becoming more efficient while homes and businesses gain increasing access to low cost natural gas, energy customers will generate their own micro-grid based power as opposed to buying it from more traditional sources. We need to connect individuals to smart energy solutions and give them the ability to live sustainable lifestyles. One important implication of these trends is that, increasingly, we will be able to substitute private capital for ratepayer-funded capital in ways that enhance the value of the grid, while reducing its cost to all ratepayers. For example, if a utility needs a substation upgrade, but a private microgrid can reduce or eliminate that need, all ratepayers benefit along with the microgrid customers, while the utility has a more efficient system and is putting less ratepayer money at risk.

1. The California Request for Offers Model for the PSC and NYSERDA

If the Commission elects to have utilities enter into the DER market directly, then it should restrict that entry to competitively-neutral solicitations through a Request for Offers ("RFO") type structure. While issuing RFOs is clearly a second-best option to a fully-

competitive market structure, it could provide the Commission with a means of jump-starting DER investment.

Indeed, this is the model used by California to incent adoption of renewable generation resources. The California Public Utilities Commission directed its utilities to conduct a competitive solicitation for stated quantities of renewable generation or other "preferred resources," which include micro-grids, storage, and demand response, among other DER technologies. Through this process, California utilities are expected to enter into long-term contracts with several gigawatts of storage and renewable, battery, microgrid and fuel cell technologies. If New York wants to mandate direct ratepayer investment in DERs, it could consider a similar program, tailored to New York's specific needs, whereby each utility would be required to contract for a stated quantity of DERs in the next 12-24 months.[7]

2. Electric Vehicles and "V2G".

We see storage as a fully competitive, distributed resource. One reason for this is that we think the most cost-effective storage technology – consumer-owned EV batteries – will have next to no capital costs when it comes to grid utilization, because the consumer will have already paid for the capital cost of the batteries when it buys the vehicle. It would not make sense to put something with no fixed cost and that is widely available to consumers in a regulated utility's ratebase.

Competitive businesses are already investing in this technology. For example, NRG has been operating BMW MINI Cooper electric vehicles as official resources in the PJM frequency regulation market since February, 2013 with vehicles in and around Newark, Delaware. NRG

[7] The RFO program could easily be layered on top of an expansion of the DLRP program. By first requiring utilities to plainly identify the portions of their system where investment is most needed, the RFO solicitations can include a strong locational preference for investment in areas where that investment will do the most to reinforce the distribution system.

also formed a partnership with Honda at the end of last year to add bi-directional power flow to their EVs. EVs are excellent candidates for this type of innovation:

1. When vehicles are parked, the aggregator manages charging or discharging rate;
2. Multiple vehicles provide single energy storage resource to the grid; and
3. Grids have ancillary services markets, such as frequency regulation, that pay for energy storage capacity.

While the initial V2G market is frequency regulation, which electricity grids use to fine tune supply and demand, we fully anticipate that these resources can play an important role in meeting the REV goals – if allowed to compete.

Question VI. Enhanced Services:

> *The Staff Report (see page 61) describes the potential for a regulated utility offering enhanced services to create revenues, some or all of which may accrue to revenue requirements. Please discuss the regulatory issues related to this potential, e.g. the definition of basic services, and the relationship between enhanced services offered by a regulated utility and the monopoly function of the utility.*

NRG strongly disagrees with the premise that a utility's monopoly status will "enable" the "offering of non-essential value-added services." While NRG agrees that utilities should continue to provide the streets and traffic lights, it is the competitive third-parties that should provide the cars, trucks, bikes and pedestrians that utilize those public benefits. It would be a true shame if the Commission elects to give the combined utility/DSPP control over non-essential value-added services and deny third-party suppliers any ability to come into the New York market.

Indeed, NRG's experience in the ERCOT portion of Texas, where competitive restructuring eliminated default service providers, has shown that a tremendous number of services can be provided by competitive suppliers, including free nights and weekends, green

power solutions, bundled renewable investments, innovative retail rate schedules and many more creative options. For example, the Staff Report notes that "a DSPP might charge an aggregation fee to third party providers, or might offer a mobile outage notification service for customers who use electric garage-door openers as the means of entry into their houses." In fact, these are already services offered by competitive retail providers in Texas.

We also disagree that it is appropriate for the Commission to peanut butter the charges for these non-essential value added services across all customers in all rate classes. While the Staff Report concludes that "[u]tility payments for DER products that are used to manage load and optimize system operation belong to the class of costs that are recoverable as part of the utility's revenue requirement," we see no realistic way to accomplish this goal without massive cross-subsidization of customer classes.

Question VII. Access to Data:

> *Issues concerning access to data are currently the subject of a formal comment period Case 12-M-0476, pursuant to a Notice Seeking Comments issued February 25, 2014. Initial comments were filed June 2, 2014, and reply comments are due June 16, 2014, as detailed in a Notice issued April 3, 2014. Staff will review those comments before determining whether additional written input on issues related to access to data should be obtained through separate comments in this proceeding as well.*

In order for innovation to flourish, customers need to own their own information and utilities must get into the business of making information free.[8] New York utilities need to free "real-time" customer electric meter data from a rather oppressive array of restrictions on who can access the data. This will allow companies to access the data (at a customer's request) to help the customer identify what energy services (solar panels, micro-grids, small efficient generators, and the like) might make sense for them. The system where customers don't "own" their own

[8] Dr. Ben Wellington, Visiting Assistant Professor of the Pratt Institute in Brooklyn, NY has done amazing things analyzing New York City's "Open Data" initiative. Imagine what could happen if energy usage data was likewise available to innovators. *See* http://iquantny.tumblr.com/.

data is anachronistic in the extreme and needs revising. Freeing this information will allow energy customers to shop for products and services that meet their specific needs. Moreover, this is a market reform that the Commission can implement in this proceeding, at a relatively low cost, and that will provide a material improvement to entities attempting to engage with customers on how they use and consume energy.

Question VIII. Other issues:

> *This initial list of issues is drawn largely from the Staff Report, but contains other issues in response to concerns raised in the working groups or directly by parties, as we want to ensure that we include for consideration those policy issues of concern to the parties. Although the questions listed above are very broad, parties should use this section to raise their concerns not encompassed by our specific questions.*

1. Retail Competition.

The other area for immediate reform in New York has to be on the retail competition side. While not glamorous, the Commission needs to seriously address the competitive problems in the retail electric market that make it harder for third-party suppliers to meaningfully invest in long-term customers.

NRG's experience in the extremely competitive ERCOT market is that customers have access to a vast array of value-added services in that market, because energy supply companies ("ESCOs") have (1) timely access to customer usage data, (2) the ability to operationally control customer consumption through both the utility network and other networks (e.g., the internet); and (3) billing and other rights that allow third-party suppliers to establish meaningful customer relationships. While nobody expects New York to adopt Texas-style energy market deregulation, the level of customer engagement that the Commission is seeking to foster in New York will only exist when electric service becomes about more than just the absolute lowest commodity price.

In our prior comments, NRG recommend the following commonsense reforms to the retail market:

i. Allow for immediate ESCO switching/day-one enrollments, seamless moves.

ii. Eliminate utility account number requirement for customer enrollments and allow ESCOs to access account numbers (with customer authorization) via a secure portal.

iii. "Enroll w/your wallet" account ID: a number that customers readily know or have in their wallet such as last 4 digits of phone number, last 4 digits of SSN, last 4 digits of driver's license, etc.

iv. Supplier billing options need to be expanded:

    1) On-bill financing for energy management, energy efficiency and other DER related services;

    2) Line items for non-commodity services and products; and

    3) Purchase of Receivables collection of reasonable early termination fees ("ETFs")

v. Elimination of reverse slamming processes that send customers back to default supplier for any change to account; for example, change of address or marital status.

vi. Regulatory process changes:

    1) Statewide uniform utility business rules/programs rather than on a utility-by-utility basis.

    2) Take regulation of competitive business out of regulated utility contested case process

    3) Competitive ESCOs should be able to use energy efficiency program funds collected through supplier billing consolidation systems, with the ability to include innovative energy efficiency systems

    4) Use funds to provide whole-house power monitors to customers in lieu of AMI deployment to collect usage data for products and services