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9 **BEFORE THE GUAM PUBLIC UTILITIES COMMISSION**

10 IN THE MATTER OF:

11 **GWA DOCKET NO. 25-11**

12 **THE GUAM WATERWORKS
13 AUTHORITY'S ISSUANCE OF A
14 COMPETITIVE DESIGN PROPOSAL
15 FOR DEEP WELL ELECTRICAL
16 UPGRADES**

17 **PETITION FOR GWA TO PROCURE
18 DESIGN SERVICES FOR DEEP WELL
19 VFD AND ELECTRICAL UPGRADES**

20 **COMES NOW**, the GUAM WATERWORKS AUTHORITY ("GWA"), by and through
21 its counsel of record, THERESA G. ROJAS, ESQ., and hereby files its petition seeking PUC
22 approval to issue a Request for Proposal ("RFP") to procure engineering design services for Deep
23 Well Variable Frequency Drives ("VFD") and electrical upgrades.

24 **BACKGROUND**

25 The Guam Waterworks Authority plays a crucial role in providing potable water to the
26 residents of Guam, operating a network of 120 deep wells to meet the community's water needs.
27 In adherence to the Guam Primary Safe Drinking Water Requirements, GWA is required to
28 ensure that water quality is rigorously monitored and that all GWA wells operate at optimum
levels.

GWA Docket 25-11

PUC Review: Petition for GWA to Procure Design Services for Deep Well VFD and Electrical Upgrades

Recent challenges, such as recurring pump and motor failures, power fluctuations, and rising chloride levels have prompted GWA to reconsider how its wells are monitored and adjusted to enhance overall service.

One potential solution is the use of Variable Frequency Drives (VFDs), which are known to regulate pump speed on demand, maintain consistent pressure, and gradually start and stop motors. This helps reduce stress from electrical surges, potentially leading to significant cost savings by extending the lifespan of pumps and motors and reducing labor costs associated with replacements.

To address these challenges, GWA is seeking professional design services to implement enhanced electrical monitoring systems at the affected wells. The goal is to ensure GWA's ability to quickly monitor and adjust production flow rates as needed, as well as to upgrade electrical control panels and related control systems to improve overall operational efficiency at the wells and throughout GWA's water production system.

REQUEST FOR APPROVAL

GWA is seeking to procure professional engineering design services, with the total contract cost anticipated to exceed \$1M dollars (\$1,000,000). This initiative will focus on resolving monitoring, adjustment, and power-related issues that impact well operations.

Specifically, the scope will include the design and integration of solutions such as Variable Frequency Drives (VFDs) to allow for adjustable production flow rates, energy storage systems to manage short-term power interruptions, and three-phase power balancing equipment to stabilize and optimize energy supply for pumping systems. Through these improvements, GWA aims to enhance operational resilience, reduce equipment failure, and improve overall service reliability.

GWA Docket 25-11

PUC Review: Petition for GWA to Procure Design Services for Deep Well VFD and Electrical Upgrades

1 In accordance with the PUC's contract review protocol, GWA must secure approval
2 before proceeding with the procurement process for projects valued at One Million Dollars
3 (\$1,000,000) or more. This request seeks the necessary approval from the PUC to solicit
4 proposals from experienced and qualified design engineers in ensuring GWA's continued
5 commitment to enhance and improve its ability to operate its wells safely, reliably, and cost-
6 effectively. Funding for the procured services will come from bonds funds.
7

8 In support of this Petition, the CCU has approved GWA's request to procure design
9 services for Deep Well VFD and electrical upgrades by its adoption of CCU GWA Resolution
10 39-FY2025. This Resolution and its supporting exhibits are attached as **Exhibit A** and are
11 incorporated by reference as if fully set forth herein.
12

13 CONCLUSION

14 Based on the foregoing, GWA requests the PUC approve and authorize GWA to procure
15 design services for Deep Well VFD and electrical upgrades as it is reasonable, prudent, and
16 necessary. Once the proposals have been received and evaluated, GWA will return to the PUC
17 for a second approval on the proposed contract and the amounts to be awarded.
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20 **RESPECTFULLY SUBMITTED** this 5th day of September 2025.
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22
23 By: _____/s/
24 **THERESA G. ROJAS**
25 GWA Legal Counsel
26



CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 39-FY2025

**RELATIVE TO APPROVAL OF
DESIGN SERVICES PROCUREMENT FOR
DEEP WELL VFD AND ELECTRICAL UPGRADES**

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, the GWA operates 120 Deep Wells for potable water production; and

WHEREAS, during the first 7 months of this fiscal year, GWA documented over \$519,000 worth of pumps and motors being issued from inventory for corrective maintenance at various wells that have suffered pump and motor failures, similarly GWA documented over \$970,000 for FY2024 and over \$1,100,000 for FY2023; and

WHEREAS, in addition to these documented costs, impacts from such pump & motor failures also include material cost of other appurtenances, labor cost, opportunity cost, and loss of customer satisfaction and trust in the water service, which can be difficult to quantify; and

WHEREAS, in compliance with the Guam Primary Safe Drinking Water Requirements, the GWA Laboratory continues to collect and test water samples from all GWA potable water production facilities; and

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1 **WHEREAS**, a number of wells are experiencing chloride levels that are trending higher,
2 which is a signal for saltwater intrusion, and a possible mitigation is to lower the production flow
3 rate at the affected wells; and
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5 **WHEREAS**, the GWA is committed to protecting Guam's precious aquifer and to
6 providing excellent water services, which includes delivery clear and great tasting water to the
7 tap; and
8

9 **WHEREAS**, GWA Management believes the best course of action is to solicit for
10 professional engineering design services to address the aforementioned concerns by exploring
11 options to mitigate power anomalies and equip the wells with the ability to adjust production
12 flow rate, which may include the use of Variable Frequency Drives allowing for variable speed
13 operation for the well pumps, energy storage devices (such as batteries, inductors, and/or
14 capacitors) to ride-through momentary power outages or brownouts, and/or three-phase power
15 balancing equipment to ensure optimal power supply for the well pumping equipment; and
16

17 **WHEREAS**, GWA Management believes that now is the appropriate time to proactively
18 plan and implement measures to mitigate these risks before they evolve into significant obstacles
19 that could hinder GWA's ability to fulfill its mission of delivering excellent water and
20 wastewater services in a safe, reliable, responsible, and cost-effective manner; and
21

22 **WHEREAS**, the GWA anticipates this professional engineering design service will cost
23 more than One Million Dollars (\$1,000,000); and
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25 **WHEREAS**, the Public Utilities Commission (PUC) contract protocol requires GWA to
26 obtain approval prior to advertising procurement for projects with an anticipated value of One
27 Million Dollars (\$1,000,000) or greater; and
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29 **WHEREAS**, the CCU must approve all petitions that will be submitted to the PUC; and
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31 //

1 **WHEREAS**, GWA Management seeks CCU's approval to submit a petition to the PUC
2 for the approval of the advertising for procuring design services for this project.

3
4 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities
5 does hereby approve the following:

- 6 1. The recitals set forth above hereby constitute the findings of the CCU.
7 2. The CCU finds that the advertisement to solicit Professional Engineering
8 Design Services for Deep Well VFD and Electrical Upgrade is necessary to
9 ensure the water system's resilience and to maintain excellent water services
10 to the public.
11 3. The CCU hereby authorizes the management of GWA to submit a petition to
12 the PUC for the procurement of professional engineering design services for
13 the Deep Well VFD and Electrical Upgrade project.

14
15 **RESOLVED**, that the Chairman certified, and the Board Secretary attests to the adoption
16 of this Resolution.

17
18 **DULY AND REGULARLY ADOPTED**, this 27th day of May, 2025.

19
20 Certified by:

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23 **FRANCIS E. SANTOS**

24 Chairperson

20 Attested by:

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23 **MELVIN F. DUENAS**

24 Secretary

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The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

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