Project Briefing Document

Data Centers: Understanding Economic Considerations and Opportunities for Water and Wastewater Utilities (RFP 5367)

Project and Team Introduction

Data centers can catalyze local economic growth through construction jobs, tax revenues, and shared infrastructure. They can also advance community sustainability via heat-recovery partnerships and the use of reclaimed water. Yet utilities often lack practical tools to evaluate requests and negotiate agreements that balance reliability, affordability, and environmental goals. This project will close that gap by producing actionable guidance that helps water utilities assess data-center proposals and negotiate durable, transparent deals. Outputs will include best practices for rate design, capacity/development fees, and contract structures; standardized data-exchange templates for technical due diligence; and community-engagement strategies that align benefits with local priorities. Together, these tools will help utilities maintain financial stability, optimize water resources, and support sustainable, community-centered economic development.

Research Approach

Task 1 – Literature, Policy, and Practice Review: Establish a comprehensive baseline of current knowledge on data center–water utility interactions, analyzing data center types, water/energy use intensities, influent/effluent quality, and co-benefits like heat recovery; review U.S. and international utility rate structures, fees, incentives, and corporate sustainability commitments to identify best practices for financial risk management.

Task 2 – Stakeholder Engagement: Conduct structured interviews and workshops with diverse water and wastewater utilities (and data center representatives) to identify the essential information each side needs for data-informed planning, capturing variations in climate, cooling strategy, demand seasonality, and financial arrangements.

Task 3 – Development of Guidance Framework: Create a Utility Decision Toolkit containing model contract clauses, alternative rate structures, financial modeling templates, a stoplight planning map, and evaluation guidance—validated through workshops—to help utilities negotiate, plan, and manage financial risks with data center customers.

Benefits of Participation

Partnering utilities and agencies will gain early access to emerging best practices, benchmarking data, and decision tools that strengthen their ability to plan for and manage high-demand, high-uncertainty data center customers. By participating in interviews, workshops, and toolkit reviews, utilities will directly shape practical guidance tailored to real-world utility contexts—ensuring the resulting framework reflects their operational, financial, and regulatory realities. Participants will also receive first-hand insights into national and international policies, evolving cooling and reuse technologies, and corporate sustainability commitments from leading data center operators. This collaboration will enhance each utility's internal capacity for financial risk management, rate design, and infrastructure planning while positioning them as thought leaders in the evolving nexus of water, energy, and digital infrastructure.