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7 **BEFORE THE GUAM PUBLIC UTILITIES COMMISSION**

9 IN THE MATTER OF:) **GWA DOCKET NO. 25-02**
10)
11 **THE GUAM WATERWORKS)**
12 **AUTHORITY'S REQUEST TO)**
13 **ISSUE PROCUREMENTS)** **PETITION FOR GWA TO PROCURE**
14 **(SCADA) SYSTEM PHASES 1 AND 2)** **DESIGN-BUILD FOR SUPERVISORY**
15 **CONTROL AND DATA ACQUISITION**
16 **(SCADA) SYSTEM PHASES 1 AND 2**

13 **COMES NOW**, the GUAM WATERWORKS AUTHORITY (“GWA”), by and through
14 its counsel of record, THERESA G. ROJAS, ESQ., and hereby files its Petition seeking PUC’s
15 approval to issue a competitive procurement to solicit design-build for its SCADA System Phases
16 1 and 2. This project will be implemented in four (4) nonsequential Phases: Phase One (1)
17 involves the construction of the SCADA Control Center including all necessary appurtenances;
18 Phase Two (2) is the integration of locations with existing site-level local SCADA systems into
19 the SCADA Control Center which may include major upgrades for systems that have reached end
20 of service life; Phase Three (3) will encompass the assessment, design, and construction at potable
21 water facilities to install SCADA equipment and integrate each facility to the SCADA Control
22 Center; and Phase Four (4) involve the assessment, design, and construction at wastewater
23 facilities to install SCADA equipment and integrate each facility to the SCADA Control Center.
24 GWA seeks to solicit bid proposals for the Design Build of GWA SCADA System Phases 1 and
25 2 as funding becomes available and plans to return to the PUC for approval of additional scope
26 and Phases 3 and 4 if needed.
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I. BACKGROUND

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2 A SCADA system is a combination of hardware and software that enables real-time
3 monitoring and control of industrial processes, such as those used in water production and
4 distribution, wastewater collection, and treatment. SCADA systems gather data from sensors and
5 instruments located at remote sites, process this data, and provide operators with the ability to
6 monitor and control equipment from a central location. This project involves creating a GWA
7 SCADA Control Center that will bring together all existing local SCADA systems from different
8 GWA facilities. The SCADA Control Center will consist of the following components:

- 9
10 1. A secure and modern SCADA control room for GWA, with dedicated areas for SCADA
11 development workstations and the current dispatch office.
- 12
13 2. Evaluation of all current GWA sites with local SCADA systems, addressing any issues
14 and establishing connections between these sites and the SCADA Control Center for
15 ongoing system monitoring and data collection.
- 16
17 3. Providing ongoing support to develop and integrate new facilities, optimize, calibrate,
18 maintain, and train GWA on all aspects of the SCADA system for an initial period of
19 three years, with the option to extend for two additional one-year periods.

20 GWA recognizes the numerous benefits that a SCADA system can provide for the
21 operation of the water and wastewater system, including improvement to operational efficiency
22 and cost savings, reliability and resilience, and regulatory compliance.

23
24 Currently, GWA does not have a central station that serves to interconnect all of the
25 remote sites for centralized data gathering, historian, and analysis. As a result, the utility operates
26 a diverse array of SCADA hardware and software solutions that are localized at some facilities
27 while the majority of the remote sites lack SCADA equipment. Managing these disparate systems
28

1 with five (5) different brands of SCADA systems across multiple facilities has become
2 increasingly unsustainable in terms of maintenance, training, and spare parts management.

3 GWA has identified a total of roughly 420 remote locations consisting of water wells,
4 springs, reservoirs, water booster pump stations, pressure regulating valves, master meters,
5 surface water treatment plants, sewage pump stations and wastewater treatment plants, where the
6 exact quantity will continue to change slightly as GWA continues to execute capital improvement
7 projects to improve and expand water and wastewater services.
8

9
10 In May 2023, GWA faced the effects of Typhoon Mawar, underscoring the need for
11 continued investment in a reliable island-wide SCADA System. This investment would enable
12 better management and monitoring of emergency events. Post-typhoon, FEMA-appointed
13 SCADA expert consultants recommended that GWA standardize its SCADA system hardware
14 and software across its facilities. This standardization would lead to better management of cost
15 and efficiency in maintenance and operation. GWA can optimize training and enhance staff
16 expertise, simplify software licensing and reduce development costs, maximize synergistic
17 features in equipment products, and reduce cybersecurity threats.
18

19 **II. REQUEST FOR APPROVAL**

20 GWA now desires to solicit bid proposals for the Design-Build of its SCADA system
21 Phases 1 and 2 as funding becomes available. The recommended Scope of Work includes
22 remodeling the GWA System Control Center to include SCADA Control Center, a central
23 SCADA master server assessment and integration of remote sites that have site level local
24 SCADA systems and providing all remedies necessary for successful integration including
25 complete replacement of aged systems beyond their useful life and service contract for
26 maintenance, training, and development for 3 years with two 1-year optional renewals.
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1 In support of this Petition, the CCU approved GWA Resolution 28-FY2024 to solicit the
2 aforementioned services necessary for this project. This resolution is attached as Exhibit A and
3 are incorporated by reference as if fully set forth herein.

4 **III. CONCLUSION**

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6 Based on the foregoing, GWA respectfully requests the PUC approve and
7 authorize GWA Management to issue a competitive procurement to solicit design-build from
8 experienced and qualified companies from GWA Bond funds and USEPA Grants as it is
9 necessary to improve operations and customer service.
10

11 **RESPECTFULLY SUBMITTED** this 4th day of October 2024.
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15 By: _____ /s/_____
16 **THERESA G. ROJAS**
17 GWA General Counsel
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GWA RESOLUTION NO. 28-FY2024

**RELATIVE TO REQUEST FOR APPROVAL TO PROCURE THE DESIGN-BUILD OF
GUAM WATERWORKS AUTHORITY SCADA SYSTEM**

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities (“CCU”) has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority (“GWA”); and

WHEREAS, the Guam Waterworks Authority (“GWA”) is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, a SCADA System is a combination of hardware and software that enables real-time monitoring and control of industrial processes, such as those used in water production and distribution, wastewater collection and treatment. SCADA systems gather data from sensors and instruments located at remote sites, process this data, and provide operators with the ability to monitor and control equipment from a central location; and

WHEREAS, the GWA recognizes the numerous benefits that a SCADA system can provide for the operation of the water and wastewater systems including improvement to:

- 1) Operational efficiency and cost savings by providing automated real-time data collection enabling operators to make better informed decisions,
- 2) Reliability and resilience by providing continuous monitoring enabling operators to detect system anomalies before they escalate into major problems,
- 3) Regulatory compliance by provided timely data for reporting purposes as well as continuous monitoring and recording ensuring adherence to health and safety standards and environmental standards; and

WHEREAS, currently GWA operates a diverse array of SCADA hardware and software solutions that are localized in the site level at some facilities, while majority of the remote sites

1 do not have SCADA equipment at all; and GWA currently does not a central station that
2 connects to all of the remote sites for centralized data gathering, historian, and analysis; and
3

4 **WHEREAS**, managing these disparate systems with five (5) different brands of SCADA
5 systems across multiple facilities has become increasingly unsustainable in terms of
6 maintenance, training, and spare parts management; and
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8 **WHEREAS**, the impact of Typhoon Mawar in May 2023 further highlighted GWA's
9 need for continued investment in implementing a reliable island-wide SCADA System to better
10 manage and monitor the response and recovery of emergency events; and
11

12 **WHEREAS**, in the aftermath of Typhoon Mawar, SCADA expert consultants appointed
13 by FEMA, recommended for GWA to standardize its SCADA system hardware and software to
14 better manage the cost and efficiency in maintenance and operation; by standardizing across
15 GWA facilities, GWA can:

- 16 1) Optimize training and enhance staff expertise by having more focused and deeper
17 knowledge,
- 18 2) Simplify software licensing and reducing cost on development environment,
- 19 3) Ensure synergistic features in an equipment product family are fully leveraged,
- 20 4) Mitigate cybersecurity threats by reducing threat vectors; and
21

22 **WHEREAS**, the GWA has identified a total of roughly 420 remote locations consisting
23 of water wells, springs, reservoirs, water booster pump stations, pressure regulating valves,
24 master meters, surface water treatment plants, sewage pump stations and wastewater treatment
25 plants, where the exact quantity will continue to change slightly as GWA continues to execute
26 capital improvement projects to improve and expand water and wastewater services; and
27

28 **WHEREAS**, GWA management plans to implement a system wide SCADA system in 4
29 nonsequential phases, where

- 30 • Phase 1 involves the construction of the SCADA Control Center including all
31 necessary appurtenances,

- 1 • Phase 2 involves the integration of locations with existing site level local SCADA
- 2 systems to the SCADA Control Center which may include major upgrades for
- 3 systems that has reached end of service life,
- 4 • Phase 3 involves the assessment, design, and construction at potable water
- 5 facilities to install SCADA equipment and integrate each facility to the SCADA
- 6 Control Center,
- 7 • Phase 4 involves the assessment, design, and construction at wastewater facilities
- 8 to install SCADA equipment and integrate each facility to the SCADA Control
- 9 Center; and

10
11 **WHEREAS**, GWA management seeks to solicit bid proposals for the Design Build of
12 GWA SCADA System Phases 1 and 2 as funding becomes available, GWA management will
13 return to the CCU for approval of additional scope and Phases 3 and 4; and

14
15 **WHEREAS**, the recommended Scope of Work includes remodeling of the GWA System
16 Control Center to include a secured SCADA Control Center, a central SCADA master server,
17 assessment and integration of remote sites that have site level local SCADA systems and provide
18 all remedy necessary for successful integration including complete replacement of aged systems
19 beyond their useful life, and service contract for maintenance, training and development for 3
20 years with two 1-year optional renewals; and

21
22 **WHEREAS**, GWA management is actively exploring additional funding options, such as
23 grants, with intent to expand the scope of this project to include all facilities and complete the
24 SCADA system implementation, and will seek additional CCU approval when necessary, should
25 additional funding become available; and

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27 **WHEREAS**, GWA management seeks CCU approval to issue a competitive
28 procurement to solicit design-build bids from experienced and qualified companies; and

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1 **WHEREAS**, GWA management seeks CCU approval to fund this project in the amount
2 of Four Million Eight Hundred Fifty-Three Thousand Eight Hundred Fifty-Five Dollars
3 (\$4,853,855.00) from GWA Bond funds and USEPA Grants; and
4

5 **WHEREAS**, the Public Utilities Commission (PUC) contract protocol requires GWA to
6 obtain approval prior to advertising procurement for projects with an anticipated value of One
7 Million Dollars (\$1,000,000.00) or greater; and
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9 **WHEREAS**, the CCU must approve all petitions that will be submitted to the PUC and
10 GWA management further seeks CCU approval to submit a petition to the PUC for approval;
11 and
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13 **NOW BE IT THEREFORE RESOLVED**; the Consolidated Commission on Utilities
14 does hereby approve the following:

- 15 1. The recitals set forth above hereby constitute the findings of the CCU.
- 16 2. The CCU finds that solicitation of bids for Design Build of GWA SCADA
17 System Phases 1 and 2 is necessary to improve operations and customer
18 service.
- 19 3. The CCU hereby authorizes the amount of Four Million Eight Hundred Fifty-
20 Three Thousand Eight Hundred Fifty-Five Dollars (\$4,853,855.00) from
21 GWA Bond funds and USEPA Grants for the Design Build of GWA SCADA
22 System Phases 1 and 2.
- 23 4. The CCU hereby further authorizes the management of GWA to fund Design
24 Build of GWA SCADA System Phases 1 and 2 project with GWA funds
25 applicable to the project and other funding sources such as federal and local
26 grants.
- 27 5. The CCU hereby further authorizes GWA management to submit a petition to
28 the PUC for the procurement of Design Build of GWA SCADA System
29 Phases 1 and 2.
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