



October 21, 2013

Mr. Stephen St. Marie
Division of Policy and Planning
California Public Utilities Commission
505 Van Ness Avenue
San Francisco CA 94102

Dear Steve,

SUBJECT: Southern California Edison's "Living Pilot"

We, the Directors of Syzergy, Inc., a 501(c)(3) corporation dedicated to advancing sustainability through education, thank you and Southern California Edison (SCE) for this opportunity to provide proposals for SCE's *Living Pilot*. We are excited that SCE is leveraging its electric reliability challenges as an opportunity to test alternatives to building large natural gas power plants. SCE's proposed procurement of 400 MW of *preferred resources* is a very important step in the right direction. However, we strongly recommend that the *Living Pilot* push the envelope even further. Below are the salient aspects of our recommended approach.

INTEGRATED DEMAND SIDE MANAGEMENT (IDSMS)

[*IDSMS = Energy Efficiency, Demand Response, Distributed Generation and Energy Storage*]

Background: Although the concepts of IDSMS are embedded throughout the CPUC's 2008 Long Term Energy Efficiency Strategic Plan, achieving that vision has proved challenging. The primary hurdle lies in the siloed nature of traditional regulated energy programs, exacerbated by legislative appropriations that assign funds to specifically defined purposes. Many of these funds cannot be reassigned, even when that could be beneficial to efficiently achieving cross-cutting goals.

IDSMS itself is not difficult. In fact, the process of IDSMS is much more consistent with the way most organizations do strategic planning; i.e., looking at all aspects of their programs, assets and operations for opportunities to more effectively and economically achieve their goals. In California, the problem lies not on the customer side, but on the utilities' side: specifically, there are very real structural challenges to implementing IDSMS under the existing regulatory compact that impede integration of traditionally separate programs for energy efficiency, demand response, distributed generation; and now, energy storage.

Recommendation: SCE should provide comprehensive strategic energy planning assistance and new incentives to help put large energy users on a path to energy self-sufficiency over the next 3 years (well within the targeted timeline to prove the concept prior to committing to build large natural gas power plants that may not be needed by 2020 or soon thereafter, and would thus incur substantial stranded costs for ratepayers).

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The following types of organizations should be invited to participate in this program:

- Local Governments. Four cities (Costa Mesa, Huntington Beach, Fountain Valley, and Westminster) already participate in SCE's Orange County Local Government Partnership. This partnership should be expanded to include all of the cities within Orange County, and the county itself. In addition to accounting for a significant portion of the area's electric requirements, local governments can leverage their superior relationships with constituents to extend the IDSM invitation to all large energy users within their jurisdictions.
- Water and Wastewater Agencies. California's water sector has the unique ability to substantially change the location, timing and magnitude of its electric use. The below agencies are particularly well positioned to assist:
 - The *Municipal Water District of Orange County (MWDOC)* is comprised of 28 retail water agencies that cover most of the area targeted by SCE's *Living Pilot*. Some of MWDOC's member agencies are independently developing comprehensive energy plans now. The ability to collaborate with SCE on these plans could significantly accelerate implementation.
 - *Orange County Water District (OCWD)* and the *Orange County Sanitation District (OCS)* have large energy loads. Both are already developing comprehensive energy plans, and both already participate in demand response programs.

Water continues to be the most cost-effective and flexible form of energy storage today. Helping water and wastewater agencies to develop storage would increase the state's demand response portfolio. In addition, renewable resources that occur as a by-product of the water use cycle (hydropower and biogas) should be maximized to the greatest possible extent.

- Colleges and Universities. Nearly 30 campuses reside within Orange County. Both UC and CSU are already SCE partners, and both are seeking the next generation of energy strategies. IDSM is the optimal and logical next step for these and other colleges and universities.
- Industrial Parks. Any large energy user with a campus is also an excellent candidate for IDSM.

IDSM is much quicker to implement than large power plants. In addition, (a) smaller distributed generation units enable better matching of generation assets to loads, (b) losses are significantly reduced, and (c) units as small as 4MW now achieve fuel efficiencies comparable to large combustion turbines. IDSM would enable much more efficient electric system investments.

MICRO-GRIDS

In addition to targeting specific end users, SCE should identify groups of loads within one or more defined geographical areas that are being served by specific, high priority circuits to demonstrate the electric reliability and economic benefits of self-sufficient micro-grids. (Examples include a set of contiguous mid-sized commercial loads, or a subdivision with residential and small retail loads.)

PRICE SIGNALS

For smaller customers, IDSM may not be as easily achievable within existing technologies. However, (a) new distributed technologies are on the horizon that may make them candidates in the foreseeable future, (b) these customers certainly have an important role through electric vehicles, and (c) new technologies are entering the market now that will give rapid rise to sophisticated energy management at the individual customer level.

For these customers, it is vitally important to effectively and clearly communicate price signals and provide tools that enable timely response. In addition, the price signals should be set at a level that provides a sufficient incentive to participate. To this end, all costs associated with the joint agencies' "base case" assumptions about the incremental investments in Generation, Transmission and Distribution that will be needed to meet demand in 2020 and beyond - including the costs of environmental impacts and assets that are likely to be stranded well before the end of their useful lives as new, efficient energy production and consumption technologies and energy storage are integrated into California's future electricity portfolio – should be included in calculating the price.

IN SUMMARY

We observed with great interest the October 8th discussion between the CPUC and the chief executives of the four regulated energy IOUs regarding the need to transition to the *Utility of the Future*. It is only by engaging a very open and frank dialogue about the realities of challenges to the existing IOU business model that we will be able to collaboratively identify and implement long-term viable solutions. SCE's *Living Pilot* provides the perfect impetus for transitioning now to the *Utility of the Future*.

The transition will not be an easy one:

- Encouraging customers to take responsibility for their energy use will require a wholesale cultural change, extensive education, and new programs, tools and techniques.
- Supporting IOUs in helping their customers to become more energy independent will require substantial changes to the CPUC's traditional regulatory compacts, including overhauling rate and revenue models, and paving the way for IOUs to find sustainable pathways for their customers, their employees and their shareholders.

As the joint agencies noted in their testimony to the Energy Commission on July 15th, it is difficult to make decisions under uncertainty, and there is considerable uncertainty about what our real electric needs will be by 2020. Multiple factors - large quantities of renewable resources and multiple new technologies: electric vehicles, consumer energy management systems, continued improvements in distributed generation and storage technologies – will significantly impact the state's electric load profile. It is precisely for this reason that we urge moving expeditiously to maximize smart grids, micro grids and comprehensive IDSM, with the aim of deferring as much new central generation plant and associated high voltage infrastructure as possible – because we just don't know what we will need in ten or more years.

California has distinguished itself many times by leading the nation in energy innovation. Let's work together to make that happen here, as well. Synergy is prepared to help.

Sincerely,

The Board of Directors of Synergy, Inc.

Michael Bacich
Bridgett Luther
Laurie Park
Jack Sahl
Kristina Skierka