

RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: MAY 23, 2022

SUBJECT: REQUEST FOR PROPOSAL NO. 2129 – AGREEMENT WITH SUEZ WATER TECHNOLOGIES AND SOLUTIONS SERVICES USA, INC. OF NORFOLK, VIRGINIA TO PROVIDE AS-NEEDED DEMINERALIZED WATER TREATMENT SERVICES AT THE RIVERSIDE ENERGY RESOURCE CENTER AND CLEARWATER POWER PLANT FOR A FIVE-YEAR TERM WITH THREE OPTIONAL ONE-YEAR EXTENSIONS FOR \$6,400,000

ISSUE:

Consider approval of an agreement with Suez Water Technologies and Solutions Services USA, Inc., of Norfolk, Virginia, to provide as-needed demineralized water treatment services at the Riverside Energy Resource Center and Clearwater Power Plant for a five-year term with three optional one-year extensions in the amount of \$800,000 per year and a total of \$6,400,000 for eight years.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Approve an agreement with Suez Water Technologies and Solution Services USA, Inc., of Norfolk, Virginia, to provide as-needed demineralized water treatment services for a five-year term with three optional one-year extensions in the amount of \$800,000 per year and a total of \$6,400,000 for eight years; and
2. Authorize the City Manager, or designee, to execute the Agreement and the optional contract extensions with Suez Water Technologies and Solution Services USA, Inc., including making minor non-substantive changes.

BACKGROUND:

The Riverside Energy Resource Center (RERC) and Clearwater Power Plant consume high quality purified demineralized water which is common practice within the gas turbine industry. It is integral for power augmentation and compliance with air emissions regulations.

RERC is designated as a Zero Liquid Discharge (ZLD) facility that produces 196 megawatts of electricity. ZLD designation prohibits the discharge of waste generated from the plant operation processes. With the ZLD designation, a mobile water treatment system is the only viable option at RERC. RERC utilizes reclaimed water from the adjacent Riverside Regional Water Quality

Control Plant and processes up to 30,000 gallons into ultra-pure demineralized water during each hour of power plant operation. Each mobile treatment system can purify up to 150,000 gallons of reclaimed water before it is exhausted and exchanged for a newly regenerated treatment system. During the summer peak months, RERC's demineralized water usage requires two mobile treatment exchanges per day. Increasing operations due to increasing electricity demands results in a higher usage of demineralized water and may require additional exchanges.



Figure 1 Mobile Demineralizer on RERC Units 3&4

The Clearwater Power Plant is a combined-cycle facility. At Clearwater, the gas turbine produces 20 megawatts of electricity and the exhaust leaving the gas turbine heats demineralized water to produce steam. The steam is then used to generate an additional 8 megawatts. The facility relies on demineralized water for environmental compliance.

Unlike RERC, that uses two mobile treatment systems, the Clearwater water treatment facility is a permanent facility which was originally installed in 2005. The water treatment facility is comprised of several pieces of equipment, components and instruments that are used during multiple stages of water purification. During normal operations, staff operates the water treatment equipment to produce 1,500 gallons of purified water each hour.

Keeping the water treatment equipment at Clearwater in good working order requires periodic maintenance, monitoring and performance assessments. Staff does not have the equipment nor the expertise to perform all the recommended water treatment system maintenance. Acquiring technical assistance to conduct the critical maintenance and performance assessments at Clearwater is recommended.



Figure 2 Water Treatment Facility at Clearwater

DISCUSSION:

The existing agreement for demineralized water treatment services expires on July 1, 2022, and staff initiated a Request for Proposal (RFP) for a new agreement through Riverside's Planet Bids system. RFP No. 2129 posted on September 29 and closed on October 28, 2021. There were 57 prospective vendors notified of the RFP, 21 prospective vendors downloaded the RFP, and one proposal was submitted by Suez Water Technologies and Solutions Services USA, Inc. of Norfolk, Virginia (Suez).

This specialized service was last bid in 2016 under RFP No. 1618 and two proposals were received. Suez provided the most responsive proposal at the lowest price in 2016. Given the complexities of the service needs, the bid results for RFP No. 2129 were anticipated.

RFP No. 2129 Notification Summary

| Action | Number of Vendors |
|------------------------------|-------------------|
| Prospective Vendors Notified | 57 |
| RFP Downloads | 21 |
| Proposals Received | 1 |

RFP No. 2129 Proposals Received

| Vendor | Location | Average Score (100 max) | Amount | Rank |
|--|-------------|----------------------------|---|------|
| Suez Water Technologies and Solutions Services USA, Inc. | Norfolk, VA | 92.17 | \$800,000 per Year \$6,400,000 for 8 Years | 1 |

Staff evaluated and scored the proposal submitted by Suez according to the selection criteria specified in RFP. Staff developed the weighting of the criteria and emphasized experience, approach, methodology, pricing, and qualifications. The overall goal was to select the proposal that reliably meets Riverside's demineralized water requirements and at a competitive price.

- a. Qualifications (25%-25 points)
- b. Pricing (35%-35 points)
- c. Experience, Approach and Methodology (40%-40 points)

After review, staff recommends the proposal submitted by Suez for the following reasons.

1. Suez's proven experience and good performance.
2. Suez's approach adds delivery assurance by providing a stand-by mobile demineralizer system stationed at RERC during the summer peak months at no additional charge.
3. Suez provided favorable pricing for mobile demineralizers and met all the RFP criteria including qualifications.

The mobile demineralizer exchange at RERC is the largest cost for the agreement. Suez provided favorable rates for the next eight years that represent minimal increases over the prices from the prior agreement. The proposed fixed rate for a mobile demineralizer exchange is \$5,508 which is only \$100 higher than the rates from 2016. Subsequent increases have an incremental fixed structure and prices are reasonable compared to industry standards. Clearwater's monthly fixed rate for the next three years only increased by \$200/month compared to the price in 2016. After negotiations, staff added critical maintenance services to the existing scope while keeping the same price. The following table provides the detail for the proposed rates for the services and

equipment Suez will provide for RERC and Clearwater.

| | 2022, 2023, & 2024 (BEGINNING OF CONTRACT YEAR) | 2025 & 2026 (BEGINNING OF CONTRACT YEAR) | 2027, 2028, & 2029 (BEGINNING OF CONTRACT YEAR) |
|---|---|---|---|
| Proposed Rates - RERC | | | |
| Mobile Demineralizer Exchange Rate | \$5,508.00 | 2024+CPI-U* | 2027+CPI-U |
| | +Caustic Surcharge** | | |
| MBP Exchange Rate | \$594.00 | 2024+CPI-U | 2027+CPI-U |
| Carbon Filter Exchange Rate | \$1,106.48 | 2024+CPI-U | 2027+CPI-U |
| Other Costs | | | |
| Field Service Rate | \$107.34 | 2024+CPI-U | 2027+CPI-U |
| Klaraid 1172 Coagulant (up to 12) | Included | Included | Included |
| Demurrage Charge | \$255.00 | 2024+CPI-U | 2027+CPI-U |
| Proposed Rates - Clearwater | | | |
| Monthly Charge (4 weekly visits) | \$1,941.18 | 2024+CPI-U | 2027+CPI-U |
| MBP Exchange Rate | \$594.00 | 2024+CPI-U | 2027+CPI-U |
| Others Costs-Clearwater | | | |
| Additional RO membrane cleaning | \$134.74 | 2024+CPI-U | 2027+CPI-U |
| Additional EDI Cleaning*** and Additional Resin Testing | Included | Included | Included |
| Replacement RO Pre-filter Cartridge | \$14.00 | 2024+CPI-U | 2027+CPI-U |
| Replacement RO Membranes Parts and Labor | \$668.00 | 2024+CPI-U | 2027+CPI-U |
| Loaner Membranes | \$80.00 | 2024+CPI-U | 2027+CPI-U |
| Demin water truck**** | \$825.00 | 2024+CPI-U | 2027+CPI-U |
| Mobil Demineralizer Exchange Rate | \$5,508.00 | 2024+CPI-U | 2027+CPI-U |
| | +Surcharge | | |
| Field Service Rate | \$107.34 | 2024+CPI-U | 2027+CPI-U |
| <i>Partially used DI trailers for onsite recirculation of RW tank</i> | \$21/kgal | \$21/kgal | \$22/kgal |

*CPI-U: Consumer Price Index for All Urban Consumers as defined in Section 11 - Price Modification of Priority Services Agreement. Historical CPI-U provided

**For Caustic Surcharges Calculations, please see Appendix H of SUEZ proposal, historical caustic surcharges provided

***For additional clarifications on pricing, please see Section 6 of SUEZ proposal

****One (1) Acid cleaning per year included. Site CIP system to be used and site to dispose of waste post neutralization. Any additional cleanings needed will be billed at cost +25%

The Purchasing Manager concurs that the recommended actions are in compliance with Purchasing Resolution No. 23812.

Demineralized water usage is directly proportional to operations of the power plants; thus, costs will vary year to year based on how much or how little the power plants are operational. The operating and maintenance budget for this service is planned for \$800,000 per year with only actual costs incurred. At the end of each fiscal year, staff review the water treatment requirements and seek approval from the Board of Public Utilities through the Fiscal Year Annual Purchase Order process.

STRATEGIC PLAN ALIGNMENT:

This item contributes to the following strategic priorities and goals from the Envision Riverside 2025 Strategic Plan:

Strategic Priority 4 - Environmental Stewardship

Goal 4.2 - Sustainably manage local water resources to maximize reliability and advance water reuse to ensure safe, reliable, and affordable water to our community.

Goal 4.3 - Implement local and support regional proactive policies and inclusive decision-making processes to deliver environmental justice and ensure that all residents breathe healthy and clean air with the goal of having zero days of unhealthy air quality per the South Coast Air Quality District's Air Quality Index (AQI).

Strategic Priority 5 - High Performing Government

Goal 5.4 - Achieve and maintain financial health by addressing gaps between revenues and expenditures and aligning resources with strategic priorities to yield the greatest impact.

Strategic Priority 6 - Infrastructure, Mobility & Connectivity

Goal 6.2. Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

The item aligns with each of the five cross-cutting threads as follows:

1. **Community Trust** – Ensuring that Riverside's power plants comply with all environmental regulations and provide electricity to the entire City demonstrates a commitment to environmental stewardship and serves the greater public good.
2. **Equity** – This item ensures that RPU's power plants can safely and effectively operate and provide reliable electricity benefitting the entire City and all customers.
3. **Fiscal Responsibility** – Maintaining the RERC and Clearwater plants in good working order supports fair and equitable electricity rates for customers. Staff was able to negotiate competitive pricing for equipment and services and was able to add critical maintenance services to the existing scope while keeping the same price.
4. **Innovation** – The water treatment processes used at RERC, and Clearwater are consistent with industry best practices. Both systems perform well and consistently deliver high quality water.
5. **Sustainability & Resiliency** – RERC utilizes a large volume of reclaimed water which is a sustainable source that supports the overall goal for reclaimed water usage. Demineralized water is essential to meeting stringent air emission regulations. This agreement ensures the supply of demineralized water for the next eight years and supports the goal for environmental stewardship and highly reliable power plant operations.

FISCAL IMPACT:

The total fiscal impact for the initial contract term of five years plus three optional one-year extensions is \$6,400,000. The total fiscal impact for Fiscal Year 2022/23 and Fiscal Year 2023/24 is \$800,000 per year. Upon approval of the proposed Fiscal Years 2022/23 – 2023/24 budget, sufficient funds will be available in the RERC Maintenance Generating Plants Account No. 6120130-424131 and Clearwater Maintenance Generating Plants Account No 6120140-424131.

Subsequent years' costs will be included in future budgets for approval.

Prepared by: Daniel E. Garcia, Utilities Deputy General Manager/Power Resources
Approved by: Todd M. Corbin, Utilities General Manager
Approved by: Kris Martinez, Assistant City Manager
Approved as to form: Phaedra A. Norton, City Attorney

Certifies availability
of funds: Edward Enriquez, Interim Assistant City Manager/Chief Financial Officer/
Treasurer

Attachments:

1. Suez Agreement
2. Bid Award Recommendation
3. Presentation