

Microgrids and Emerging Utility Business Models

The Role of Distribution Support Service Agreements (DSSAs)

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The Utility Business Model is shifting

- **Traditional “pipeline” business models linking revenues to volumes of electrons delivered are beginning to shift**
- **Deregulated Markets led to Unbundled Utilities and started the shift**
 - Distribution and generation split
 - Commodity portion is a market pass-through
 - Demand Charges stayed linked to sales volume
- **The dawn of decoupling distributional utility revenues from sales volumes**
- **Bringing electric utilities into the modern age of technology & customer service**
- **In the future utility revenues also based on performance metrics and the overall customer experience, not only sales volumes**
- **The future Platform Utility Business Model and creating the smart grid by “conducting the DER concert”**

Customers are shifting

- **Customers have the right to self-supply and market products from onsite generation, storage, and controls**
- **Technology and gas cost declines have opened the doors to customers installing more robust onsite resources**
- **The grid edge is increasingly inhabited by “prosumers”**
- **Utility and customer relationships are getting more dynamic and increasingly bi-directional**
- **Microgrids are flexible and dispatchable distributed energy resources that have the ability to offer dynamic, shapeable products and services to:**
 - Hosts
 - Organized Power Markets (ISOs/RTOs)....and
 - Distributional Utilities
- **Importantly, microgrid services for distributional utilities can be customized to specific grid locational needs and be wide ranging**

DSSAs: A New Microgrid Market Pathway

- **Microgrids have market pathways to provide their hosts products and services**
- **In deregulated market regions, microgrids have market pathways to provide standardized products**
- **However, microgrids need a new market pathway to provide customized services to distributional utilities, this is where DSSAs come in ...**
- **DSSAs are the contracting vehicle for a utility to call services from microgrids**
- **Utilities would be able to create portfolios of DSSAs that enable them to create the smart grid by “conducting the DER concert”**
- **Microgrids, and microgrid clusters, can support advanced distribution grid operations, such as sectionalization and the accommodation of larger amounts of BTM solar, they can act as dynamic, localized shock absorbers for the grid system, with travel in both directions**

Why DSSAs? Open Questions ...

- **Ratepayers want the low-carbon, smart grid system that microgrids can enable**
- **Ratepayer advocates don't want ratepayers paying to construct microgrids**
- **DSSAs offer utilities, ratepayers, and communities a way to benefit from microgrid capabilities and services without having to pay to build microgrids**
- **DSSAs offer microgrid developers and owners a contracted revenue stream to assist with financing**
- **Portfolios of DSSAs with local microgrids offer utilities unprecedented control over the distribution grid and support utility investment in advanced grid control systems**
- **Open questions:**
 - Will utilities be given performance targets and earn a rate of return for establishing DSSA portfolios?
 - Will FERC choose to leave DSSA regulation up to the states?
 - What is the full range of services microgrids might provide under DSSAs?
 - How will DSSAs be procured by utilities? Part of NWA efforts?

Look for the White Paper and Q&A ...

- **The IDEA Education Foundation has a White Paper coming out soon on DSSAs as a new market pathway for microgrids**
- **Overall, DSSAs = the path to utility smart grid operations and a way everyone can benefit from the advanced capabilities of microgrids**
- **Q&A**

Thank you

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