

Energy Storage Deployment in the United States

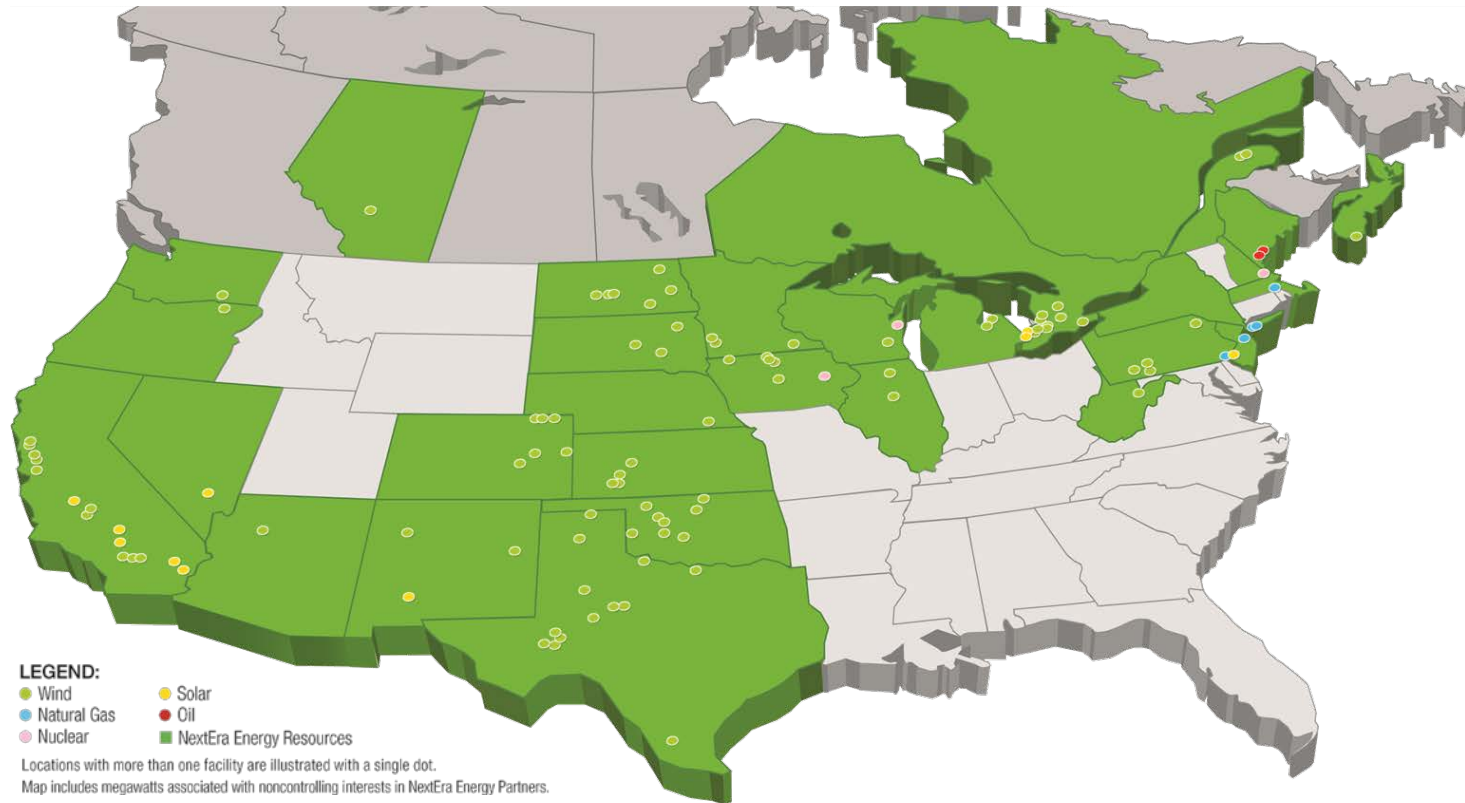
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NextEra Energy Resources operates renewable energy projects in nearly every market across the United States and is expanding its deployment of energy storage

Company Overview



- **Unregulated independent power producer**
- **21.1 GW in operation including 50 MW of energy storage**
- **Largest wind and solar generator in North America**
- **Assets in 27 states & Canada**

Until now, energy storage has primarily participated in the electricity sector by meeting individual needs in varying markets

Energy Storage Market Update

- **The frequency regulation market in PJM has opened opportunities for storage to be deployed today**
 - Short-duration projects have performed frequency regulation while minimizing capital investment
 - Payments have been performance-based but are subject to market variability
- **California has focused on contracting assets for capacity or demand response**
 - Contracted 4-hour systems will not be constructed at scale until 2018 and later because of anticipation in declining cost curve
- **Demand charge reduction has been profitable in regions with high retail rates**
- **Other regions have seen minor storage development in an effort to learn the capabilities**

While markets are beginning to open for energy storage, the efforts attempt to fit storage within existing frameworks and limit the ability to monetize services

Energy Storage Deployment Hurdles

- **Markets are unable to value the full host of energy storage attributes**
 - Contracts are focusing on individual use-cases when multiple are possible
 - Storage bridges the gap between energy markets and transmission services but cannot directly participate in both
 - Avoided costs associated with storage projects are not considered for pricing purposes
- **Interconnection processes are inhibiting rapid deployment**
 - Co-locating with assets requires new interconnections despite not increasing output
 - Storage capabilities negatively impact interconnection evaluation when sited in most beneficial locations near load and generation

Securing financing and deploying new projects relies on achieving predictable and appropriate compensation structures