

DOCKETED

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SCE Comments on Demand Forecast

Additional submitted attachment is included below.

August 24, 2017

California Energy Commission
Docket Office, MS-4
Re: Docket No. 17-IEPR-03
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.ca.gov

Re: Southern California Edison Company's Comments on the California Energy Commission Docket No. 17-IEPR-03: Workshop on the California Energy Demand 2018-2028 Preliminary Forecast

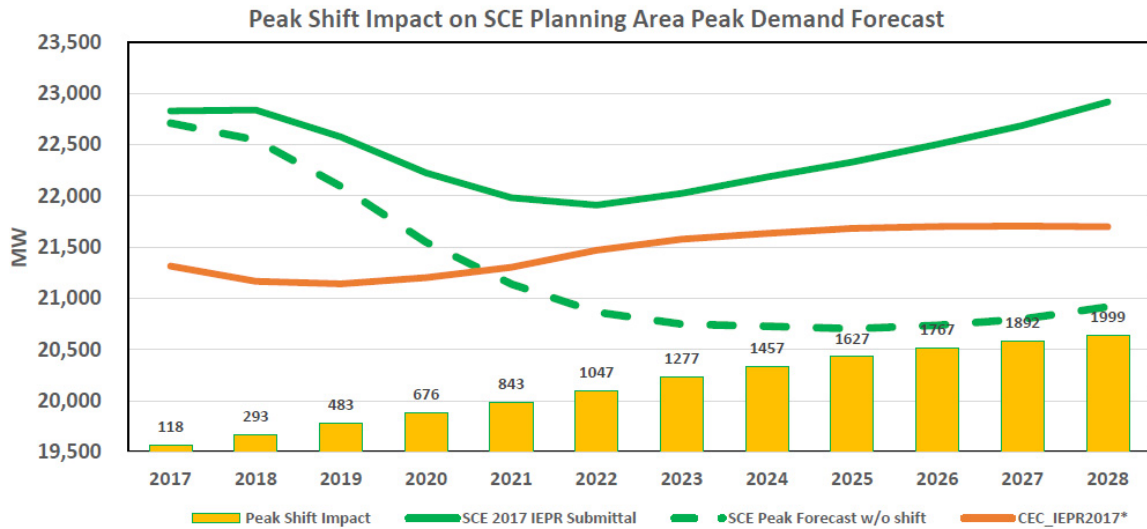
Dear Commissioner Weisenmiller:

On August 3, 2017, the California Energy Commission (Energy Commission) held a workshop to explore a range of perspectives on the future of electricity demand in California over the next 10 years as part of the 2017 Integrated Energy Policy Report (IEPR) ("the Workshop"). Southern California Edison (SCE) participated in the Workshop and presented SCE's 10-year demand forecasts to the Energy Commission and stakeholders. SCE appreciates the opportunity to provide these written comments to reinforce recommendations made during its presentation.

In these comments, SCE expands on some of the key assumptions used in its forecast, including: (1) the impact of the peak hour shift, (2) electric vehicle (EV) load growth and (3) zero net energy (ZNE) building assumptions. SCE believes that the Energy Commission's forecast should consider assumptions which provide a more robust view of the future – one that incorporates the State's long-term policy goals, EV markets, and accounts for the changing load peak. SCE looks forward to working with the Energy Commission staff to share its insights and methodologies in modeling the Demand Forecast.

I. The Final Demand Forecast Should Incorporate Peak Hour Shift Impacts

As discussed during the Workshop, SCE forecasts a significant increase in the impact of the peak hour shift. The impact of the peak hour shift accounts for an approximate 2,000 Megawatt difference between SCE's and the Energy Commission's Demand Forecasts by 2028, as shown in the graph below:

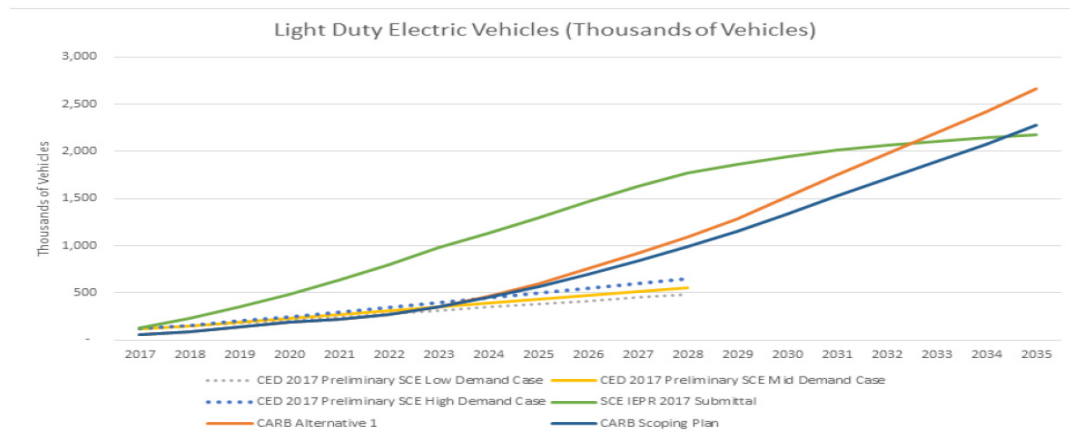


*TN220395_20170726T155040_CED_2017_Preliminary_SCE_Mid_Demand_Case, form 1.5 1-in-2 case

If the Energy Commission incorporates the peak hour shift impact into the final base demand forecast, the differences between the two forecasts would be significantly reduced. SCE looks forward to working with the Energy Commission staff to share its methodology and insights in developing its peak hour forecast, so that it can inform the Energy Commission as it finalizes the IEPR Demand Forecast.

II. The Final Demand Forecast Should Align More Closely with the State’s Long Term EV Goals

Another key difference between SCE’s and the Energy Commission’s Forecasts relates to EV load forecasting. Under SCE’s EV forecast, which reflects rising competitiveness of electric vehicle technology and its impact on customer adoptions in the long term, nearly 1.8 million light duty EVs are projected to contribute to the EV load within SCE’s territory by 2028. Conversely, under the Energy Commission’s preliminary forecast, only 552,000 EVs are forecasted in the Mid-Demand Case by 2028 – a figure that is far below the level reflected by the California Air Resources Board’s (CARB’s) Mobile Source Strategy.



At the Workshop, Chairman Weisenmiller reinforced the importance of adopting a robust forecast. SCE thus recommends that the Energy Commission include the CARB Mobile Source Strategy in its final forecast so that it reflects the policies set by the State of California and the rapid developments in electric vehicle markets globally. SCE is happy to collaborate with Energy Commission staff to share its methodologies for modeling EV load to incorporate state goals.

As previously recommended in SCE's November 24, 2015 and July 5, 2017 IEPR Comments on the Transportation Energy Forecast, SCE strongly recommends that the Energy Commission also consider modeling a high-case scenario that assumes achievement of Governor Brown's long-term state climate goals for 2050, as well as federal air quality requirements under a variety of fuel and technology mixes, including a high electrification case in most market segments. This scenario would potentially bring more alignment between IEPR and future IRP planning.

Aside from the CARB Mobile Source Strategy itself, SCE is optimistic that EV load will increase because many of the key barriers preventing EV penetration are already being addressed, or will soon be addressed. For example:

- Technology costs are decreasing more rapidly than originally anticipated and additional purchase incentives are being made available through programs like the SCE Clean Fuel Reward Program, California Clean Vehicle Rebate Program, and other State and Federal rebates;
- Charging infrastructure continues to lag behind EV growth, but public and private investments are quickly ramping up – this includes SCE's Charge Ready Pilot, which targets over 1,000 charging ports, as well as additional expansion of charging infrastructure in residential and commercial locations through utility programs as per SB 350. Additional investments will also be offered through Volkswagen settlement fund beginning in 2018;
- Manufacturers (e.g., Volvo, Tesla, Chevy Bolt and Honda Clarity) and governments (e.g., Norway, India, France, United Kingdom) are pushing for greater EV product development;
- Funding for education and outreach activities to overcome low consumer awareness

III. Zero Net Energy Reach Codes

As noted by SCE during its presentation at the Workshop, SCE recommends that the Energy Commission expand its ZNE impact consideration to both single- and multi-family homes due to the fact that multi-family unit construction in SCE's service territory has been exceeding single family since 2012¹.

SCE would also note that the City of Santa Monica adopted the first-ever low-rise residential Zero Net Energy reach code in October 2016, which was approved by the CEC in March 2017. SCE collaborated with the city on developing the cost effectiveness framework for the ordinance, and provided targeted training on enforcement for the City's building department. The City of Santa Monica is seeing both low-rise multi-family and single family units being constructed under this reach code. Since the adoption of Santa Monica's ZNE reach

¹ Example: 2015 permit data showed 81% of permits pulled in Los Angeles metro were for multi-family units, and 67% in Orange County metro. Source: CA Department of Finance Construction Permit Data, August 2016.

code, other cities within SCE's service territory have expressed interest in ZNE ordinances, as well as other types of reach codes, including:

- Residential CalGreen Voluntary Tier I and II (15% and 30% better than 2016 T24 respectively)
- Non-Residential CalGreen Voluntary Tier I (10% better than 2016 T24)
- Non-Residential Outdoor Lighting
- Local Solar PV Ordinance
- Plug-in Electric Vehicle Infrastructure

The statewide Reach Code team has also developed a toolkit website (www.localenergycodes.com) that serves as a repository for reach code tools and resources to support Local Governments in adoption of local energy efficiency and renewable energy ordinances.

Key resources available on the site include:

- Reach Code Cost-effectiveness studies
- Ordinance summaries for internal communications
- Model language, and
- Document templates

SCE appreciates the consideration of these comments and looks forward to working with the Energy Commission and stakeholders to help inform the Final Demand Forecast. SCE is happy to assist in coordinating with the Energy Commission to further clarify and resolve differences between SCE's and the Energy Commission's respective forecasts—particularly in terms of the annual peak demand forecast, the EV load forecast, and ZNE assumptions in the solar PV forecast.

SCE appreciates the Energy Commission's consideration of these comments and looks forward to its continuing collaboration with the Energy Commission and stakeholders. Please do not hesitate to contact me at (916) 441-3979 with any questions or concerns you may have. I am available to discuss these matters further at your convenience.

Very truly yours,

/s/

Catherine Hackney