



COUNTY OF SAN DIEGO

LAND USE AGENDA ITEM

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DATE: April 10, 2024

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TO: Board of Supervisors

SUBJECT

UPDATE ON ENERGY SUPPLY STUDY AND AUTHORIZE SINGLE SOURCE PROCUREMENT WITH THE ALLIANCE FOR SUSTAINABLE ENERGY LLC AND RELATED CEQA EXEMPTION (DISTRICTS: ALL)

OVERVIEW

This Board Letter is a request to authorize the Director, Department of Purchasing and Contracting, to enter into negotiations with the Alliance for Sustainable Energy LLC (Alliance), the contracting authority for the U.S. Department of Energy's National Renewable Energy Laboratory (NREL), for a single source contract to procure Energy Supply Study services and award a contract for a term of one (1) year, with three (3) one-year option periods and up to an additional six (6) months if needed. NREL performs advanced, unbiased research, development, and analysis; has access to expertise and proprietary technology not available in the private sector; and is the preeminent authority in developing energy supply studies.

Led by the Office of Sustainability and Environmental Justice (OSEJ), the Energy Supply Study will analyze existing and potential capacity for residential, commercial, and other infill renewable energy and battery-storage infrastructure throughout the region and per Supervisorial district. It will also analyze how infill renewable energy options might impact factors such as ratepayer costs, grid reliability, resiliency, equity, and the environment. These factors will be considered within the context of the diverse landscapes in the region that include mountain, desert, and coastal ecosystems with communities of varying population densities throughout. It is imperative that decarbonization actions are equitable, therefore the study will assess access to rooftop and infill solar and battery storage for low income, vulnerable, and environmental justice communities impacted disproportionately by climate change.

On May 24, 2023 (09), the San Diego County Board of Supervisors (Board) directed the development of an Energy Supply Study that will expand and add additional local context to the analysis that began with the Regional Decarbonization Framework (RDF) Technical Report. The RDF Technical Report outlines science-based pathways to reach zero carbon emissions by mid-century by addressing the three highest greenhouse gas emitting sectors in the region: on-road transportation, electricity generation, and natural gas use in buildings. The Board also directed that the Energy Supply Study be prepared as a supplemental study to the RDF Technical Report, which was last presented to the Board of Supervisors on August 31, 2022 (5).

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RECOMMENDATION(S)

CHIEF ADMINISTRATIVE OFFICER

1. Find that the proposed actions are not subject to the California Environmental Quality Act (CEQA) because negotiating and awarding a contract to procure an Energy Supply Study is administrative in nature and is not a project as defined in CEQA Guidelines Section 15378(b)(5).
2. In accordance with Board Policy A-87, Competitive Procurement, approve and authorize the Director, Department of Purchasing and Contracting to enter into negotiations with the Alliance for Sustainable Energy LLC and, subject to successful negotiations and a determination of a fair and reasonable price, award a contract for a term of one (1) year, with three (3) one-year option periods and up to an additional six (6) months if needed subject to the availability of funds and a need for services.

EQUITY IMPACT STATEMENT

As the County continues its decarbonization efforts, it is imperative to ensure that actions are equitable. The Energy Supply Study will analyze how rooftop and infill renewable energy options might impact factors such as ratepayer costs, grid reliability, resiliency, equity, and the environment. The study will assess access to rooftop and infill solar and battery storage for low income, vulnerable, and environmental justice communities impacted disproportionately by climate change.

SUSTAINABILITY IMPACT STATEMENT

Today's action supports the County of San Diego Sustainability Goal #3, to transition to a green, carbon-free economy, reduce greenhouse gas emissions, support green job creation and workforce development, and prepare for impacts of a changing climate; and Sustainability Goal #4, to protect the health and wellbeing of everyone in the region, with a focus on collaborating with community partners and advocating for environmental justice for communities that have been disproportionately impacted. This study will build on the research of the Regional Decarbonization Framework Technical Report to analyze the local conditions relating to residential, commercial, and other infill renewable energy generation.

FISCAL IMPACT

Funds for this request are included in the Fiscal Year (FY) 2023-24 Operational Plan in the Land Use and Environment Group Executive Office. If approved, this request will result in costs of \$250,000 for the first year of the contract. The funding source is existing one-time General Purpose Revenue in the Land Use and Environment Executive Office. There will be fiscal impact in subsequent years; if approved, this request will result in an estimated contract costs and revenue of \$875,000 for the 3 option years and 6 months, for a maximum total amount not to exceed \$1,125,000. If approved, future years' funding source will be identified and included in future years Operational Plans for the Land Use and Environment Executive Office. There will be no change in net General Fund cost and no additional staff years. There may be fiscal impacts

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associated with future related recommendations for which staff would return to the Board for consideration and approval.

BUSINESS IMPACT STATEMENT

N/A

ADVISORY BOARD STATEMENT

N/A

BACKGROUND

In an effort to reduce the region's reliance on traditional sources of energy and address climate change, on January 27, 2021 (3), the San Diego County Board of Supervisors (Board) directed the Chief Administrative Officer to develop a framework for a regional zero carbon sustainability plan which includes strategies and initiatives to achieve zero carbon in the region. This resulted in the Regional Decarbonization Framework (RDF), which promotes public and private interests working together to move the entire San Diego region toward zero carbon emissions in transportation, buildings, energy supply, land use, and food systems by mid-century. The RDF helps policymakers work in harmony with community, industry, environmental, business, and labor groups to realize distinct and tangible actions that respond to the specific needs of cities and the unincorporated areas of the county. The foundational three-part publication for the RDF includes:

- Technical Report, a science-based analysis of decarbonization pathways in which the energy supply chapter evaluated nine potential scenarios for renewable energy infrastructure through solar, wind, and geothermal technologies;
- Workforce Development Study titled, *Putting San Diego County on the High Road: Climate Workforce Recommendations for 2030 and 2050*, to address the workforce needs resulting from labor market changes related to decarbonization; and the
- *Let's Get There Playbook*, a guide to action that offers individuals, organizations, communities, and the region strategies to reduce greenhouse gas emissions.

As directed by the Board on May 24, 2023 (09), the Energy Supply Study will expand and add additional local context to the RDF Technical Report, and will include an analysis of current and future renewable energy generation, transmission, distribution, and storage capacity in the San Diego region. The study will also consider resiliency from power outages, economic benefits and costs and other co-impacts, and local community context. As part of the exploration, information will be directly gathered from local residents and organizations to better understand existing related community assets, strengths, and efforts underway. This data can then be evaluated in the context of low-income, vulnerable, and systemically impacted communities to support next-level actions for energy solutions rooted in environmental justice.

After the May Board direction, the Office of Sustainability and Environmental Justice (OSEJ) conducted informational interviews with organizations (such as Building Decarbonization Coalition, Energy & Environmental Economics, Inc. [E3], Gridworks, IDeAs Consulting, Inc., Montara Mountain Energy, New Buildings Institute, Rocky Mountain Institute, and U.S.

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Department of Energy) and jurisdictions with similar explorations underway (such as City of Los Angeles and City and County of San Francisco). This led to a desktop review of recommended publications, including “LA100: The Los Angeles 100% Renewable Energy Study and Equity Strategies” (LA100), which was authored by the U.S. Department of Energy’s (DOE) National Renewable Energy Laboratory (NREL).

LA100 included a similar approach to that envisioned for the County’s Energy Supply Study, and NREL has a global reputation for finding creative answers to today’s energy challenges. As a next step, OSEJ successfully applied for the opportunity to participate in the Department of Energy’s “Clean Energy to Communities (C2C): Expert Match” program, which provides 40-60 hours of no cost direct guidance to local communities to support their energy goals. The C2C Expert Match paired OSEJ with the NREL staff who authored LA100. These NREL staff offered considerations for the County’s Energy Supply Study, as well as technical insights and related reference materials.

This is a request to authorize single source procurement for Energy Supply Study services with Alliance for Sustainable Energy, LLC (Alliance), which is the contracting authority for NREL. NREL performs advanced, unbiased research, development, and analysis; has access to expertise and proprietary technology not available in the private sector; and is the preeminent authority in developing energy supply studies. NREL innovates energy supply research that is informed by models and technologies that it and other DOE laboratories develop. Additionally, as part of DOE, NREL is nonpartisan.

NREL is the only federal laboratory dedicated to the research, development, commercialization, and implementation of renewable energy and energy efficiency technologies. It also advances related science and engineering, and provides knowledge, analysis, and high-performance computing resources to help understand and integrate energy systems at all scales.

Approval of today’s request would provide the County with an Energy Supply Study that is based on the most advanced proprietary modeling software, Distributed Generation Market Demand (dGEN), which forecasts the adoption of distributed solar, wind, and geothermal energy production, paired with storage, by region and sector through 2050. NREL developed the modeling software to simulate consumer decision-making and incorporate detailed spatial data to understand adoption trends in a region. The modeling software also helps identify infrastructure needs for distribution grids to accommodate infill renewable energy installations, the influence of infill renewable energy on retail electricity prices, the impact of an electrifying economy, and the synergy between distributed-scale resources and transmission-scale resources.

In addition to the dGEN modeling software, NREL has its open-source Renewable Energy Potential modeling assessment tool (reV). This tool serves as a powerful instrument for estimating the potential of renewable energy, encompassing capacity and generation metrics, system costs and performance, and profiles for various renewable energy technologies. This tool brings in various data including geographical, built environment (e.g., every building, road, railroad, transmission line, radar tower, and more), natural environment (i.e., topography, hydrography, preserved and conserved lands, species habitat), and regulatory landscape (i.e., existing wind and

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solar ordinances). This versatile and customizable tool allows for more accurate renewable energy capacity and costs estimates.

NREL published almost 2,300 scientific and technical materials in Fiscal Year 2022 alone, and its innovation has resulted in more than 550 patents. NREL, through the Alliance, boasts more than 1,000 active partnership agreements, which include local, state, and federal government entities, as well as private sector entities. A few examples of NREL's government partnerships include:

- City of Orlando, Orlando Utilities Commission: NREL used its dGEN modeling software to understand the potential for customer-owned solar in Orlando to help the city's energy planners more efficiently plan for grid updates.
- Department of Defense, Marine Corps Air Station Miramar (San Diego): NREL worked with the Marine Corps Air Station Miramar in San Diego, California to develop a microgrid that is powered by solar, landfill gas, natural gas, and diesel fuel.
- Los Angeles Department of Water and Power: NREL provided integrated engineering-economic analysis to the Los Angeles Department of Water and Power through the Los Angeles 100% Renewable Energy Study (LA100) and Equity Strategies. The Los Angeles City Council initiated work in 2016, which led to NREL being awarded a single source contract for the study. NREL used both the dGEN and reV modeling for the LA100 study.

NREL also has extensive experience with entities in the San Diego region, such as the Port of San Diego and San Diego International Airport, in addition to the MCAS Miramar project referenced above. Another benefit of working with NREL is that the Energy Supply Study will be able to thread with both past and current NREL publications, as well as leverage nuanced improvements to software due to lessons learned from NREL's previous regional research and development activities.

ENVIRONMENTAL STATEMENT

The proposed action includes negotiation and award of a contract to procure Energy Supply Study services. Therefore, the action is not subject to the California Environmental Quality Act (CEQA) because it is not a "project" as defined in the CEQA Guidelines Section 15378(b)(5) as it is administrative in nature and will not result in direct or indirect physical changes in the environment. No environmental determination is required for this action.

LINKAGE TO THE COUNTY OF SAN DIEGO STRATEGIC PLAN

The Energy Supply Study supports the County of San Diego's 2024-2029 Strategic Plan initiative of Sustainability (Climate, Environment, Resiliency).

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Respectfully submitted,



DAHVIA LYNCH
Interim Deputy Chief Administrative Officer

ATTACHMENT(S)