



California Energy Commission DOCKETED 12-EPIC-01
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Gridco Systems
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August 26, 2012

EPIC - Docket #12-EPIC-01
California Energy Commission
1516 Ninth Street
Dockets Office: M/S 4
Sacramento, CA 95814

RE: Notification of Interest in EPIC Program

Dear Commissioners:

Please accept this letter as notification of Gridco Systems' interest in the California Energy Commission's Electric Program Investment Charge (EPIC) Program. We are confident that the advanced distribution solutions we are developing will qualify for funding under the EPIC guiding principles and advance California's environmental, economic, and employment policies. We would welcome the opportunity to engage with the CEC in a dialogue concerning our technologies and their benefits for California ratepayers.

Introduction

Founded in 2010, Gridco Systems is introducing advanced power distribution hardware and software that will enable utility's to maintain precise, localized control of the power distribution system below the substation. In the past, this degree of control was not required as power flowed predictably and only from generating stations to loads. With the rapid adoption of distributed energy, the introduction of electric vehicles, and an increasing focus on systemic reliability and efficiency, a host of challenges are emerging:

- Steady-state and intermittent voltage regulation under high renewables penetration
- Power factor stability under high renewables penetration
- Mechanical device (e.g. voltage regulators) overuse under high renewables penetration
- Deterioration of conservation voltage reduction (CVR) benefits under high renewables penetration
- Ground fault contribution from high renewables penetration
- Phase imbalance due to high renewables penetration
- Localized system overloading due to electric vehicles

Leveraging recent advances in power electronics, Gridco Systems' is introducing utility-grade solutions to address these challenges.

Project Concept: Product Demonstration in a High Penetration Environment

Under this project concept, Gridco Systems products would be deployed to control voltage and other key parameters of feeder performance under high PV penetration. The scope of work would include baseline development, demonstration of benefits, demonstration of SCADA integration and control, data analysis and the final report.

Fit with EPIC Guiding Principles

Gridco Systems solutions qualify for EPIC funding under all of the “guiding principles” for CEC investment plans. These include:

- a.) **Societal Benefits:** Gridco Systems devices supports continued deployment of utility RPS by addressing distribution circuit operational concerns caused by PV and other DER.
- b.) **Greenhouse Emissions:** Gridco Systems devices support current and future RPS goals and deployments at the distribution circuit level by enabling DER penetration while also preserving CVR benefits through lower voltage levels.
- c.) **Loading Order:** Gridco Systems devices support the current grid dispatch loading order criteria by enabling demand response and DER.
- d.) **Low-Emission Vehicles/Transportation:** Gridco Systems devices provide sensing to identify system overloading cause by EV supply equipment.
- e.) **Safe, Reliable, and Affordable Energy Services:** Gridco Systems solutions provide enhanced sensing and control of the distribution system, boosting safety and reliability while increasing systemic efficiency.
- f.) **Economic Development:** Gridco Systems has the potential to drive job creation in California through manufacturing, systems deployment, and more.
- g.) **Efficient use of Ratepayer Monies:** Gridco Systems devices are a cost-effective solution relative to conventional alternatives, such as reconductoring.

Gridco Systems respectfully requests an opportunity to meet with the CEC staff to discuss the benefits of utility-owned power electronics in the EPIC program.

Please feel free to contact our local California office for additional information:

David Lentsch
Director of Business Development
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On behalf of the staff and engineers of Gridco Systems, we are looking forward to exploring the opportunity to work with the CEC on the EPIC program.

Sincerely,



Naimish Patel
CEO
Gridco Systems

Cc: David Lentsch