Bluhm, Sara

From: BUSINOVATION, LLC <paul@businovation.com>
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To: comments, EMP
Cc: chuck.feinberg@gmail.com; Fred Brody; Hornsby, Michael
Subject: [EXTERNAL] Comments for Friday Sept 28th Meeting

Please find my key talking points below:

- **GRID (AND COMMUNITY) RESILIENCE**
  - Resilience and Community **Self Sufficiency** go hand in hand. Community/Aggregator/Prosumer owned, Distributed Energy Resources (DER) are the key to empowering the community to achieve this and to move away from a model of long term government subsidy for clean energy.

  - **Ultra Efficiency** is the new energy world order: Unlocking the *energy use data* and flowing it securely into market making platforms will free the trapped value of higher efficiency, local, **clean energy production** and **responsive power distribution operations**.

  - **Energy Justice** is critical and extends beyond low income subsidies and POLR obligations into a fairer and more transparent Risk/Reward sharing that **encourages participation** and does not just reward and perpetuate extractive and inefficient energy systems by maintaining an unlevel playing field.

  - **Smart Cities**. Improved coordination between agencies and individual incentive programs based on societal/systemic performance outcomes is critical. Ie. Connect particulate emissions with improved energy efficiency and clean power job creation and optimize for the broader improvement. Other states have realized the true (and real) cost to citizens of maintaining more parochial interests or silos.

- **MICROGRIDS**
  - Microgrids are fast emerging as a viable decentralized alternative or augmentation to traditional centrally sourced (and controlled) electric power delivery.
    - Costs for small renewable generation and storage is dramatically dropping.
    - Computing and communication power continues to advance, along with major advances in Artificial Intelligence and interoperability standards
    - Communities are recognizing that true resilience and fiduciary responsibility demand stronger local stake and participation in the process.
    - Utilities themselves recognize the benefits of these flexible grid management resources that can help them meet and exceed reliability requirements and facilitate disaster recovery operations.

  - Microgrids in NJ face major barriers to adoption that require public policy reform and progressive legislation, because:
    - Existing utility franchise protection is threatened, leading to “preemptive frictions”
    - Utility EDC business model is highly dependent on volumetric energy sales (kWhr)
    - Legacy regulatory barriers prevent adoption of new business models and technologies which stifle innovation.
    - Inadequate net benefit methodologies to properly value externalities, inefficiencies, and resilience value.

- **TRANSACTIVE ENERGY**

- SEPA and the US DOE have been advancing TE as one approach to grid mod/evolution that would enable a more market-driven grid investment and operation. Several successful simulations and demonstrations have been accomplished.
- Blockchain technologies are advancing the possibility of a more automated, self-assembling and self-balancing microgrid using Smart Contracts. EWF, EBC, IEEE are all examples of advancing this application to the Energy space.
- Continued advances in edge device compute power, high power switching, IoT connected low cost sensors, along with low latency high speed communication networks such as 5G will enable more refined *aggregation* and *virtualization* of DER
- Artificial Intelligence is leveraging these physical advances and creating levels of optimization and efficiency that reinforce strong economic preference for more distributed ***but closely orchestrated*** energy resources.
- Emerging standards such as OpenADR and IEEE2030 are also enabling open system communication and interoperability, which can support the aggregation and virtualization of heterogeneous "subsystems"
- Unlocking the *energy use data* and flowing it securely into market making platforms will open the latent value of higher efficiency energy production and power distribution ops.

Paul Heitmann
President
Businovation, LLC

Voice/Text: (973) 906-1184 | paul@businovation.com | LinkedIn: Paul Heitmann