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Docket Number:	18-IRP-01
Project Title:	Integrated Resource Plan
TN #:	228400
Document Title:	TID response to CEC email dated 5-16-19 RE SB 338
Description:	N/A
Filer:	Cory Sobotta
Organization:	Turlock Irrigation District
Submitter Role:	Applicant
Submission Date:	5/28/2019 3:51:11 PM
Docketed Date:	5/28/2019

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: David Vidaver's email dated May 16, 2019

Dear Mr. Vidaver,

Below is our response to your email to me dated May 16, 2019 relating to the requirements of SB 338:

Turlock Irrigation District (TID) is one of the few Publicly Owned Utilities in California that operates a Balancing Authority Area (BAA). Being a Balancing Authority, TID must meet reliability standards such as maintaining an adequate amount of contingency reserves as well as balancing loads and resources within the TID BAA. Also, like other electric utilities, TID has a policy to maintain a minimum amount of planning reserves to ensure reliability. TID's IRP plans to meet the required contingency and planning reserves from existing thermal and hydro resources supplemented by short-term capacity or firm power purchases and forecasted future renewable procurement. In other words, the IRP does not plan for additional resources other than the forecasted need for additional renewable resources in compliance with the RPS.

As mentioned earlier, TID is also responsible for balancing loads and resources within the TID BAA. In calculating the load/resource balance, TID reflected/considered the contribution of energy efficiency (EE) and customer owned distributed energy resources (DER) (during all hours including the peak hours) as a reduction to its load forecast while electric vehicles (EV) were reflected as an addition to load. By 2030, TID estimates that EE represented 5.1% of load, DER 6.6% of load, and EV 1.3% of load. Other resources, including existing renewable resources, are then used to meet the forecasted load net of the contribution of EE, DER, and EV (Net Load).

At TID, customer solar generation generally begins around 8 am when the load is relatively low resulting in a steep decline in Net Load in the late morning to early afternoon period requiring resources that can reduce generation to offset the solar generation increase to maintain system balance and reliability. By mid-afternoon, customer solar generation begins its rapid decline resulting in a steep increase in Net Load in the late afternoon to early evening period requiring resources that can respond quickly to offset the declining solar generation to maintain system balance and reliability. Furthermore, solar generation is intermittent and hard to predict requiring resources that can regulate and respond quickly to

help reduce the operational cost and emissions by reducing and optimizing thermal generation, avoiding/capitalizing on negative wholesale prices and generation curtailment. The ES supplemented our existing dispatchable resources to accommodate the relatively large solar resource absorbing the solar generation during the low load hours and deferring it to the higher load and higher load ramp periods. As mentioned in our IRP, TID has seen projections of the decline in ES costs and will continue considering ES as projected cost declines materialize. In the past we have had discussions with several DR aggregators but no final proposals have been presented to TID. Hence, no DR programs have been assumed in our IRP. TID plans to continue evaluating potential DR programs that could benefit our customers.

In addition to our existing dispatchable and flexible resources, existing renewable resources some of which are baseload, such as small hydro are also relied upon to meet Net Load in the IRP.

Sincerely,



Willie Manuel
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