The Future of Reliability:
Stanton Energy Reliability Center

DCBO Bidders’ Conference

September 5, 2018
The Stanton Energy Reliability Center ("SERC") is being developed by Stanton Energy Reliability Center, LLC, a joint venture of W Power, LLC and Wellhead Energy, LLC. W Power is the majority owner.

About W Power:

- Founded in 2011, W Power is a California certified woman-and-minority owned business enterprise ("WMBE") focused on doing business in California’s energy industry.

- W Power develops, builds, owns, and operates community energy reliability centers (CERC). In California, W Power owns one CERC in Delano. In addition, W Power has developed another CERC in Tulare.

- W Power believes in building lasting partnerships with the communities we serve. The ultimate result is an environmentally responsible, cost effective, and reliable energy future for California.
About Wellhead:

- Based in Sacramento, CA, Wellhead is a developer, owner and operator of small and medium scale power generation projects. Since 1982, Wellhead has been involved in the development, construction and/or operation of twenty facilities including four combined heat and power (CHP), one landfill gas generation facility, and one solar PV facility. Wellhead and its related companies currently own and/or operate eleven projects totaling approximately 418 MW.

- Wellhead has developed the Hybrid Energy Storage product and has been awarded a patent on the technology.
The Stanton Energy Reliability Center ("SERC") is a state-of-the-art grid stability solution based upon the new General Electric Hybrid Energy Storage System

- SERC, as its name implies, was designed from the ground up to be an all-purpose Energy Reliability resource. SERC is being permitted to deliver superior reliability services at a low cost and a low emissions profile.

- SERC will consist of 2 Hybrid Energy Storage Systems

- Major equipment will include:
  - 20 MW, 10 MWh Battery system
  - Two GE LM6000 gas turbines
  - Innovative visual screening
  - Technology has been patented by Wellhead
Electrical Interconnection

- SERC executed a Generator Interconnection Agreement ("GIA") for electric interconnection on February 8, 2018.

- The electrical interconnection consists of two components, 1) a substation (called Skip which will be designed, constructed, owned and operated by SCE); and 2) connection to an existing Barre – Skip 66kV Line.

- The transmission line will run underground as it stretches from the project’s switchyard to the Barre Substation on the east side of Dale Avenue.
Stanton Energy Reliability Center – Project Description - continued

• **Gas Interconnection**

SERC has entered into a Collectible Work Authorization (“CWA”) with Southern California Gas Company ("SoCalGas") for facilities engineering and planning for the gas interconnection. It is expected that the construction will begin January 2019 with a target in-service date of November 2019.

• The Southern California Gas Company ("SCGC") natural pipeline will run 2.75 miles north along Dale Avenue to SCGC’s Line 1014 in La Palma Avenue.

• Natural gas pipeline construction areas include staging yard A, a one-half acre parcel adjacent to the Stanton site, which is owned by SCE. Staging area B is one half-acre area within a parking lot 700 feet south of the intersection of Crescent and Dale avenues (open area on Dale Avenue surrounded by a parking lot). Access to the natural gas pipeline route would be along existing urban streets. The natural gas pipeline trench would be 6 feet deep; approximately 4-6 feet wide, with a minimum cover depth of 36 inches.

• The service extension and meter-set assembly for the gas interconnection is being engineered and constructed by SCGC.

• The new pipeline segment will be designed to deliver at a nominal pressure of 520 psi to the facility.
Stanton Energy Reliability Center – Project Description - continued

**Water Interconnection:**

- Process and potable water will be supplied by Golden State Water Company via connections in Dale Avenue and Pacific Street.

**Sewer Interconnection:**

- Sewer service will be supplied by the City of Stanton’s municipal sanitary sewer system via connection in Dale Avenue.
GE Unveils World’s First Two Hybrid Energy Storage Systems with Southern California Edison

– Southern California Edison (SCE) converted 2 existing LM6000 peakers into Hybrids in response to California’s Aliso Canyon energy emergency

– Hybrid Energy Storage System package expected to help SCE’s customers save on fuel costs, while reducing natural gas consumption and emissions, plus improving gas turbine start-up time and reliability

– GE developed the LM6000 Hybrid Energy Storage System in collaboration with Wellhead

– First two units went commercial in March 2017
Hybrid Energy Storage System Awards

Edison Electric Institute 2017 Edison Award

ESNA 2017 Innovation Award for Centralized Storage

Power Magazine Top Plant – Gas-fired Award

South Coast AQMD Innovative Clean Air Technology Award

POWER-GEN 2017 Best Energy Storage Project

POWER-GEN 2017 Best Overall Project
Visual Simulation – Dale Ave looking North – Before SERC
Visual Simulation – Dale Ave looking North – After SERC
Visual Simulation – Dale Ave looking South – After SERC
General Arrangement – Parcel 2
# Project Schedule Information

## LM6000 Milestones

<table>
<thead>
<tr>
<th>Construction Period</th>
<th>Start Date</th>
<th>End Date</th>
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<tbody>
<tr>
<td>Construction</td>
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<td>Mobilization</td>
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## Battery System Milestones

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Project Participants

• Project Participants
  – W Power
  – Wellhead Energy
  – POWER Engineers
  – General Contractor (TBD)
  – Southern California Edison
  – Southern California Gas
  – The City of Stanton
  – Orange County
  – Wellhead Construction
  – Wellhead Services
Project Org Chart

[Diagram showing the organization chart with various components and connections.]

- Various Vendors
- Powers Engineering
- General Contractor TBD
- Wellhead Construction, Inc.
- Wellhead Services, Inc.
- Stanton Energy Reliability Center, LLC
- Construction Management
- Operations & Maintenance
Questions?