

Docket Optical System - California Energy Commission 1516 Ninth Street

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California Energy Commission 1516 Ninth Street
 Sacramento, CA 95814-5512
 RE: DOCKET NO. 09-IEP-1C -

Public comment to 2009. California Energy Demand 2010-2020, Staff Revised Forecast –
 Second Edition. California Energy Commission. CEC 200 2009 012 SF REV
 By Frank Brandt a private citizen.

This is for presentation to the December 2, 2009 Commission Business Meeting

I am troubled and puzzled as I read this document. Does it provide adequate information that the state utility regulators need? The final paragraph on page 9 informs the reader that CA ISO says the report will be, “helpful” I presume that CA ISO is responsible for any actions to be taken as a result of the document. It is obvious from the data presented that additional electric generating capacity is needed by the state in the future. Are the data accurate enough to make rational decisions?. New generating capacity within or out of state requires several years to construct thus only estimates for time periods at least 5 years from now are useful. IOUs must have accurate estimates if they are responsible for increased generation capacity.. . If the estimates are too low the state will have brown outs. If the estimates are too high the state may be able to export electricity. It is better to have high estimates so the reduced estimates of this report are not warranted. . The ISO should always use the high estimates unless it can be shown that the low estimates are valid. This advice should be in the abstract and executive review.

Making forecasts of any kind for time periods far into the future is an art not science. It looks as if the authors used all the numbers that their calculators displayed even though they were using 2 or 3 digit multipliers. When one multiplies a 6 digit number by a 2 or 3 digit number it is impossible to rely on more than 2 or 3 digit answers.. The tables throughout the document show estimated numbers with up to 8 significant figures. There is no way that a believable estimated number can have this many significant figures. Publishing this kind of data casts doubt on all the forecasts being presented in the document. The data presented to many significant numbers based on actual numbers for past dates can be believed but the estimated data are certainly not good to more than 2 or three digits The report tables should be revised to use believable numbers.

Table 1 which shows estimates strung out to 6 significant figures shows the reader that the estimators have remarkable powers but also make one wonder about wonder about the accuracy of the estimates. .Incidentally this table is not clear on whether the numbers are in gigawatt hours or megawatt hours. The table headings should state, “consumption in gigawatt hours” and “Non-Coincident Peak in Kilowatts” The number 309,561 for the year 2018 would more believable if it were written as 310,000. 69,240 should read 69000. I don’t believe any of the 3 digit growth rates. They should be rounded to 2 digits.

It is troubling to see many graphs with actual data followed by forecast data For example, the actual data curve in Figure 1 shows appreciable up and down values followed by estimated data in a smooth curve.

It is obvious that the forecast data is not reliable. See also figures 21,22,23,24 and many others. The actual data curve in Fig. 31 shows large variations of 1.37 to 2.28 kw for household usage followed by a forecast data curve with essentially no variation and well below the actual peak. This doesn't make sense and as an engineer I don't see any value in that forecast data..

Do the authors really believe that they can forecast the number of electric autos to the nearest unit? Table 8 says there will be exactly 1,500,322 electric cars in.2020 !! Can the authors defend that number?

This report should be summarized to a 5 to 10 page document with believable estimated numbers and only maximum estimates that can be actually used to assure the public that the state will not have brownouts...Low estimates will only cause problems that will cause public suffering.. It is true that the IOUs and not the state will be blamed by the public if there are brownouts but the report estimators should still try to avoid them. All the supporting data and verbiage should be in a separate report also with believable numbers and graphs..