

Living Pilot

Company / Organization:

ChargePoint, Inc.

Background: A decision to close the San Onofre Nuclear Generating Station (SONGS) permanently was made in June 2013, leaving a capacity loss of 2,200 MW in the Orange County/San Diego County areas. On August 26, 2013, the Southern California Edison Company (SCE) filed Track 4 direct testimony in R.12-03-014 calling for a balanced approach, including development of preferred resources, transmission, and conventional gas-fired generation to replace SONGS. SCE proposed a Preferred Resource "Living" Pilot to procure and evaluate the ability of Preferred Resources to meet Local Capacity Requirements (LCR). The Living Pilot is separate and in addition to the California Public Utility Commission's (CPUC's) Long Term Procurement Plan (LTPP) Track 1 procurement requirement. The Living Pilot will be designed to help inform electric system operators, transmission planners, and procurement entities about the ability and availability of Preferred Resources to perform where and when needed to meet local reliability, while ensuring grid stability and resiliency. The timeframe to incorporate the results of the Living Pilot into procurement requirements would be ongoing post 2014. The goal is for Edison to file an application with the commission for its proposed Living Pilot utilizing the feedback from this symposium. This Living Pilot is also separate and in addition to Edison's existing Energy Efficiency (EE) and Demand Response (DR) programs and requirements.

Objective: The State's goal is to maximize the replacement of the gap created by the SONGS closure with preferred resources (e.g. energy efficiency, demand response, distributed generation, interconnection, and storage) consistent with reliability needs. SCE is seeking to develop and implement an aggressive pilot targeted in south Orange County to procure competitively priced preferred resources to meet local reliability needs while ensuring grid stability and resiliency. The Living Pilot will include near-term "managed load" efforts to reduce or eliminate need for conventional generation at Johanna and Santiago substations.

ChargePoint Response

Energy consumed from electric vehicle charging is rapidly increasing and the PEV penetration is increasing every month. The electrical load from electric vehicles in SCE territory is looming on the horizon. The capacity loss from SONGS closure will cause the grid to be unstable and unreliable in SCE territory. The ChargePoint has developed demand response technology to mitigate the impacts of such loads. The technology will include; peak load reduction, time-of-use capability and load management. The ChargePoint technology will provide demand response and time-of-use capability to mitigate the loss of capacity caused by the closure of SONGS.

Managing the charging of EVs based on the cost and availability of power sources benefits both the utility and the end-user. Efficient management of these power sources will be economically beneficial to all parties, which in turn benefits California ratepayers. The main issues addressed by the proposed ChargePoint technology are:

- Peak load reduction and load management
- Integrated energy management
- Forecasting, profiling and prediction of EV load
- Demand pricing, real-time pricing, non-peak pricing and pricing models

ChargePoint will produce a novel system of demand response to mitigate peak loads from plug-in electric vehicle charging. The technology lets customers precisely know where the load is and allows them to actively manage load. The load reduction can be done at an individual customer site or charging stations can be grouped together in a geographic location. With the loss of capacity, this technology and our measured energy savings will become an important tool for local capacity requirements. The technology will provide a greater installed base to aggregate loads for demand curtailment, thereby avoiding the need to run conventional gas fired generation plants.

PEV charging and ChargePoint DR technology can act as a preferred resource to successfully manage load growth to meet reliability needs at Johanna and Santiago substations for the purpose of reducing/eliminating the need for gas fired generation at these locations

ChargePoint's Demand response technology can play a critical role as a resource in Living Pilot planning mix. ChargePoint technology and solution can fill the gap and should included and tested as part of the Living Pilot.