AU AIP WATER INVESTMENT SUMMIT: PROJECT SHOWCASE

PROGRAMME/ PROJECT OVERVIEW	
Project name	Enhancing Energy Efficiency in Water Utilities through Targeted Audits and Technology Upgrades
Location (Country, Region, Coordinates)	Ghana – Ashanti Region (Mampong) and Central Region (Bonsa) Coordinates: Mampong (7.0630° N, 1.4018° W), Bonsa (5.18333° N, 2.05° W)
Involved countries (if regional)	Single-country project – Ghana
Sub-Sector (Water Supply)	Water Supply and Energy Efficiency in Water Utilities
Project description (Goals and expected outcomes)	This project aims to enhance energy efficiency in Ghana Water Ltd by implementing audit-driven upgrades, including VSD installations and pump replacements in Mampong and Bonsa. It targets a 25–30% reduction in energy use per m³, improved system reliability, and longer equipment lifespan.
Technological details/ innovation	Implementation of ISO 5002 Type III energy audits, VFDs for efficient pump control, smart leak detection systems, and optimized operation at 47Hz to prevent motor damage. Conventional starters are being phased out in favor of VSDs for improved performance.
Governance improvements / innovation	Audit findings integrated into GWL's asset management, with baseline energy KPIs and annual monitoring. Strengthened maintenance planning and PPPs support funding and implementation. Ask ChatGPT
IMPLEMENTATION & KEY PLAYERS	
Lead institution	Ghana Water Ltd.
Implementing agent(s)	Ghana Water Ltd.
Sponsors / Investors / Contractors / Advisors	WaterWorx, VEI (Vitens Evides International), African, IRC, Development Bank (AfDB), GIZ (German Development Cooperation)
PROJECT TIMELINE & DEVELOPMENT STAGE	
Year of preparation, estimated start & end dates	Year of Prepation:2025, Estimated Start Date: Mar-2026, Estimated End Date: Feb-2027
Current development stage	Project Identification and Conceptualization
PROJECT RATIONALE & STRATEGIC IMPORTANCE	
Alignment with national/regional plans, SDGs, Agenda 2063	Contributes to Ghana's National Water Policy and Energy Efficiency Strategy Supports SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), and SDG 13 (Climate Action) Aligns with Agenda 2063 Aspiration 1 (A prosperous Africa based on inclusive growth and sustainable development)
Contribution to NDC's and alignment with NAPs / Adaptation and Mitigation measures	Supports energy mitigation targets under Ghana's updated Nationally Determined Contributions (NDCs) Encourages climate-resilient water infrastructure Reduces GHG emissions via reduced fossil-fuel-based pumping energy use
Paradigm shift potential (scalability, replicability, policy or behaviour change)	Easily scalable to other GWL systems nationwide Model is replicable in similar utilities across West Africa Demonstrates how ISO energy audits can guide utility-level operational efficiency Encourages evidence-based policy improvements and tariff restructuring
FINANCIAL & INVESTMENT DETAILS	
Total project cost, currency	Estimated GHS 45 million (approx. USD 3.5 million)
Funding already raised (amount & sources)	Initial technical assistance and audit support by WaterWorx, VEI (In-kind + technical value est. USD 150,000) & IRC
Proposed revenue model	OPEX savings through reduced energy use and extended equipment life Performance-based tariffs and reinvestment of energy savings Donor support on Green Initiatives

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Financial metrics (IRR, Payback Period, DSCR, NPV) available? Y/N, date	Preliminary IRR and payback analysis underway, results expected Q4 2025
Economic performance (Benefit-Cost Ratio) Y/N, date	Preliminary BCR of 2.8 based on Mampong energy savings case
INVESTMENT ASK & WAY FORWARD	
Remaining investment required: project component & type (Loan/Equity/Grant/Guarantee/insurance)	USD 3.35 million required Preferred type: Blended finance (Grants and Concessional Loans) a) USD 2 million (Capex upgrades – Pumps, VFDs, SCADA systems) b) USD 1 million (Technical training, audits, baseline setting) c) USD 0.35 million (Monitoring, community engagement, ESG compliance)
Opportunity for bundling with other projects (Y/N, date)	Potential bundling with AfDB's Water Utility Efficiency Program (WUEP); assessment underway, Q4 2025
Next steps	Detailed design and feasibility study (Q4 2025) Financing roadmap and investor roundtable (Q1 2026) Pilot implementation (Q2 2026 – Q1 2027)
TARGET GROUPS & SOCIAL IMPACT	
Direct beneficiary population per project component	Mampong & Bonsa combined population: approx. 150,000Majority low-income and peri-urban households
Social & gender impact assessment (Y/N, date)	Gender impact: Improved water reliability reduces burden on women and girls
Job creation estimate / local economic benefit assessment (Y/N, date)	Est. 75 temporary jobs and 20 permanent operational roles; Q2 2026
SUSTAINABILITY & ENVIRONMENTAL ANALYSIS	
Environmental compliance & climate assessment (Y/N, date)	To be conducted under national EPA guidelines, scheduled Q1 2026
Environmental impact assessment (Y/N, date)	Preliminary scoping in progress, full EIA to follow in Q1 2026
ESG performance (Y/N, date)	To be embedded in project M&E plan; ESG criteria defined Q4 2025
Safeguards & community engagement (Y/N, date)	**Safeguards & community engagement (Y/N, date):** Stakeholder consultations planned Q4 2025 in both Mampong and Bonsa
RISK MANAGEMENT	
Main risks & mitigation measures (Political, Legal, etc)	Delays in procurement mitigated by early engagement with PPA and MoF; revenue shortfalls addressed through cost recovery and donor support; technical capacity gaps managed via staff training and partnerships with VEI & IRC.
Constraints or bottlenecks to finance	Difficulty accessing concessional energy/water infrastructure loans Fragmented donor coordination
CONTACT INFORMATION AND CONSENT	
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