



JOEL ANDERSON
SUPERVISOR, SECOND DISTRICT
SAN DIEGO COUNTY BOARD OF SUPERVISORS

AGENDA ITEM

COUNTY OF SAN DIEGO

2021 AUG 23 PM 12:08

CLERK OF THE BOARD
OF SUPERVISORS

DATE: August 31, 2021

10

TO: Board of Supervisors

SUBJECT

**FULL VETTING OF THE BENEFITS, POTENTIAL RATE PAYER COST INCREASES
AND LIABILITIES ASSOCIATED WITH COMMUNITY CHOICE AGGREGATION
(DISTRICTS: ALL)**

OVERVIEW

The County of San Diego is considering joining one of the two Community Choice Energy (CCE) programs currently operating in the San Diego region: San Diego Community Power and the Clean Energy Alliance. However, recent events related to the Western Community Energy bankruptcy, combined with unaccounted for cost factors related to long duration energy storage puts the Board of Supervisors in the position of being asked to make a decision based on incomplete information. Further, the County's unincorporated area residents, who are not as affluent on average as coastal residents, face far greater average summer temperatures than those cities already participating in San Diego's two CCEs. And they are also more reliant on electricity for heating. To address these issues, this resolution directs staff to come back with an updated feasibility study that incorporates the unaccounted-for risk and cost factors of joining a CCE and identifies the differences that exist between San Diego County's unincorporated area residents and residents residing in incorporated cities and coastal areas.

To date, the Board and County staff have largely relied upon a detailed feasibility study conducted by EES Consulting, Inc. that was delivered to the Board of Supervisors on August 29, 2019. This study contains useful information, but like many other CCA studies conducted by other jurisdictions, it overlooks a critical cost driver necessary to deliver reliable renewables-based energy. And it does not address the differenced in demographics and energy use profile that exists between resident in cities and coastal areas and San Diego unincorporated area residents.

This overlooked cost driver consists of billions of dollars of long duration energy storage systems (LDES) that will have to be built to meet our energy needs via renewables. Without investing billions of dollars to deploy LDES systems into the grid, meeting 100 percent of our energy needs via renewables such as solar and wind is not possible. A December 2020 study sponsored by Energy Action Fund found that meeting existing 2030 statewide goals for renewables will require an additional 2 to 11 GW of operational long duration energy storage (LDES) and that achieving 100 percent renewable energy for the state will require 45 to 55 GW of LDES. This represents 150

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times the storage currently in operation and 12 times the storage planned to be built or in operation. The updated feasibility study needs to incorporate the impact this unaddressed cost will have on unincorporated area residents.

None of the long-term energy storage costs have been incorporated into San Diego County's feasibility analysis. Without these costs, the study cannot accurately estimate the costs to which unincorporated area resident may be subject. Further, while the feasibility study does give us a matrix of risks, it did not address the risk that resulted in Western Community Energy (Riverside County's CCA) going bankrupt. Neither does it explain why Marin Clean Energy's rates are 7 to 10 percent greater than those of PG&E, despite a similar feasibility study that had project cost saving of 1 to 14 percent versus those of PG&E. The updated feasibility needs to come back with the reasons for the discrepancy between promised saving and actual lack of savings. This will also result in a more complete risk matrix.

The current feasibility study does not take into account the differences in demographics and energy needs of unincorporated area residents and the residents in the San Diego County's two existing CCAs. The updated more complete feasibility study needs to address this data and analysis deficit.

Additionally, the existing feasibility study does not address the risks associated with partnering with a CCE that is dominated by San Diego City or joining a CCE that will be controlled by three coastal cities who regularly work together on other issues. Each of the CCE's governing structures puts San Diego's unincorporated area residents' energy future under the control of jurisdictions whose demographics and energy needs are on average significantly different than those of unincorporated area residents. Regardless of how well intentioned potential CCE partners may be, there is a chance that divergent interests between the more urban residents and more rural residents could result in energy policy that does not treat San Diego County's unincorporated area residents fairly.

More specifically, San Diego County's unincorporated area residents face significantly hotter summers while being more reliant on electricity to provide heating for colder nights and colder winters. The updated feasibility study needs to address this.

Finally, the feasibility study does not provide the Board of Supervisor with any guidance as how to go about extracting the County from a CCA should circumstances dictate doing so.

RECOMMENDATION(S)

SUPERVISOR JOEL ANDERSON

1. Direct the Chief Administrative Officer to go back to EES Consulting, Inc. or another consulting firm to get the feasibility study updated to include:
 - a. Revised cost estimates that incorporate the impact on cost to ratepayer from the investment in long duration storage that will be required over the next two decades to achieve a grid that truly can deliver 100 percent of its energy from renewables.
 - b. An updated risk and benefits analysis in the feasibility study that incorporates the significant demographic and energy need differences of San Diego

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unincorporated area residents from those of San Diego area residents living along the coast and in incorporated areas.

2. Direct the Chief Administrative Officer to have the updated feasibility study compare rates that California's CCEs in business for more than two years are charging, versus the rates of the incumbent public utility.
3. Direct the Chief Administrative Officer to have the updated feasibility include a section on an exit strategy for San Diego County from a CCA should circumstances arise that doing so makes sense for San Diego County's unincorporated area residents.

EQUITY IMPACT STATEMENT

San Diego County's unincorporated area residents rely upon the San Diego County Board of Supervisors to represent them much as residents living in cities rely upon their city council members to represent them. San Diego's unincorporated area includes some of county's most disadvantaged residents living in areas that have lower per capita incomes with much higher average temperatures than San Diego County's more coastal residents. Energy reliability can be a life and death matter for vulnerable residents living in areas of San Diego County that regularly experience life threatening temperatures. Consequently, any policy that has the potential to substantially raise their utility bills and or impact reliability must be carefully and completely analyzed.

FISCAL IMPACT

The cost to incorporate the costs of long-duration energy storage into the existing feasibility study should be significantly less than the original cost. County staff will come back with those cost estimates.

BUSINESS IMPACT STATEMENT

Reliable, affordable energy is critical to ensuring that San Diego businesses can continue to compete and provide jobs. Significant energy cost increases will damage San Diego's economy, leading to job losses.

ADVISORY BOARD STATEMENT

NA

BACKGROUND

Without a large grid-wide investment into long-duration energy storage systems, achieving the goal of 100 percent of energy coming from renewable sources is not possible by 2045, much less 2030. However, once the investment is made, an energy grid based on renewables should provide substantial cost savings over the current fossil fuel reliant grid.

Important Factors to Consider in Move to Renewables

- Renewables are essentially "uncontrollable" supply resources. When the sun isn't shining, solar panels do not produce energy. When the wind isn't blowing, turbines do not produce either. Diminished conditions, including shading, clouds and dust for solar and light breezes

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for wind power all reduce energy production from renewable assets to levels below the installed capacity.

- While Marin Clean Energy's feasibility study predicted saving to its customer of 1 to 14 percent, today Marin Clean Energy is charging its customers 7 to 10 percent more than the local investor-owned utility.
- Installed capacity of 100 MWs of gas-fired power plants produces many times the electricity energy (MWh) of the same 100 MW of solar or wind power resources.
- Fossil plants can and do operate with capacity factors of 80%-90%.
- Solar and wind power plants' average capacity factors are about 20%-25%, primarily because wind and solar energy is not available all the time.
- To produce the same amount of power as generated by a fossil power plant, we need 4-5 times the installed capacity of wind or solar capacity.
- While from a complex grid accounting perspective it is possible to talk about providing customers the option to obtain 100 percent of their energy from renewable sources today, in reality, those same customers are still highly reliant on fossil-fuel based energy generation; i.e. if you rely on the grid, you are still getting much of your energy from non-renewable energy sources.
- Meeting California's SB 100 state mandated goal of 60 percent of energy coming from renewables by 2030 will require a large investment in energy storage systems.
- While it will take billions of dollars in investment into energy storage system to truly meet 100 percent of energy needs via renewables, once such storage systems are in place they have the potential to provide significant year-over-year cost saving (billions) over the current fossil-fuel based system.
- Energy storage and its costs involve far more than batteries. It involves building energy storage systems and integrating them into the grid. Here is a breakout and rough percent of cost per energy systems component:
 - Storage Block - batteries or other storage medium. (29 to 35 percent)
 - Storage Balance of System (7 to 9 percent)
 - Power Equipment (13 to 17 percent)
 - Controls and Communication (about 2 percent)
 - System Integration (8 to 10 percent)
 - Engineering, Procurement and Construction (10 to 15 percent)
 - Project Development (13 to 17 percent)
 - Grid Integration (4 to 5 percent)
- Long duration energy storage cost will have to decrease by 70 to 90 percent to make them economically feasible.

LINKAGE TO THE COUNTY OF SAN DIEGO STRATEGIC PLAN

The Board of Supervisors' authorization to come back with a more complete analysis of the rewards and risks of moving unincorporated area residents to reliance on a CCA is part of the due diligence necessary to ensure that San Diego County maintains its vision of a region that is safe, equitable, healthy, and thriving.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Joel Anderson', with a long horizontal stroke extending to the right.

JOEL ANDERSON
Supervisor, Second District

ATTACHMENT(S)

N/A

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AGENDA ITEM INFORMATION SHEET

REQUIRES FOUR VOTES: ☐ Yes ☒ No

WRITTEN DISCLOSURE PER COUNTY CHARTER SECTION 1000.1 REQUIRED

☐ Yes ☒ No

PREVIOUS RELEVANT BOARD ACTIONS:

April 6, 2021 (#20) - UPDATING COMMUNITY CHOICE ENERGY GUIDING PRINCIPLES
October 15, 2019 (#10) - ADOPT AN ORDINANCE ESTABLISHING A COMMUNITY CHOICE ENERGY PROGRAM AND RECEIVE UPDATE ON FORMING A JOINT POWERS AUTHORITY AND RENEWABLE ENERGY SUPPLY

BOARD POLICIES APPLICABLE:

NA

BOARD POLICY STATEMENTS:

NA

MANDATORY COMPLIANCE:

NA

ORACLE AWARD NUMBER(S) AND CONTRACT AND/OR REQUISITION NUMBER(S):

NA

ORIGINATING DEPARTMENT: Supervisor Joel Anderson, District 2

OTHER CONCURRENCE(S):

CONTACT PERSON(S):

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