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# Utility Practices: Hosting Capacity and Locational Value Assessment

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# Overview of the Effort

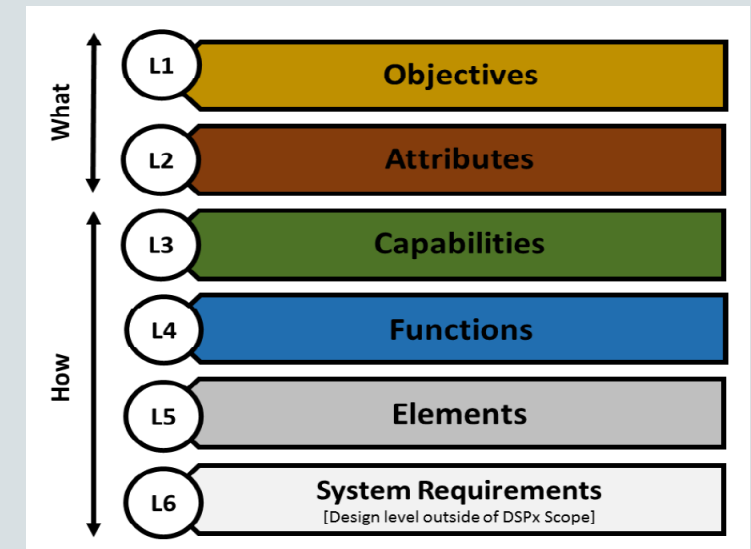
## Scope

- DOE effort focused on current industry implementation
- Tracking utility progress on Integrated System Planning
- Focus on Hosting Capacity and Locational Value Assessment

## Goals

- Document current industry efforts and trends
- Focus on use cases and value
- Present a framework focused on outcomes
- Coordination with other efforts at DOE and beyond

## DSPx Taxonomy Framework



# Use Cases for Hosting Capacity

Hosting Capacity supports DER integration as a:

1. Development guide
2. Interconnection technical screen
3. Distribution planning tool

	Objective	Method	Challenges
<b>Development Guide</b>	Accelerate DER deployment	Focus development capital in potentially lower cost areas	Regularly updated analysis of the full system Data visualization to facilitate external use
<b>Technical Screen</b>	Facilitate timely, more robust interconnection screening process	Hosting capacity replaces less accurate rules of thumb in the interconnection technical screens	High granularity, required, model validation, benchmarking to detailed studies
<b>Distribution Planning Tool</b>	Reduce future barriers to DER integration	Proactive identification of system upgrades to increase hosting capacity	Higher input data requirements

# Sample of Comments on Hosting Capacity

- Use cases help define the value that hosting capacity provides so that they aren't understated or overstated
- As utilities contemplate stakeholder use cases, the first consideration that needs to be addressed is often the publication of utility asset data.
- Understanding long term use cases will inform decisions that impact near-term investments in system visibility and control.
- The use cases conversation must be iterative and expansive to capture dependencies and prerequisites (e.g. data needs)
- The value of hosting capacity use cases can depend on policy and DER penetration
- In some cases, hosting capacity can provide part of a use case, but needs to be viewed in a broader context

# Use Cases for Locational Value Assessment

Locational Value Assessment in the context of:

1. Non-Wires Alternatives procurement
2. Retail rate design
3. Program design

	Objective	Method	Challenges
<b>Non-Wires Solutions</b>	Reflect the impact of DER on long-term system needs	Procurement of non-wires solutions that can defer the need for traditional investments	Mapping quantifiable DER and DER aggregation performance to utility planning criteria
<b>Retail Rate Design</b>	Enable the provision of DER products and services via price signals	Establish mechanisms for price formation based on local distribution requirements	The development of short-term and long-term prices that accurately and transparently reflect the value of distribution services
<b>Program Design</b>	Maximize the system value that utility programs provide	Target program incentives and/or customer acquisition to direct the deployment of DER in beneficial locations	Guarantee the paid incentive will provide value over the assumed lifetime of the DER

# Sample Comments on Locational Value

- The ability of DER to address planning needs in the context of non-wires alternatives procurement depends critically on well-designed performance obligations
- Utilities' current non-wires alternatives efforts will provide valuable input on the ability of DER to address system needs
- The use case of locational value assessment to inform pricing via retail tariffs are in early stages and addressing many threshold issues
- A key challenge with respect to implementing a pricing use case for locational value assessment is the binary nature of many distribution system needs
- The ability to target programs to deliver locational system value often provides a good starting place both in the context of non-wires alternatives procurement as well as in the context of DSM program innovation

# Acknowledgements, Next Steps

- Team and contributors

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- Schedule

- Interviews continue through mid-December
- Final product anticipated mid-January

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