



# TRANSMISSION — ANALYTICS —



## TRANSMISSION ANALYTICS CONSULTING, LLC

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Transmission Analytics Consulting, LLC (“Transmission Analytics”) is a consulting services company providing specialized transmission system related services to a wide variety of clients within the electric power industry. The consultants of Transmission Analytics are leaders in the space helping to shape industry standards related to the methodologies and standards of practice related to transmission analysis and due diligence.

Our consultants have extensive experience in addressing the unique aspects of a variety of different generation resource types and have developed trusted methods and procedures to assess each resource type.



Engaging on a significant percentage of the renewable generation (i.e., wind and solar) development that has reached commercial operation over the past 10 years has added to experience working with traditional thermal generation (i.e., natural gas and coal). This diverse set of experience provides the depth by which the methodologies and procedures for our analysis are based.

In addition, our consultants are experienced working in energy markets across the U.S. and abroad helping their clients navigate through complex and changing energy

markets, including providing valuable insight into interconnection and regulatory procedures, energy market operations and transmission system operation.

## STATEMENT OF QUALIFICATIONS - TRANSMISSION DUE DILIGENCE

Transmission Analytics has a focused approach to transmission due diligence rooted in the development of detailed models to assess transmission system impacts and risks in a constantly evolving energy market. Through extensive experience and history working with generation owners, lenders and investors we have developed a methodology of reviewing and assessing generation projects to help clients identify potential issues, quantify project related impacts and structure mitigation procedures. Transmission due diligence activities typically include the following tasks:

### Independent Transmission Consultant Review

- Interconnection Agreements
- Interconnection Studies (e.g., Feasibility, System Impact, Facility)
- Special Protection Schemes / Remedial Action Schemes
- Power Purchase Agreements
- Energy Hedge Off-take Agreements
- Interconnection thermal transfer capability limit review
- Project related historical energy pricing and curtailment review

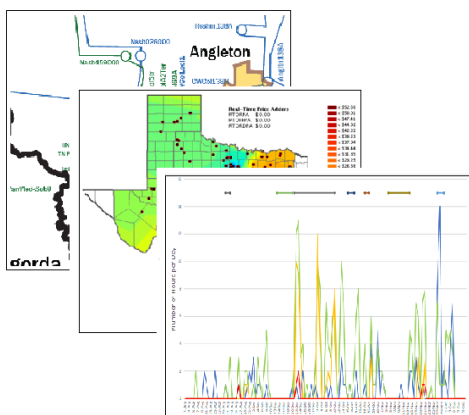


The expert review of the project specific terms and characteristics provide important insight into forward looking energy market analyses often provided as part of the due diligence services.

With industry leading experience and expertise, our consultants develop proprietary models and analysis techniques to provide the most up to date and accurate energy market analytics. Providing clients with investment grade information, data and projections for use in a variety of applications, such as project financing, development strategies, mergers/acquisitions and divestitures.

## INDUSTRY LEADING ENERGY MARKET ANALYTICS

Through many years of real world project experience engaging on hundreds of projects in regions that span the U.S./Canada, as well as internationally, our consultants have developed an understanding of the energy markets and the best manner by which to obtain, compile, process and assess market intelligence to develop investment grade energy market models of the highest quality in the industry. Through a rigorous and time-consuming process we develop maintain and benchmark our models to aid Clients in mitigating risks, helping to better position the Client to address market changes.



### Energy Market Security Constrained Economic Dispatch Analysis

- Locational Marginal Pricing Forecasting
- Transmission Congestion Projections
- Basis Differential Risk Analysis
- Transmission Constraint Curtailment
- Market Overgeneration Curtailment

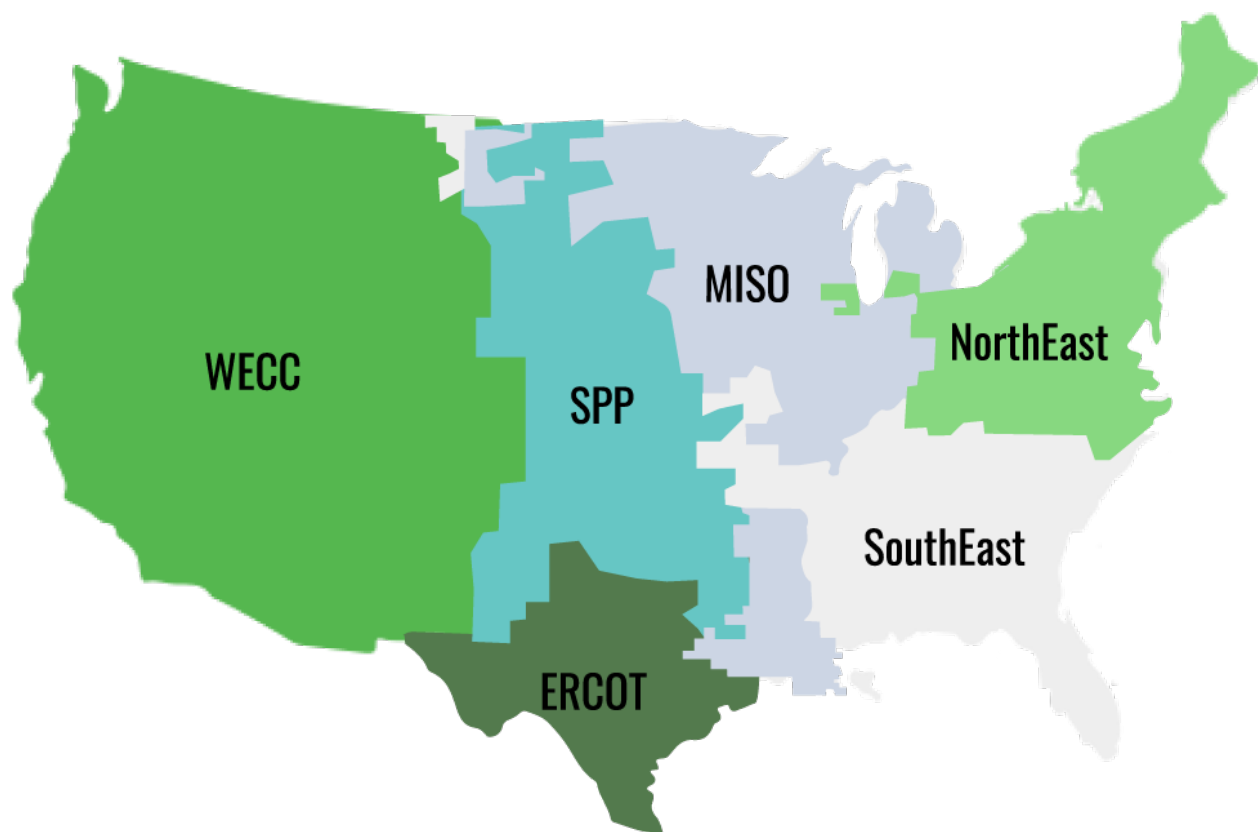
Our consultants are registered Market Participants with Independent System Operators and have longstanding relationships working with the system operators, transmission system owners and utilities. Access to the most up to date and accurate market information provides the means to develop detailed models and insight into current and future market trends. In addition to market information, Transmission Analytics subscribes to many of the industry's leading analytic tools, data sources and publications. Using these tools and resources, our consultants are able to break down the complexities of the energy markets to provide clear and concise explanations of market trends and project risks.



## REGIONAL EXPERTISE

Through the decades of experience completing transmission due diligence services, Transmission Analytics has developed an approach to assess project transmission risks providing industry leading methodologies and procedures. A key part of our approach is the assigning and maintaining regional expertise across the country. Transmission Analytics has regional experts focused on each of the primary energy market / transmission regions of the country. These regional experts are in charge of developing and maintaining transmission system models through coordinated efforts with our transmission analysts. Regional experts are market participants in their region with access to market information and insight used to develop models which are rigorously benchmarked, verified and updated. In addition, our regional experts project manage studies within their region providing our clients direct access to insight and information otherwise not available.

## REGIONAL MARKETS



WECC	<ul style="list-style-type: none"><li>•WECC Regional Expert - Shawn Sapp</li><li>•shawnsapp@transmissionanalytics.net</li></ul>
SPP	<ul style="list-style-type: none"><li>•SPP Regional Expert - Jay Nair</li><li>•jaynair@transmissionanalytics.net</li></ul>
MISO	<ul style="list-style-type: none"><li>•MISO Regional Expert - Ethan Spafford</li><li>•ethanspafford@transmissionanalytics.net</li></ul>
ERCOT	<ul style="list-style-type: none"><li>•ERCOT Region Expert - Sunil Nair</li><li>•sunilnair@transmissionanalytics.net</li></ul>
Northeast	<ul style="list-style-type: none"><li>•Northeast Regional Expert - Alex Worcester</li><li>•alexworchester@transmissionanalytics.net</li></ul>

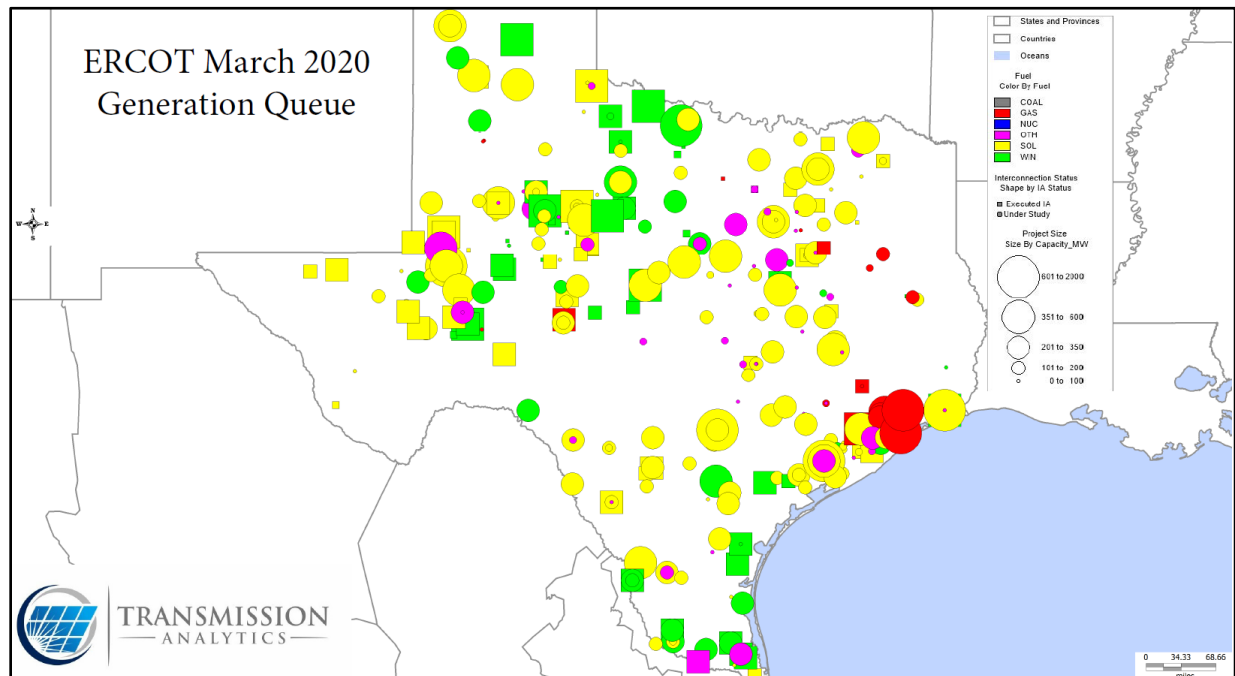
## CURRENT PROJECT EXPERIENCE

The Transmission Analytics team is actively engaged on projects across the country. Helping to provide relevant experience and insight to our clients. The following is a list of projects completed over the last 18months.



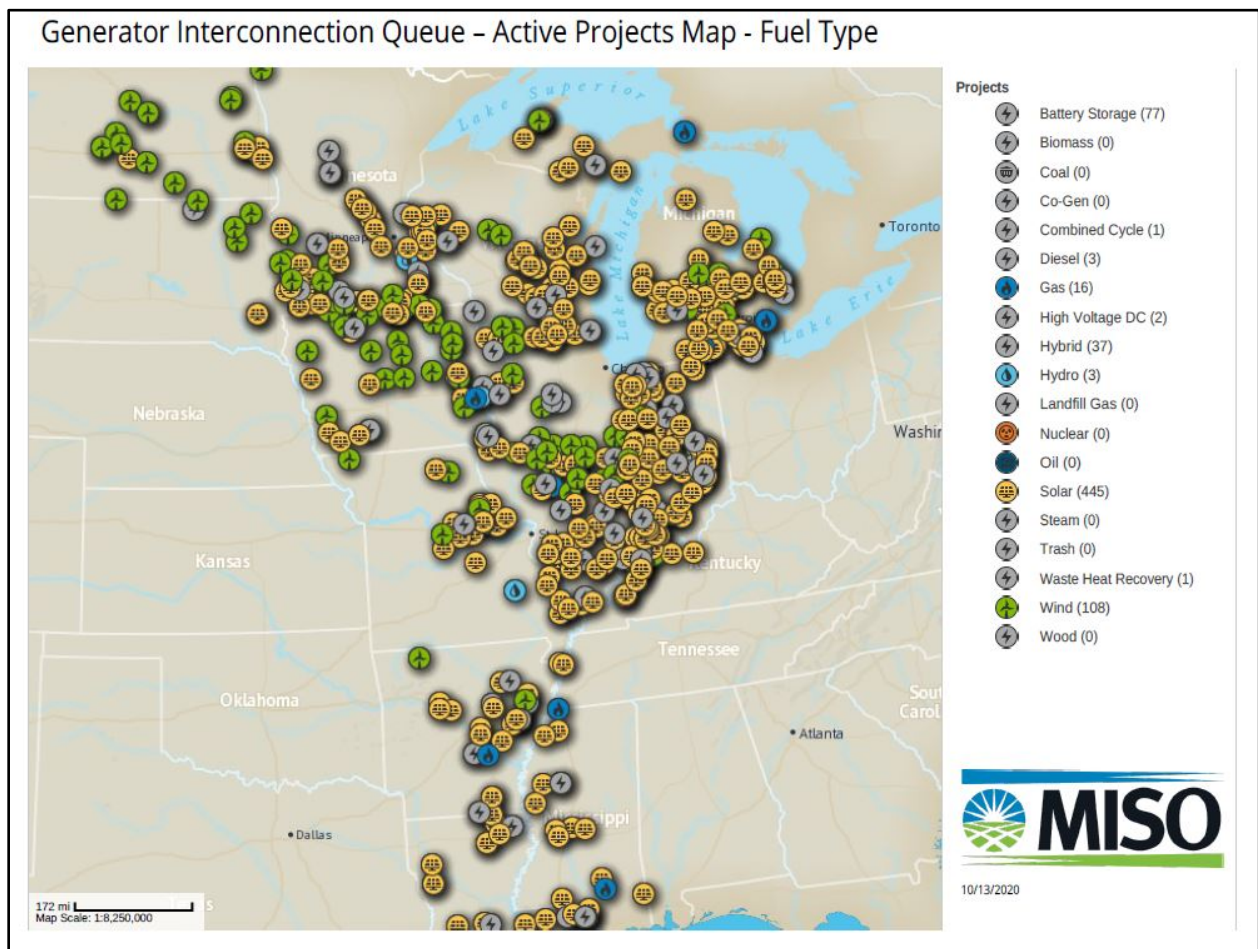
## ERCOT REGIONAL PROJECTS

- Elbow Creek Wind
- Jumbo Hill Wind
- Ranchero Wind
- Big Sampson Wind
- Holstein Solar
- Holstein 2 Solar
- Galloway Solar
- Norton Solar
- Canadian Breaks Wind
- Live Oak Wind
- El Algodon Alto Wind
- Big Raymond Wind
- Mesquite Star
- Panther Creek Repowering
- Canyon Wind
- Las Lomas Wind
- Prairie Hill Wind
- Patriot Wind
- Blackjack Wind
- Monte Alto Wind
- Karankawa Wind
- Buckthorn Wind
- White Mesa Wind
- Maverick Wind
- Sage Draw Wind
- Roadrunning Wind
- Heart of Texas Wind
- West of Pecos Solar
- Pine Forest Solar
- Amadeus Wind
- Bearkat 2 Wind
- Bobcat Bluff Wind Repower
- Peyton Creek Wind
- Anson Solar
- Longdraw Solar
- Wildcat Creek Wind
- Rayos Del Sol Wind
- Pearl Crescent Wind
- El Suaz Ranch Wind
- Sweetwater 3 Wind Repower
- Elara Solar
- Bright Arrow Solar
- Langford Wind Repower
- Aragorn Solar
- Titan Solar
- Priddy Wind
- San Angelo Solar
- Sun Valley Solar
- Hopkins Solar
- Rippey Solar
- Wolf Ridge Repower
- Blue Summit Report
- Big Star Wind
- Flatland Solar
- Sherbino Wind
- Trinity Hill Wind



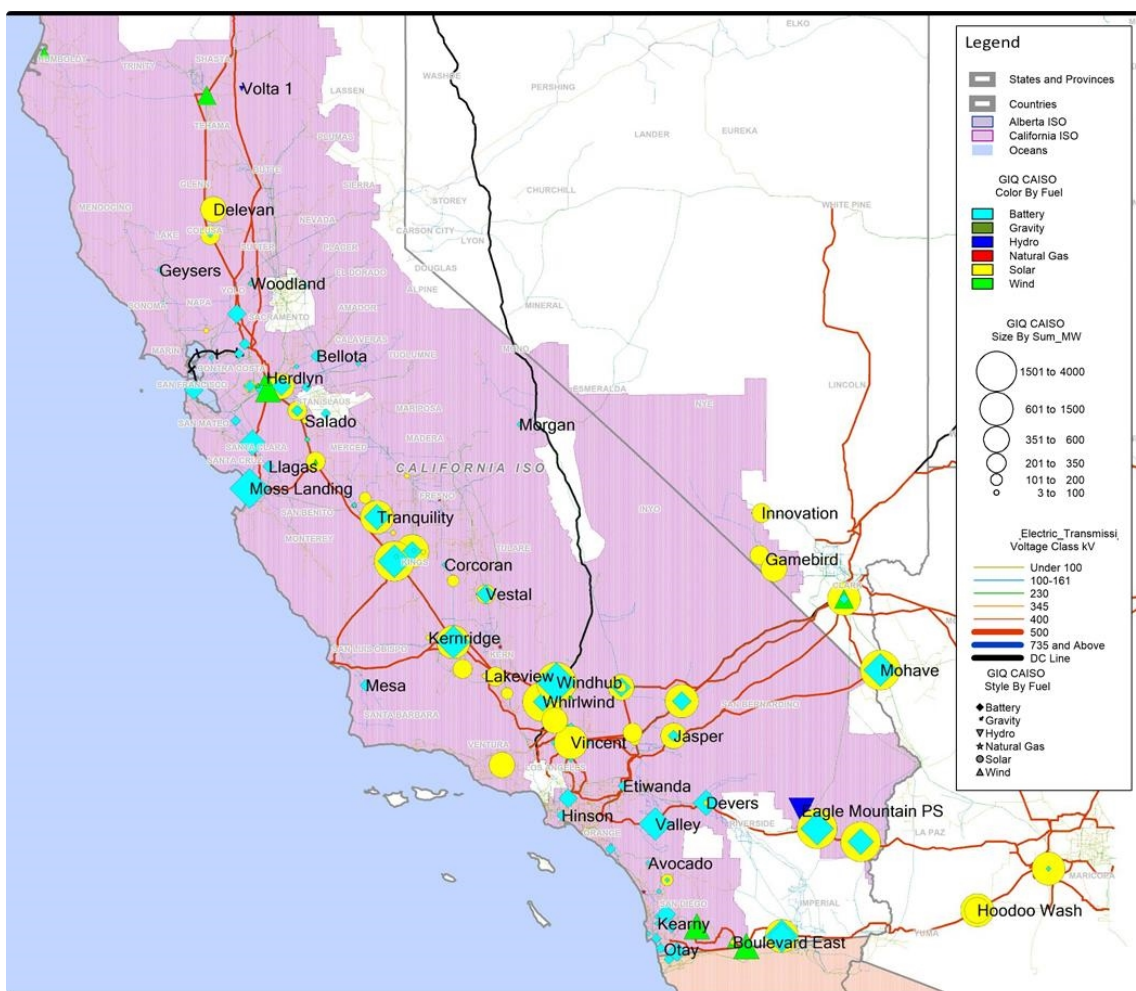
## MISO REGIONAL PROJECTS

- Stoneray Wind
- Darwin Wind
- Lincoln Land Wind
- Greentown Solar
- Gibson Wind
- Noble 2 Wind
- Indian Solar
- Star City Wind
- Hudsonville Solar
- Delta/Tunica Wind
- Ford Ridge Wind
- Great Pathfinder Wind
- Mulligan Solar Wind
- Bennington Wind
- Oliver II Wind Power
- Big Creek Wind
- Bishop Hill III Wind
- Coyote Ridge Wind



## WECC REGIONAL PROJECTS

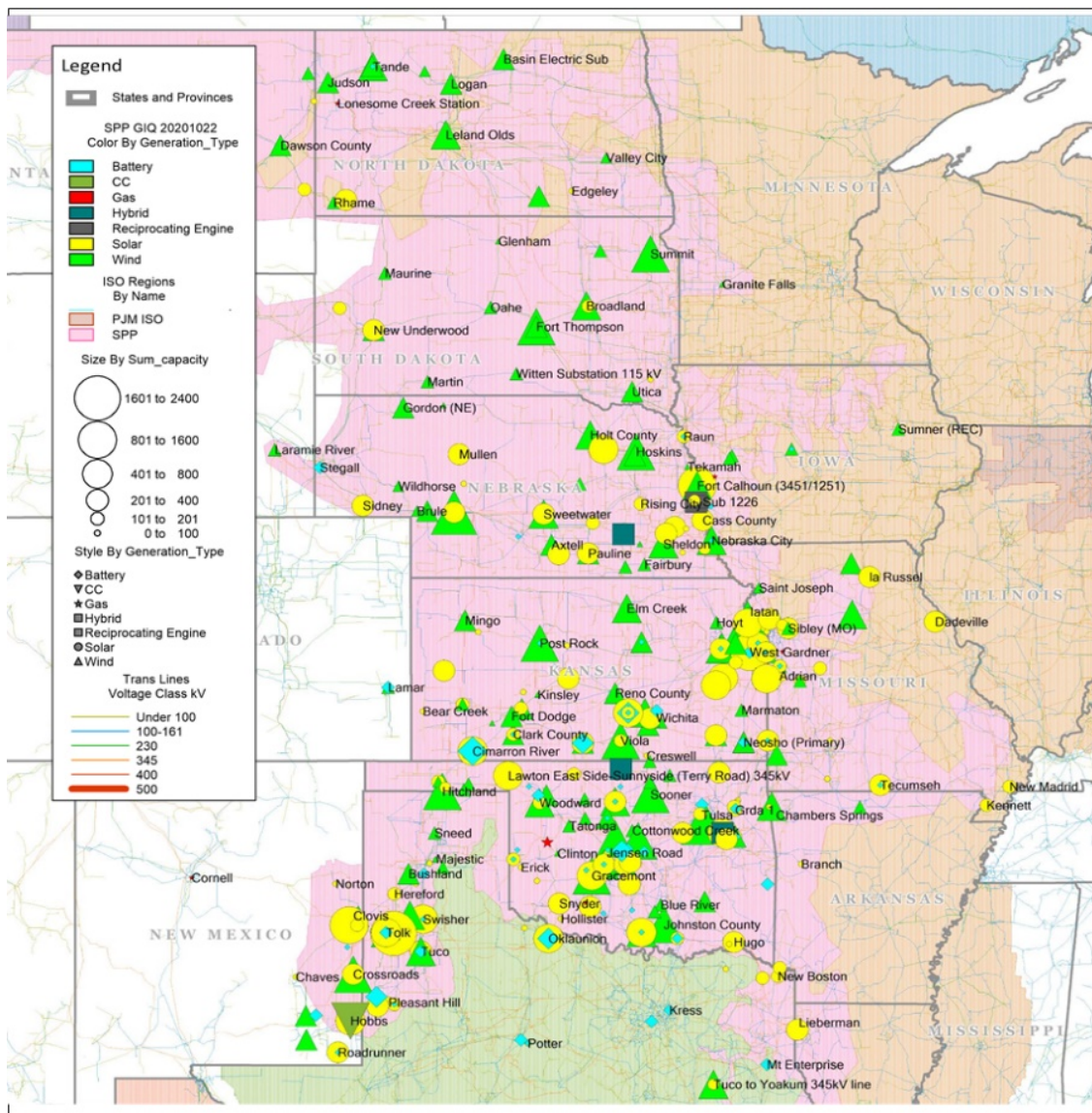
- Athos III Solar
- Shepherd Flats
- Eastline Solar
- Peetz Wind
- Western Spirit Wind
- Rosamond Solar
- Cool Water Wind
- Daggett Solar
- Tri-State Screening Study
- CalWEA Capacity Pricing
- Maverick Solar
- Fifth Standard Solar
- Janus Solar
- Northern Orchard
- Titan Solar I
- Rugged Solar CCA
- Luna Valley Solar
- Strauss Wind
- PSCO Screening Study
- Victory Pass Solar





## SPP REGIONAL PROJECTS

- Day County Wind Repower
- High Majestic Wind Repower
- Minco 1 Wind Repower
- Weatherford Wind Repower
- Prevailing Winds
- Solomon Forks Wind
- Triple H Wind
- King Plains Wind
- Big Creek Wind
- Boiling Springs Wind
- Wildorado Wind
- Rocky Comfort Wind
- Emmons Logan Wind
- Willow Creek Wind
- Plum Creek Wind
- Tailwind Solar
- Soldier Creek Wind
- 25 Mile Wind
- Glass Sands Wind
- Aurora Wind
- Ponderosa Wind



## NORTH EAST REGIONAL PROJECTS

- Kensington Solar
- Blackrock Wind
- Greenswitch Solar
- Harts Mills Solar
- Macadamia Wind
- Kensington Solar
- Woodford Wind
- Bakers Pond
- Antlers Road CCAs
- Blue Rock Solar
- Lone Tree
- Emerson Wind
- Republic Wind
- Halifax Solar
- Briel Solar
- Gardy Mills Solar
- Blooming Grove Wind
- Dekalb Solar
- Alamo Solar
- Angelina Solar

