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Enchanted Rock Comments to #22-OII-01

Additional submitted attachment is included below.

**Order Instituting Informational Proceeding on Distributed
Energy Resources in California's Energy Future**

COMMENTS OF ENCHANTED ROCK LLC., for Docket No. 22-OII-01

INTRODUCTION

Enchanted Rock is a microgrid developer, owner, and operator with California contracts for 60MW of resiliency capacity. Our standard California solution includes:

- Generation units that meet ultra-low California Air Resources Board Distributed Generation emissions levels, the cleanest reciprocating engine standard in the US;
- Use of renewable natural gas to provide zero carbon operation for both resiliency and grid services

Our portfolio also includes over 200 MW of capacity under construction in California, Illinois, Virginia, Pennsylvania, and New Jersey, and over 550 MW of dispatchable generation capacity deployed in Texas, Mississippi, and Louisiana. Our assets have protected critical services and facilities serving communities, including grocery stores, hospitals, nursing homes, water facilities, universities, and government facilities. When our customers are using utility power, our assets operate to provide valuable services to the grid with a fast start, dispatchable array of distributed assets, fueled by underground low-pressure pipeline natural gas.

California is a leader in promoting market opportunities for Distributed Energy Resources (DERs). Enchanted Rock commends the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) (jointly referred to as the "Commissions") for their commitment to reducing barriers and optimizing the use of distributed energy resources (DERs) as it moves California toward the next-generation electric grid. Progress has been made, but there is ample room for improvement to reduce barriers to entry and promote more robust, competitive opportunities for DERs. Bold vision and action toward DERs will provide Californians with reliable and resilient grid, and cost-effective energy supplies that can satisfy predicted capacity needs.

What does this bold action toward DERs look like? It includes two high-level guiding principles for consideration.

First, a paradigm shift in system planning is required. It is not sufficient to rely on business-as-usual investments to support the one-way power flow from large-scale generation to distant loads. For example, the “electrification of everything” is happening primarily at distribution level voltages and will place a tremendous burden on the transmission & distribution (T&D) grid. Well-placed front-of-the-meter (FTM) and behind-the-meter (BTM) solutions on the distribution system will be best positioned to address these needs—reducing the need for costly T&D upgrades, peaker resources/plants, mitigating the risk of outages or power issues due to the failure of bulk system assets, and avoiding losses from delivery over the T&D system.

- *Aggregated DERs are an effective planning and resource tool to reduce load shedding.*

Consider a scenario where a geographically diverse portfolio of 100 MW of DERs is providing reliability services. In the event of a severe load shed event, the portfolio of DERs may face the loss of 20-30% of its resources to load shed. However, since most of these DERs are likely to provide their response as a mix of load reduction and export capacity via behind-the-meter generation, the actual impact to the system is not a 20-30% loss of DER capacity, but something closer to 4-6% of the DER capacity (20% of 20-30%) since the load reduction will have been achieved in full through load shedding. Meanwhile, bulk power system generation is likely to be experiencing forced outage rates in the 30-40% range for the grid to require load shedding in the first place. System planning activities going forward must prepare for and facilitate a more interactive, distributed resource mix.

Second, DERs must be allowed to compete on level-footing with traditional bulk power resources in the markets, while recognizing the unique capabilities and incremental value DERs can provide to the grid. Generally, this means market rules should be designed based on performance criteria, not on specific technology or fuel-type specifications. In considering the capabilities of various DER types in the development of market rules to encourage DER deployment, any classification of the DER types should be based on technology-agnostic

performance characteristics so that current and emerging technologies can participate broadly based on the resource's ability provide certain services to the market.

Relevant criteria may include startup time, dispatchability, forced outage or effective load carrying capability rates, duration capabilities, or location in the grid topology, i.e., behind-the-meter or front-of-meter.

SPECIFIC POLICY RECOMMENDATIONS

- 1. Policies and incentive programs that include market price signals and dispatch orders will significantly bolster DER participation and grid resilience.*

A key value proposition for DERs is the ability to support the grid as an aggregation of resources or as a single resource. A diversified portfolio of DERs can achieve higher levels of reliability and resilience compared to bulk power resources with single shaft risk because an aggregator can manage outage risks within the portfolio of resources to meet aggregate performance obligations. The state must move quickly to create an opportunity for behind-the-meter, dispatchable DERs to provide Resource Adequacy and participate fully in the markets.

For example, Enchanted Rock's DER participation format utilizes a natural gas reciprocating engine to power a resilience microgrid for commercial, industrial, and institutional customers. For these large energy users who demand greater reliability rates than can be provided by the grid alone, our microgrids provide fast-responding, long-duration backup power when the grid experiences outages. When operating in parallel with the grid, our cluster of DERs are operated to provide grid services like ERS, energy, and peak shaving. When compared to traditional bulk power resources, Enchanted Rock's microgrids are most similar to peaking resources on the system that run for limited hours during the year for periods of high demand. The revenues generated through grid services offsets the cost of the backup power services to the host customer. Further, Enchanted Rock's cluster of smaller engines can aggregate to a capacity greater than the host load.

- 2. Mechanisms are required to allow distribution system resilience services by DERs.*

Enchanted Rock's microgrid assets are oversized relative to the host load. During last year's Winter Storm Uri in Texas, Enchanted Rock protected 143 sites for over 5,000 outage hours. In most cases, Enchanted Rock had excess capacity sitting idle while the surrounding

communities dealt prolonged power outages. With this excess capacity, it would have been possible for Enchanted Rock to provide backup power not only to the host site but also to neighboring facilities during a grid outage if the distribution feeder could be sectionalized and islanded appropriately. Regulatory and operational mechanisms need to be developed to allow DERs to coordinate with the utility to serve the utilities' customers during grid outages and to be compensated accordingly.

CONCLUSION

Enchanted Rock appreciates the Commissions' leadership to date on DERs. We are committed to supporting your efforts to promote the robust market for DERs that California needs for a stable and resilient grid. Thank you for your consideration.

By:

Joel Yu
Vice President, Policy
Enchanted Rock, LLC
1113 Vine St, Suite 101
Houston, TX 77002
jyu@enchantedrock.com