

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local Procurement Obligations.

R.11-10-023
Filed October 20, 2011

**REPLY TO COMMENTS ON PROPOSED DECISION OF
IMERGY POWER SYSTEMS, INC., PRIMUS POWER, ZBB ENERGY
CORPORATION, ENERVault CORPORATION
AND UNIENERGY TECHNOLOGIES, LLC**

Tim Hennessy
President and COO
Imergy Power Systems, Inc.
48611 Warm Springs Blvd.
Fremont, CA 94539
Telephone: (510) 668-1485
Email: timothy.hennessy@imergypower.com

Tom Stepien
CEO
Primus Power
3967 Trust Way
Hayward, CA 94545
Telephone: (510) 342-7602
Email: tom.stepien@primuspower.com

Eric C. Apfelbach
President and CEO
ZBB Energy Corporation
N93 W14475 Whittaker Way
Menomonee Falls, WI 53051
Telephone: (608) 576-7549
Email: eapfelbach@zbbenergy.com

Craig R. Horne, Ph.D.
Chief Strategy Officer & Co-Founder
EnerVault Corporation
1244 Reamwood Avenue
Sunnyvale, CA 94089
Telephone: (408) 636-7519
Email: chorne@enervault.com

Russell Weed
VP, Business Development & General Counsel
UniEnergy Technologies, LLC
4333 Harbour Pointe Blvd. SW, Suite A
Mukilteo, WA 98275
Telephone: (425) 404-3307
Email: russ.weed@uettechnologies.com

June 23, 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local Procurement Obligations.

R.11-10-023
Filed October 20, 2011

**REPLY TO COMMENTS ON PROPOSED DECISION OF
IMERGY POWER SYSTEMS, INC., PRIMUS POWER, ZBB ENERGY
CORPORATION, ENERVault CORPORATION
AND UNIENERGY TECHNOLOGIES, LLC**

Imergy Power Systems, Inc., Primus Power, ZBB Energy Corporation, EnerVault Corporation and UniEnergy Technologies, LLC (the “Joint LDES Parties”) respectfully submit this reply to other parties’ opening comments on the Proposed Decision of Administrative Law Judge Gamson Adopting Local Procurement and Flexible Capacity Obligations for 2015, and Further Refining the Resource Adequacy Program (“Proposed Decision”).

I. Mandatory Flexible Capacity Requirements Should be Adopted in 2015 and on an Ongoing Basis

The Joint LDES Parties strongly support the opening comments filed by the California Independent System Operator (“CAISO”) reiterating the need for flexible capacity on California’s grid and supporting the adoption of a mandatory flexible capacity procurement program starting in 2015.¹ We disagree with the comments filed by the Alliance for Retail Energy Markets and the Office of Ratepayer Advocates (“ORA”), which seek to delay implementation of this important

¹ See California Independent System Operator Corporation Comments on Proposed Decision (June 16, 2014) at 2-3.

framework even further. As argued in our opening comments, flexible capacity framework must be implemented now to address current and future system flexibility needs. The Proposed Decision is consistent with D.13-06-024, CAISO's flexibility needs assessment and the record to this proceeding,² and should be adopted with respect to adoption of the mandatory flexible capacity requirements starting in 2015.

The Joint LDES Parties agree with ORA's comment that the flexible capacity program should not be referred to as "interim" in the Commission's RA decision this year. As ORA comments, the program should be adopted on an ongoing basis, with the potential for future modifications, rather than being adopted as an interim program that sunsets in 2017.³ We agree that regulatory certainty is crucial for load-serving entities in order to make procurement planning decisions.⁴ This certainty is also necessary for market participants to develop projects and business models in order to satisfy the grid's need for flexible capacity. In fact, by adopting a mandatory flexible capacity procurement requirement beginning in 2015, the Commission will have the opportunity to learn from the first iteration of the program and make modifications, if necessary, in future years as flexibility need becomes more extreme.

² See, e.g., CAISO Comments on April 9, 2014 Workshop Presentations and Proposals on Flexible Capacity and Resource Adequacy (April 18, 2014) at 2-3; D.13-06-024 at 3, 42, 43, 66-67 (Conclusions of Law 7-9, 12), 69 (Ordering Paragraph 5); Reply Comments of Imergy Power Systems, Inc., Primus Power, ZBB Energy Corporation, EnerVault Corporation and UniEnergy Technologies, LLC on Revised Energy Division Proposals at 1-3, n.4 (citing CAISO, "What the Duck Curve Tells Us About Managing A Green Grid", available at: http://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf).

³ Comments of the Office of Ratepayer Advocates on Proposed Decision Adopting Local Procurement and Flexible Capacity Obligations for 2015, and Further Refining the Resource Adequacy Program (June 16, 2014) at 6-7.

⁴ *Id.*

II. The CPUC Should Retain the Three Hour Duration Requirement

The Joint LDES Parties strongly support the comments filed by San Diego Gas & Electric Company (“SDG&E”) regarding Appendix B to the Proposed Decision and the problems associated with its treatment of bidirectional energy storage resources. The Proposed Decision correctly concludes that “there is insufficient evidence of reliability impacts to change the current three hour durational requirement for Flexible RA at this juncture.”⁵ We agree with SDG&E that bidirectional resources should not be permitted to add charging time to discharging time in order to meet the three-hour RA requirement and that Appendix B should therefore be corrected or deleted.

Along these lines, we disagree with Southern California Edison’s (“SCE”) comment that two-hour resources should qualify for System RA and Local RA, and with California Energy Storage Alliance’s (“CESA”) comment that Regulation Energy Management resources should be able to qualify for Flexible RA. The record to this proceeding clearly demonstrates that a minimum of three hours of duration (either three hours of continuous charging or three hours of continuous discharging) is consistent with California’s expected three-hour ramping needs.⁶ As discussed in our opening comments, shorter duration flexible resources provide on average only a quarter of the

⁵ Proposed Decision at 33.

⁶ See, e.g., Post-Workshop Comments of Imergy Power Systems, Inc., Primus Power, ZBB Energy Corporation, EnerVault Corporation and UniEnergy Technologies, LLC on Energy Division Proposals (February 18, 2014) at 4-6; Comments of MegaWatt Storage Farms, Inc. on the January 24, 2014 Workshop Staff Proposals (February 18, 2014); Reply Comments of Imergy Power Systems, Inc., Primus Power, ZBB Energy Corporation, EnerVault Corporation and UniEnergy Technologies, LLC on Energy Division Proposals (March 3, 2014); Joint LDES Opening Comments on Revised Staff Proposals at 3-4; Comments of MegaWatt Storage Farms, Inc. on the April 9, 2014 Workshop Staff Proposals (April 18, 2014); Reply Comments of Calpine Corporation on Energy Division Proposals Addressing Resource Adequacy Implementation (March 3, 2014) at 2-3.

output in MWh as longer resources, which reduces flexibility services and requires more fossil-based resources to address ramping and peak load.⁷ The Proposed Decision rightly concludes that there is a lack of evidence to support a change to the three hour durational requirement.⁸ The Commission should therefore correct or delete Appendix B in its decision to clarify that a bidirectional resource is not permitted to aggregate the average charging power (e.g., $P_{max}/2$) hours with the average discharging power (e.g., $-P_{max}/2$) hours to meet the three hour discharge minimum at rated power (P_{max}) required for RA eligibility.

III. Conclusion

The Joint LDES Parties appreciate the opportunity to offer these reply comments and the Commission's diligent efforts to establish a flexible capacity procurement framework.

⁷ Comments on Proposed Decision of Imergy Power Systems, Inc., Primus Power, ZBB Energy Corporation, EnerVault Corporation and UniEnergy Technologies, LLC (June 16, 2014) at 5-6.

⁸ Proposed Decision at 33.

Respectfully submitted,

/s/

Tim Hennessy
President and COO
ImergyPower Systems, Inc.
48611 Warm Springs Blvd.
Fremont, CA 94539
Telephone: (510) 668-1485
Email: timothy.hennessy@imergypower.com

/s/

Tom Stepien
CEO
Primus Power
3967 Trust Way
Hayward, CA 94545
Telephone: (510) 342-7602
Email: tom.stepien@primuspower.com

/s/

Eric C. Apfelbach
President and CEO
ZBB Energy Corporation
N93 W14475 Whittaker Way
Menomonee Falls, WI 53051
Telephone: (608) 576-7549
Email: eapfelbach@zbbenergy.com

/s/

Craig R. Horne, Ph.D.
Chief Strategy Officer & Co-Founder
EnerVault Corporation
1244 Reamwood Avenue
Sunnyvale, CA 94089
Telephone: (408) 636-7519
Email: chorne@enervault.com

/s/

Russell Weed
VP Business Development & General Counsel
UniEnergy Technologies, LLC
4333 Harbour Pointe Blvd. SW
Suite A
Mukilteo, WA 98275
Telephone: (425) 404-3307
Email: russ.weed@uetechnologies.com

Date: June 23, 2014