45 N Broad Street
Ridgewood, NJ 07540
Tel. +1 719-213-3494
www.scalemicrogridsolutions.com

September 2018

TO: New Jersey Energy Master Plan Committee

SUBJECT: Executive Order 28 – Energy Master Plan Stakeholder Comment

As a New Jersey based clean technology company, we very much appreciate the opportunity to submit the following comments in conjunction with development of the 2019 New Jersey Energy Master Plan. While there is no doubt that climate change represents a clear and present danger to our State, we are also confident that New Jersey has the ability to help lead a global transition towards a clean energy economy. We look forward to working with the Energy Master Plan Committee throughout this process in pursuit of this worthy goal.

As the Committee is undoubtedly aware, building a functional clean energy economy is significantly more complex than simply mitigating Greenhouse Gas ("GHG") emissions. As established in Article II of the Paris Agreement, our State's climate action policy must aim to accomplish (3) key objectives simultaneously:

(a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

(b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and

(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

These objectives are interrelated and developing an effective plan of action requires holistic thinking and a comprehensive strategy. For example, the State's current goal of converting to 100% clean energy by 2050 is heavily reliant on deploying utility scale renewable generation assets that deliver electricity to customers via traditional transmission and distribution infrastructure. Transmission and distribution infrastructure failures during severe weather events are currently responsible for ~96% of customer utility outages nationally. As such, achieving 100% clean energy portfolio cannot be considered an adequate stand-alone climate action strategy unless such a plan also incorporates a financially viable approach to improving resiliency.

In this light, it is our view that developing a revised framework for incorporating Distributed Energy Resources ("DER") into our State's energy portfolio must be a key point of emphasis with respect to the 2019 Energy Master Plan. While we realize that both the State and the Board of Public Utilities have been generally supportive of distributed generation projects in the past, we believe it to be in the State's best interest for distributed technologies to play a much larger role in our State's energy ecosystem moving forward for several key reasons:

1) Resiliency: as our State learned first-hand during Superstorm Sandy, the threat of long-duration power outages is one that must be taken seriously. Regardless of State policy, as severe weather events become increasingly frequent, the end-user business case for distributed generation becomes more appealing.
2) Load Balancing: we know that achieving our 100% clean energy goal will require large utility scale wind and solar deployments. Adding large amounts of intermittent renewables to our generation mix creates load balancing challenges for grid operators. If properly designed, distributed generation assets can be utilized to solve grid-scale load balancing challenges.
3) Inevitability: the stand-alone business case for DERs is already exceptionally appealing for C&I facilities in the State, and almost all industry experts anticipate exponential growth in the sector in coming years. DERs are going to be deployed throughout the state anyway, but optimizing the DER value proposition requires a planned approach developed in conjunction with grid operators.
4) Opportunity: the future market for DER technologies is massive. New Jersey is already home to some of the most innovative DER companies in the world, and our State has the potential to become a hub for the global distributed generation industry moving forward. As the market continues to grow exponentially, we believe our industry can create significant economic value and become a major employer within the State.

It is important to highlight that an Energy Master Plan emphasizing large scale deployment of DERs is not only a financially viable approach for the State to consider, but there is ample evidence to suggest that doing so represents the optimal financial approach. For example, a recent report released by the Rocky Mountain Institute concluded:

> *RMI's analysis finds that, because of recent innovation and rapid cost declines in renewable energy and DER technologies, clean energy portfolios can often be procured at significant net cost savings, with lower risk and zero carbon and air emissions, compared to building a new gas plant. More dramatically, the* new-build *costs of clean energy portfolios are falling quickly, and likely to beat just the* operating *costs of efficient gas-fired power plants within the next two decades—a sobering risk for investors and customers in a market with over $100 billion of already announced investment in new gas-fired power plants.*[1]

Moreover, we anticipate that an Energy Master Plan emphasizing large scale deployment of DERs would be supported by our utility partners throughout the State, many of whom are already industry leaders with respect to distributed resource integration. A Joint Statement recently issued by the Edison Electric Institute emphasized utility industry support for such an initiative:

> *At the heart of accomplishing the energy transition is the significant potential offered by the widespread deployment of smarter energy infrastructure around the world. The elements of an improved infrastructure, which include energy storage, grid hardening/strengthening, advanced metering, ubiquitous sensing and automation, micro-grids, cyber protection and hydrogen. They form the backbone of the evolving modern energy system, and also facilitate the integration of renewable energy sources such as solar and wind.*[2]

Ultimately, it is our assessment that accomplishing the Administration's goal of restoring New Jersey's place as a leader in the green economy is contingent on rethinking the role that DERs play in our electrical ecosystem. DERs should no longer be considered a niche industry solution, but rather a critical component of the clean, resilient, and affordable energy economy that we desire. Instead of planning our State's energy transition from the top-down, we should incorporate a bottom-up approach.

In our view, a key aim of the 2019 Energy Master Plan should be to create the most distributed electric grid on the planet. We have the right companies, the right utilities, and the right citizens to do it. Should we succeed, we will have provided a framework for accomplishing our Paris Agreement objectives that can be broadly adopted across the globe.

[1] https://rmi.org/insight/the-economics-of-clean-energy-portfolios/
[2] https://www.eurelectric.org/media/3071/ies2018_joint-statement-final.pdf