

## Review of Proposals and Comments Submitted for Edison's Living Pilot Symposium

Organization	Type of Proposal	General Category and Description
Enbala	Data Analytics	The GOFlex platform is a constraint-based real-time optimization and control system. The platform consists of a central optimization node that utilizes advanced real-time information and communication infrastructure to control the power usage of distributed demand-side loads.
Equilibrium Capital	Data Analytics	Suggestion for CPUC action -- Load is a System Resource. Problem is getting a cash flow to match the value received from reducing load. Changes in the portfolio strategy of utilities to produce a better match to need.
FirstFuel Software - Analytics	Data Analytics	Advanced meter data analytics. Deploying in targeted areas will provide transformation benefits in cost, speed, and scale benefits in achieving EE, peak load reductions, permanent load shifts, real time demand reduction, etc.
Quest	Data Analytics	Integrated Wireless Control for Energy Management and Demand Response. This replaces individual wired connections between thermostats and individual roof AC for better overall usage and efficiency.
Retroiciency	Data Analytics	Advanced energy analytics for commercial buildings. Software leverages sophisticated technology that has been built in. Virtual Energy Assessment. Automated Energy Audit. Efficiency Track scans for new opportunities.
S&C Electric-FIAMM	Data Analytics	For the utilities: inverters, static compensators and storage management systems and svcs. For renewables: Numerous power electronic products and services. Note that this proposal is related the another S&C proposal and also a FIAMM stand-alone proposal.
Sentient	Data Analytics	Load monitoring, communicating distribution line monitors. Distribution line monitors integrate sensors, computing and communications. Line monitors can measure characteristics of current and voltage
AHRI	Demand-side and Storage technology	Replace existing AC, coml and residential, with modern efficient units to be more efficient, save MW. Minimum efficiency std for new AC has been raised. Could save 93 MW and \$100 million.
Charge Point	Demand-side and Storage technology	Electric vehicle charging demand is growing. Demand Response Technology to mitigate the impacts of such loads. Peak load reduction, TOU capability and load management. Will provide DR.
DNV GL KEMA	Demand-side and Storage technology	No single Preferred Resource can meet Local Capacity Reqs. Proposes to build a Multi-Pronged approach to analyze and evaluate. EE, DR, net-zero energy for existing buildings and new construction, DG, Energy Storage. Evaluation in a holistic manner.
Enerliance	Demand-side and Storage technology	Large scale HVAC systems and chiller plants are the single largest electric load in most commercial facilities. Efficiency, flexibility, permanent load shift, etc. Load Based Optimization system.
Honeywell Smart Grid Solns	Demand-side and Storage technology	Leveraging a proven platform that is Open Automated Demand Response (OpenADR), targeted geographically, approaching multiple customer segments from residential to large industrial. Day-ahead peak shaving to real-time ancillary svcs, etc.
Lincus & GEI Consultants	Demand-side and Storage technology	Proposal is to use their DR and EE programs for both Water and Energy Conservation that will lead to demand savings and/or shift of as much as 185 MW in the region.
Opower	Demand-side and Storage technology	Behavioral Demand Response. Through the application of behavioral science, motivates customers to reduce peak consumption without new hardware or complex rate structures.

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PolyBrite Borealis	Demand-side and Storage technology	Demand Response capability in Street lights. Although this may be a commercial product already, sponsor asserts it could take Megawatts off the system. Note same sponsor as for Exergonix.
Pool Response	Demand-side and Storage technology	Automated Demand Response for pool pumps and outdoor residential devices.
Proctor Engineering Group	Demand-side and Storage technology	Retrofit homes and commercial and industrial buildings. Pilot tests have shown they can be simple and effective and cost-effective.
Simple Energy	Demand-side and Storage technology	Firm Load Reduction and Scheduled Load Reduction. Software and customer engagement. Behavioral science techniques to motivate measureable and verifiable peak load reduction and energy savings.
Syzergy	Demand-side and Storage technology	Integrated demand-side management. Energy Efficiency, Demand Response, Distributed Generation, and Energy Storage. Could be available to local governments, water and wastewater agencies, colleges and universities, industrial parks.
AES Energy Services	Generation and Storage Technology	Local Capacity Arrays powered by advanced sealed-cell batteries. Each would be capable of providing up to 10 MW of continuous power for two to four hours. Or higher power for shorter time periods. Would help to manage rapid changes in load. Also could serve as a source of reactive power.
Ca Assn of Sanitation Agencies	Generation and Storage Technology	Aerobic digestion results in biomethane, which can be used (and is used) for power generation, etc. Some sanitation systems can take in more biowaste. More can be done. Agencies could time the generation or go off the grid, etc., to benefit the grid. This proposal is coming from the state association on behalf of the local sanitation district.
Exergonix	Generation and Storage Technology	Provides the missing link. Local energy storage and renewable technologies are essential and go together. Advanced Storage systems, both residential and commercial scale. Note that this is the same sponsor as for Polybrite/Borealis.
FIAMM pilot	Generation and Storage Technology	FIAMM is the supplier to the world's leading manufacturers. Sodium-Nickel Batteries. Works with S&C. Note three related proposals FIAMM, S&C FIAMM, and S&C.
Fuel Cell Energy	Generation and Storage Technology	Fuel Cell stations should be in the preferred resource mix. Stationary fuel cells and movable "tiger" fuel cell stations that can be deployed at strategic locations upon need.
Gravity Power	Generation and Storage Technology	Gravity Power Module (GPM) could be built as a pilot of 1-5 MW. Over 99% of storage is pumped hydro, but locations for natural pumped storage are hard to find. This would be an electricity storage demonstration plant that could be built in a local area.
GreenCharge	Generation and Storage Technology	GreenCharge can leverage intelligent energy storage. Electric Vehicle chargers and solar systems. Provide Demand Response during peak demand hours. Create a demand response credit/payment back to host customer.

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Hecate	Generation and Storage Technology	A combination of generation and storage. Can provide firm load reduction, scheduled load reduction. Wide range of development projects. Note, this firm works with FIAMM, a firm that has its own proposal and is mentioned in another as well.
MADA Power	Generation and Storage Technology	Energy storage systems that are not batteries and therefore may be more environmentally preferable. Compact Liquid Air energy Storage (LAES) combined with traditional thermal energy storage, heat exchangers, turbines, and centrifugal compressors. Round-trip energy costs can be lower than pumped hydro.
S&C Energy Storage	Generation and Storage Technology	PureWave Storage Management System, Inverters, power electronic products, etc. Note that this proposal may be related to the FIAMM stand-alone proposal and also the S&C Energy Storage proposal.
Sharp	Generation and Storage Technology	Hybrid solar-storage system in a distributed environment. Sharp has an integrated system with control software to store and distribute energy in a commercial environment.
SolarCity	Generation and Storage Technology	Deployable in a steady and incremental manner, providing immediate and measurable benefits. Roof-top PV, customer-side stationary battery storage, efficiency, and AC load management. Can provide pre-cooling and energy efficiency, etc.
Specialized Energy -- FractalGrid	Generation and Storage Technology	Micro-grid technology. This sponsor breaks down wall between demand-side and wholesale energy resource procurement.
Z-Global -- Imperial Irrigation District	Generation and Storage Technology	A 2200 MW IID Collector System: IID proposes to finance, construct and upgrade its internal transmission network, creating an internal Collector System that would facilitate the export of 1100 MW to the CAISO and simultaneously another 1100 MW to the Southwest of geothermal and solar energy.
CEERT - Greenhouse Tariff	Public Policy Revisions/Actions	Suggestion for CPUC action -- a revised tariff that would have revenue tied to GHG reductions. Suggests a payment much higher than CARB price of \$11/ton. Suggests \$50-\$80/ton.
CEERT - Innovation Adder	Public Policy Revisions/Actions	Suggestion for CPUC action -- an adder to utility supply contracts based on the value of a project's specific grid reliability benefits. So far, "least cost-best fit" is all about least cost. We should identify preferred resource technologies that fit better and create an adder to send a market signal to ensure transmission system reliability.
Clean Coalition	Public Policy Revisions/Actions	Suggestion for CPUC action -- CPUC should promote best practices, including Wholesale Distributed Generation (WDG) and complementary Intelligent Grid (IG) solutions.
COR and NAAC	Public Policy Revisions/Actions	COR is the nonprofit arm of Christ Our Redeemer African Methodist Episcopal Church in Irvine. NAAC is the National Asian American Coalition and represents a broad coalition. Advocate for members of marginalized communities. NAAC and COR will be actively participating
COR Community Dvp Org	Public Policy Revisions/Actions	COR is the nonprofit arm of Christ Our Redeemer African Methodist Episcopal Church in Irvine. Advocate for members of marginalized communities. NAAC and COR will be actively participating
EcoMotion	Public Policy Revisions/Actions	The CPUC should revise its point of view. Make it community-centric, not utility-centric. CPUC should not limit itself to SCE, should partner w SDG&E. Wider view should include San Clemente Green, etc.

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NRDC	Public Policy Revisions/Actions	CPUC should use the results of this symposium and the Living Pilot to improve accuracy, compare, engage, leverage, favor, provide the market with information.
SoCalRen	Public Policy Revisions/Actions	CPUC's efforts should be as broad as possible: efficiency, DR, permanent load shifting, dist generation, storage, etc.
TeMix Transactive Energy	Public Policy Revisions/Actions	A transactive retail tariff is an opt-in tariff that combines forward subscriptions for energy and distribution services with spot transactions. Can apply to both cost-based and competitive retail services.
Vote Solar	Public Policy Revisions/Actions	The CPUC should revise and improve contracting for solar to provide better incentives to improve the operation of the grid. For example, West Orientation of Arrays (which does not maximize kWh but improves operation of the grid), and Advanced Inverters. Many ideas discussed as recommendation, including monitoring and evaluation.
Womens Energy Matters	Public Policy Revisions/Actions	Suggestion for CPUC action -- Since the Living pilot is the first long awaited opportunity to have non-generation resources (NGR) replace generating resources it is critical to get it right. NGRs should be able to get long-term revenue streams like PPAs or similar contractual mechanisms.
Bloom Energy	System/Customer upgrades and Storage	Additional capacity at substations and possible other strategic locations. Permanent load reduction via customer-side installations, peak generation in areas of need, real-time load reduction via islanding capabilities, voltage support.
Energy Innovations	System/Customer upgrades and Storage	Gas Hybridization is a form of leverage to increase the percentage of preferred resources in the mix. Like hybrid autos, which are much more flexible and acceptable than electric-only. Use with storage at grid scale with enhanced technical characteristics, etc., at acceptable cost.
Ice Energy	System/Customer upgrades and Storage	Dispatchable firm megawatts that can be reliably called upon every day. Make installation on commercial and industrial buildings fast, simple and straightforward. Integrated, systematic.
Johns Manville	System/Customer upgrades and Storage	Utility-scale retrofits for buildings: insulation, roofing, membranes, etc. Knowledgeable about where the need is, can work with the utility to act fast and efficiently. MW of Demand and efficiency enhancement.
Lockheed Martin	System/Customer upgrades and Storage	Generalized Svcs to Critical Facilities including fuel-switching, efficiency, DR, Load shifting, etc. Could include gas-cooling in lieu of electricity for chillers. Comprehensive program.
Manz-Proteus	System/Customer upgrades and Storage	Water industry can modulate its energy usage in response to the energy industry's grid requirements by leveraging the excess capacity and inherent operational flexibility in the water assets.
PDE Total Energy Solns	System/Customer upgrades and Storage	A microgrid serving a community may generate power from fuel cells, wind and solar. Add a battery, power electronics, a smart inverter, energy controls, renewable integration, electric vehicle charging systems, etc. This microgrid becomes "smart."

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Peak Efficiency-Evaporcool	System/Customer upgrades and Storage	Cost-effective multi-hundred megawatt scale. Reduce weather-sensitive load on non-residential buildings with retro-fit of evaporcool and other technologies.
Xtreme Power	System/Customer upgrades and Storage	Real-time power management and energy storage systems that enable a more sustainable, cost-effective, and reliable electric grid. Flexible systems, no single battery type is best for all customers. Xtreme Active Control Technology.