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ENERNOC UK LIMITED'S COMMENTS ON THE ERGEG POSITION PAPER ON SMART GRIDS
REF: E09-EQS-30-04

Introduction to EnerNOC

EnerNOC UK Limited ("EnerNOC") appreciates this opportunity to provide comments in regards to the Position Paper on Smart Grids drafted by the European Regulators Group for Electricity and Gas ("ERGEG"). It is EnerNOC's hope that our experience in delivering smart grid solutions throughout North America, as well as in the United Kingdom, can provide valuable insights to the ERGEG as it continues its work furthering the deployment of smart grid solutions throughout Europe.

With over 3.5 GW of dispatchable load response across more than 6,500 end user sites, EnerNOC is the largest commercial and industrial demand response provider in the world. In the United States, we are active in every major liberalized electricity market and work in partnership with over 100 electric utilities. Internationally, EnerNOC provides peak reduction capabilities to the Ontario Power Authority, as well as demand-side balancing services to National Grid, the UK Transmission System Operator. EnerNOC's smart grid solutions also include SiteSmart, a next-generation energy efficiency application that utilizes building management system data to identify no- and low-cost savings opportunities, and CarbonSmart, an innovative carbon accounting and management application that integrates interval meter data.

Overall, EnerNOC agrees with the ERGEG's position that smart grids solutions will be essential to meeting the EU's 20/20/20 targets, and is pleased to see the detailed focus the ERGEG is placing on the various aspects of smart grid deployments.

EnerNOC's Comments

3. Do you agree that the objectives of reducing energy consumption impose the need for decoupling regulated companies' profit from the volume of energy supplied?

EnerNOC believes that to achieve the objectives of reducing energy consumption, steps must be taken to "level the playing field" between demand-side and supply-side initiatives so that regulated companies do not have to choose between meeting policy objectives (e.g. reducing consumption and associated emissions) and their fiduciary responsibility to their shareholders. Decoupling profit from the volume of energy supplied is one step toward making demand-side initiatives as attractive from a financial standpoint as traditional investments in supply-side infrastructure, but it is by no means the only mechanism to do so.

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Other options include demand-side targets and mandates, such as so-called "energy efficiency portfolio standards" that mirror the regulatory mandates for renewable energy, "renewable portfolio standards." Such portfolio standards require regulated companies to meet a specified percentage of their load in a given year through efficiency measures, rather than through electricity production. While portfolio standards don't necessarily make energy efficiency initiatives as profitable as increasing the volume of energy supplied, they nonetheless encourage the regulated utility to pursue efficiency goals and programs. However, a financial "carrot and stick" can be attached to such targets to provide increased incentives to invest in programs that will deliver the desired results. Typically, this approach will use bands to determine the incentives or penalties a utility will face. For example, utilities may face a financial penalty if they fail to achieve at least 70 percent of the target, receive a pro-rated percentage of the incentive for achieving 70 to 110 percent of the target, and an additional reward for achieving more than 110 percent of the target. While regulators have the power to mandate utilities to implement efficiency programs with or without incentives or penalties, a mandate without an incentive, will likely lead to utility pursuing only the minimum level of regulatory compliance. Conversely, mandates that are paired with incentives will motivate regulated utilities to be innovative in exploring cost-effective strategies that will gain widespread customer participation.

While both mandates and revenue decoupling can encourage regulated utilities to maximize their pursuit of energy efficiency, ultimately the proper policy choice will likely depend on the local jurisdiction, as political realities and economic philosophies vary from country to country.

However, policies that encourage regulated utilities to reduce the volume of energy (e.g., total megawatt-hours) supplied are only half of the equation to leveling the playing field between supply-side and demand-side investments. Equally important are regulatory mechanisms that encourage a focus on reductions in demand (e.g., peak megawatts), as peak demands are the main driver of investments in supply-side infrastructure. Because many regulated companies earn a rate of return on capital expenditures, efficiency initiatives alone will not necessarily change the utility investment paradigm. Stated another way, *traditional regulatory frameworks create a disincentive for regulated utilities to meet resource needs using approaches that are less capital intensive*. Thus, faced with otherwise equivalent alternatives of building a power plant that contributes to profitability or making investments in demand-side management that allow for cost-recovery only, a utility would generally prefer to build a power plant or invest in distribution networks.

One approach to mitigate this challenge is similar to the energy efficiency portfolio standards described above. So-called "peak load reduction standards" mandate regulated utilities to reduce their system peak demand by a specified amount that often increases with time. Increasingly, peak load reduction standards are being incorporated into energy efficiency portfolio standards to as to ensure a holistic approach to demand side management that focuses on both demand and consumption. An example of this combined approach can be found in the U.S. State of Pennsylvania. The State's "Act 129" requires a

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1% reduction in consumption by May 31, 2011, as well as a total of 3% reduction in consumption and a 4.5% reduction in peak demand by May 31, 2013, for all seven major electric distribution companies in Pennsylvania.

Legislators and regulators can also implement policies that allow regulated utilities to capitalize and earn a rate of return on their demand-side management investments. Under this approach, a utility will generally accumulate costs associated with investments in demand-side management as regulatory assets, and later recover those costs in the utility's next rate case or price control. The primary advantage of this approach is that it puts demand-side programs on an equal footing with supply-side investments. In these circumstances, utilities face no embedded disincentives in pursuit of a least-cost, optimally-efficient approach to meeting customers' electric needs either through a demand- or supply-side solution. Because of the increased societal benefits of demand-side approaches, regulators can also decide to allow a higher rate of return for investments in demand response or energy efficiency than traditional supply-side investments. A rate of return mechanism allows the utility the opportunity to earn a profit on demand response and energy efficiency investments in the same manner as other capital investments in a utility's rate base. This puts regulated utilities in a position of pursuing optimal resource planning with both supply and demand resources, unencumbered by a negative impact to their profitability from pursuing demand resource options.

A slightly different, but analogous approach, is to remove the preferential treatment for capital investments altogether. In many ways, allowing regulated companies to increase their profits from investments in supply-side infrastructure is a relic from past times where demand-side initiatives were not a true alternative – regulated companies needed to be incentivized to put their own capital at risk and invest in network infrastructure so as to ensure that networks would be able to meet future load growth. The British energy regulator, the Office of the Gas and Electricity Markets (Ofgem), recently implemented such a policy in its most recent Distribution Price Control Review, DPCR5, which goes into effect in April 2010. The DPCR5 contains an "equalization incentive" which treats capital expenditures and operating expenditures in the same fashion, removing the financial incentive for a regulated distribution utility (DNO) in the United Kingdom to pursue supply-side capital projects (e.g. new substations) when there is an alternative, such as demand-side participation among large end-users, that can achieve the same goals but through ongoing operating expenses.

Lastly, one emerging approach to encouraging regulated utilities to pursue demand response and energy efficiency programs over investments in supply-side infrastructure is based on an "avoided cost" methodology and has been championed by the large U.S. utility Duke Energy. Known as "Save-A-Watt," Duke proposes that it would be compensated for demonstrated savings by receiving a portion of the utility's avoided supply costs. Duke has proposed recovering the amortization of and a return of between 75 and 90 percent of the costs avoided by producing "save-a-watts" in different jurisdictions, thereby creating a financial incentive for itself while preserving cost savings for ratepayers compared to typical supply-side investments.

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9. Do you expect smarter grid solutions to be essential and/or lower cost than conventional solutions in the next few years? Do you have any evidence that they already are? If so, please provide details.

Through EnerNOC's firsthand experience providing demand response across North America and in the United Kingdom, we know that smart grid applications, such as commercial and industrial demand response, are already lower cost than conventional solutions like gas turbine peaking plants. EnerNOC's portfolio of over 3.5GW of demand response capacity is the scale it is for the very fact that we have been able to provide peaking and balancing resources at an equal or lower price than conventional solutions in both vertically integrated and liberalized electricity markets.

When EnerNOC signs demand response contracts with vertically integrated, regulated utility companies, EnerNOC and the utility must prove to the local energy regulator that the aforementioned smart grid application is cost-effective, a process which often includes requirements that the demand-side resource is lower cost than traditional, supply-side solutions. While the financial details of these contracts and filings are confidential, EnerNOC would welcome the opportunity to share publicly-available regulatory filings with the European Regulators' Group for Electricity and Gas, if so desired.

The lower cost of smart grid solutions is also evident in data from liberalized markets, such as the results of the most recent Reliability Pricing Model (RPM) capacity market auction in the PJM Interconnection. The RPM is a three-year ahead forward auction in which demand and supply-side resources directly compete. Based on the publicly-available data, EnerNOC estimates that participation of demand response resources in the market exerted significant downward price pressure and reduced the monthly capacity clearing price by approximately €0.65 / kW, or €7,800 per MW on an annual basis.