



BOARD OF SUPERVISORS
AGENDA LETTER

Agenda Number:

Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Department Name: General Services
Department No.: 063
For Agenda Of: 05/06/2025
Placement: Administrative
Estimated Time: NA
Continued Item: No
If Yes, date from: N/A
Vote Required: Majority

TO: Board of Supervisors
FROM: General Services Kirk Lagerquist, Director (805) 560-1011
Contact Info: John Green, Assistant Director (805) 568-3096
SUBJECT: Alternative Approach to Achieve Zero Net Energy for NBJ Expansion

County Counsel Concurrence

As to form: Yes

Auditor-Controller Concurrence

As to form: N/A

Recommended Actions:

That the Board of Supervisors:

- a) Recommend offsetting the \$14M additional cost required to achieve Zero Net Energy for the Northern Branch Jail 1.5 Housing Unit expansion by using electricity generated from the previously proposed solar Power Purchase Agreement (PPA) project designated for the Northern Branch Jail location; and
- b) Direct staff to add a 300kW battery to the scope of work for the Northern Branch Jail Power Purchase Agreement and allocate 100% of the energy generated from the project to the proposed 1.5 Housing Unit expansion; and
- c) Direct staff to perform an energy audit one year after the 1.5 Housing Unit expansion is in operation to determine if an additional solar Power Purchase Agreement is feasible and cost-effective; and
- d) Determine that the proposed actions are not a “project” as defined by the California Environmental Quality Act (CEQA) Guidelines Section 15378(b) (5), as it is an administrative activity that will not result in direct or indirect changes in the environment.

Summary Text:

This item is on the agenda for the Board of Supervisors to provide directions to staff regarding the Zero Net Energy (ZNE) effort considered for the Northern Branch Jail (NBJ) 1.5 Housing Unit (HU) expansion, approved by the Board on April 1, 2025. Staff recommend foregoing the installation of a new electric utilities plant, 1 MW Solar & 500 kWh Battery Energy Storage System (BESS) to realize a cost savings of \$14M and instead achieve ZNE offset by adding a 300 kWh BESS to the proposed Northern Branch Jail Power Purchase Agreement solar project.

Background:

On March 4th, 2014, the Board of Supervisors passed the County's Zero Net Energy (ZNE) Resolution. This resolution states that the County will begin designing all new facilities as ZNE after 2025 (with a 50% interim target after 2020). Since 2014, General Services has worked to develop a successful ZNE program for new ground-up construction projects. Recent examples include the Regional Fire Communications Center and the new Probation Headquarters building, designed to provide 100% of their energy needs from on-site renewable energy generation. Not only has the ZNE program proven to provide cost savings over the lifetime of equipment, but it also encourages the County to reduce emissions from operations and lower overall facility maintenance costs.

On April 1, 2025, the Board of Supervisors approved a 1.5 Housing Unit (HU) expansion of the NBJ. Part of the recommended actions were to achieve ZNE for the project. Prior to the decision, the design firm (Nacht and Lewis), that has been developing the bridging documents for the expansion project provided a preliminary cost estimate of \$14 million to effectively achieve ZNE for the expansion. This cost estimate considered:

1. \$4 million to build a new all-electric utilities plant to provide electricity to the 1.5 HU expansion.
2. \$10 million to build a 1-megawatt solar photovoltaic array and 500 kWh BESS.

After further discussion with the Nacht and Lewis, staff identified a path forward that achieves ZNE for the 1.5 HU without increasing the overall expansion project cost (avoiding the \$14M estimate presented during the BOS hearing). Below is an explanation of the proposed approach.

Proposed Approach

The concept design for the 1.5 HU includes an all-electric building with heat pumps for space heating, space cooling, and hot water heating systems. Staff determined that a new stand-alone central plant is not necessary for achieving ZNE. Instead, the existing Central Utilities Plant (CUP) can be expanded to provide electricity to the new 1.5 HU expansion. The existing CUP uses electricity from the grid and natural gas boilers for existing NBJ space heating and hot water. However, because the 1.5 HU will be fully electrified, no natural gas from the boilers will be necessary to power the expansion. Staff recommend avoiding the \$4M cost for the stand-alone central plant.

General Services is currently in contract negotiations to develop a 1-megawatt (MW) solar Power Purchase Agreement (PPA) for the existing NBJ facility. Nacht and Lewis original estimates concluded a 1MW solar array would support a 2.0 HU expansion, so the current 1MW solar PPA in design will generate more electricity than is needed to meet the power requirements of the approved 1.5 HU expansion. Staff recommend avoiding the \$10M cost for an additional 1MW solar array and 500kWh

BESS and instead, add a 300kWh BESS to the PPA scope and allocate the electricity generated from the PPA to the 1.5 HU expansion, effectively offsetting additional electricity consumption and achieving ZNE. Proposed plan summarized as follows:

| Original Plan & Previous Direction | For | Cost | | Proposed Plan | For* | Cost |
|------------------------------------|----------|-------|---|---|-------------------|------|
| New Central Utilites Plant | 1.5 HUE | \$4M | ➔ | New 1 MW Solar & 300 kWh BESS | 1.5 HUE/ NBJ main | PPA |
| New 1 MW Solar & 500 kWh BESS | 1.5 HUE | \$10M | | * 1MW Solar & 300 kWh BESS proposed under PPA will completely offset 1.5 HUE, as well as a portion of NBJ Main. When existing CUP approaches end of life, opportunity to replace with all electric for 100% existing NBJ offset | | |
| New 1 MW Solar | NBJ Main | PPA | | | | |

Future Opportunity

The 1.5 HU expansion is being designed with a “solar-ready” roof. This will reduce the cost of developing additional renewable energy infrastructure in the future. When the existing CUP approaches the end of life, Staff will have an opportunity to design an entirely new, all-electric CUP for the entire jail facility. Staff recommend performing an energy audit one year after the 1.5 Housing Unit expansion is in operation to determine if an expansion to the solar PPA is feasible and cost-effective. This decision will put the County in the best position to right-size the renewable energy infrastructure and maximize the financial and environmental benefits.

Fiscal Analysis:

With this action, the original budget for the NB Jail Expansion project will be reduced by \$14M. The PPA does not require upfront costs for development and thus does not require debt-service. Furthermore, debt service estimates provided to the Board at the April 1, 2025, hearing indicated that exclusion of the \$14M ZNE portion of the project could result in savings of \$1M on the annual debt service; in the case of the 1.5 HU option, that means estimated debt service of \$11.4M instead of \$12.4M.

Special Instructions:

NA

Authored by:

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