

# LS POWER

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LS Power MSOC

June 23, 2022

# About LS Power

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**LS Power is a development, investment and operating company focused on the North American power and energy infrastructure sector**

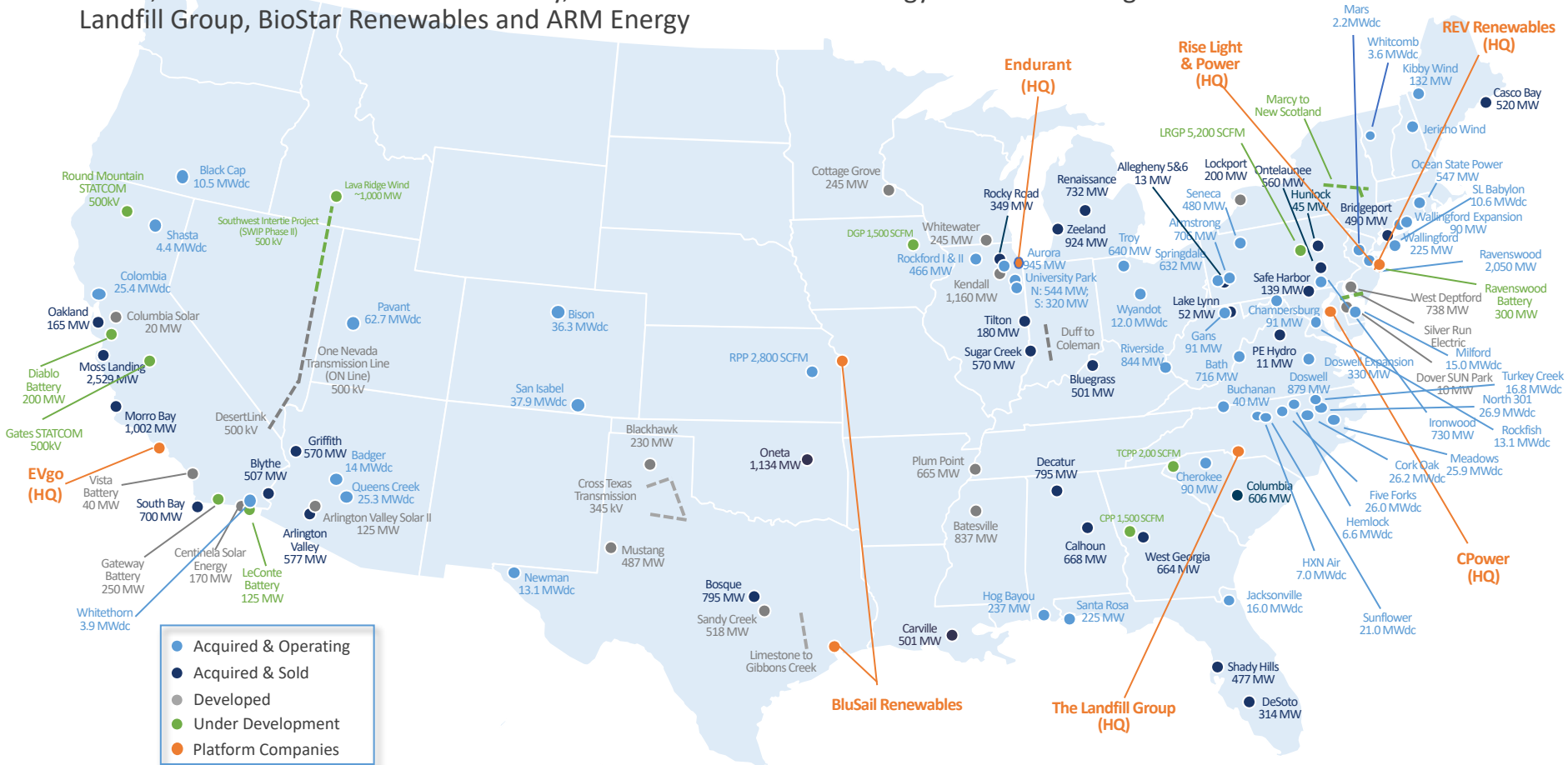
- Founded in 1990, LS Power has 280 employees across its principal and affiliate offices in New York, New Jersey, Missouri, Texas and California
- LS Power is at the leading edge of the industry's transition to low-carbon energy by commercializing new technologies and developing new markets.
  - **Utility-scale power projects across multiple fuel and technology types**, such as pumped storage hydro, wind, solar and natural gas-fired generation
  - **Battery energy storage**, market-leading utility-scale solutions that complement weather dependent renewables like wind and solar energy
  - **High voltage electric transmission infrastructure**, which is key to increasing grid reliability and efficiency, as well as carrying renewable energy from remote locations to population centers
  - **EVgo, the nation's largest public fast charging platform for electric vehicles** and first platform to be 100% powered by renewable energy
  - **CPower Energy Management**, the largest demand response provider in the country that is dedicated solely to the commercial and industrial sector
- Since inception, LS Power has developed, constructed, managed and acquired competitive power generation and transmission infrastructure, for which **we have raised over \$47 billion in debt and equity financing.**
  - **Developed over 11,000 MW of power generation** (both conventional and renewable) across the United States
  - **Acquired over 34,000 MW of power generation assets** (both conventional and renewable)
  - **Developed over 660 miles of high voltage transmission**, with ~400 miles of additional transmission under development

**Utilize deep industry expertise as owner/operator**

# LS Power Project Portfolio

## Extensive development/operating experience across multiple markets and technologies

- With over \$47 billion in equity and debt raised, LS Power has developed and acquired 120 Power Generation projects (renewable and conventional generation), 7 Transmission projects, and 5 Battery Energy Storage projects
- LS Power's Energy Transition Platforms includes CPower Energy Management, Endurant Energy, EVgo, Rise Light & Power, and REV Renewables. Additionally, LS Power has Waste to Energy initiatives through its Joint Ventures with the Landfill Group, BioStar Renewables and ARM Energy



# Design Principals

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- PJM operates a competitive wholesale electricity market
- The MSOC imposes a maximum limit on the BRA Offer Price of a resource if and when it is deemed to have the ability to exercise market power
- MSOC is not a cost-of-service, ratemaking proceeding
- Generation owners are best at determining their risks
- Transparency
  - The review and determination of Unit-Specific MSOCs by PJM/IMM has to be complete transparent to the seller
  - The determination of Default MSOCs has to be completely transparent to the sellers
  - All models, data, assumptions, etc should be available the sellers for review and understanding

# Unit-Specific MSOC Proposal – Same as Package A with the following changes:

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## ■ CPQR:

- CPQR is to be based on the market seller's view of the risk of taking on a capacity obligation vs not taking on the obligation and remaining an energy-only resource
- This risk is viewed differently by different market sellers and the market seller's view of this risk is commercially sensitive
- One size doesn't fit all and the process needs to reflect that
- Market sellers should be able to determine CPQR based on the seller's models typically used in determining their investment risks
- The MSOC should never be lower than the CPQR
  - Remember, MSOC is only a cap not a cost-of-service rate

## ■ Default MSOC

- As with the Unit-Specific MSOC, the Default MSOC should never be lower than the CPQR

## Unit-Specific MSOC Proposal – Same as Package A with the following changes:

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- Change the Deadline for Must-Offer Exception Request –
  - Must Offer Exception Request deadline moved to no later than 5 days after receipt of the final Unit-Specific Net ACR (MSOC) value from PJM/IMM (currently falls on same day as when final MSOC is issued).
  - The market seller may submit a Must Offer Exception Request if the market seller does not agree with either the final Unit-Specific Net ACR (MSOC) or the Default Net ACR provided by the IMM.
  - The market seller must provide an officer certification similar to that required by Planned Resources regarding not exercising Buyer-Side Market Power, representing that the unit would be uneconomic and would otherwise operate as an Energy Resource for the applicable Delivery Year if the market seller does not agree with PJM/IMM on the final Unit-Specific Net ACR or the IMM Default Net ACR.
  - The market seller may no longer offer into any RPM Auction for that Delivery Year but may participate as an energy resource in the energy and ancillary markets for that Delivery Year.

## Unit-Specific MSOC Proposal – Same as Package A with the following changes:

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- Transparency of models, methodology, etc.
  - Increase transparency over PJM Package A (similar to Package B)
  - All models and data sets and methodologies used to make the IMM and PJM determinations must be made available to the market seller prior to determinations being issued.
  - All detailed outputs such as hourly energy, reserve, regulation commitments must be provided for the EAS offset
  - All disagreements with the Market Seller's submitted information must be answered in writing with a detailed explanation and any supporting data and analysis backing the disagreement
  - Any and all revisions to posted MSOCs must be fully detailed and explained at the time of posting (change from Package B)

# Default MSOC Proposal – Same as Package B with the following changes:

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## ■ Methodology

- As with the Unit-Specific MSOC, the Default MSOC should never be lower than the CPQR
- The methodology must be completely transparent and not a "black box"
- Market sellers must be able to confirm every input and assumption and reproduce the results if so desired.

## ■ Locational Differentiation – same as Package B

- Differs by LDA based on Net CONE in each LDA

## ■ Implementation Timeline

- No later than Dec, 2022 for 24/24 BRA