



**American Water Works
Association**

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December 5, 2022

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Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
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RE: Response to the October 21, 2022 “Request for Information – Greenhouse Gas Reduction Fund” (EPA-HQ-OA-2022-0859)

The American Water Works Association (AWWA) appreciates the opportunity to provide information to the Environmental Protection Agency on the October 21, 2022 “Request for Information – Greenhouse Gas Reduction Fund” (RFI). AWWA is particularly appreciative of your presentation about this RFI to state and local government associations, as well as Ms. Zuckerman’s earlier briefing to the Dialogue with Intergovernmental Associations on the Bipartisan Infrastructure Law call.

AWWA looks forward to additional engagement opportunities as these funds are developed.

Water utilities should be listed as eligible entities to take advantage of GHG reduction opportunities

Water utilities have a unique role to play in mitigating GHGs, both due to the high energy usage of the water sector as well as the leading example that the water sector sets for other industries and communities. The RFI discusses those able to access the fund as states, municipalities, Tribal governments and certain nonprofits (“eligible recipients”) for funds under Section 134(a)(1) of the Clean Air Act and only “eligible recipients” under Sections 134(a)(2) and 134(a)(3). For the latter two funding streams, those nonprofits would provide financial assistance (potentially combined with other funding sources) for qualified projects. As many water utilities are organized as municipalities (either as a function of a local government or as special purpose municipality, authority, special district government, or similar organization under state laws), much of the water sector should be eligible to access funds under Section 134(a)(1) directly, and others indirectly through qualified projects under their local governments and other eligible entities. Furthermore, under the other two sections, utilities should be eligible for indirect investments as sponsors of activities eligible to use these funds.

Both asserting and promoting this eligibility is essential because the water sector (which includes drinking water, wastewater, stormwater, and water reuse) uses considerable energy and substantial opportunities to reduce emissions and increase renewable energy. Energy intensity varies considerably throughout the sector based upon water source, topography, and current efficiency measures.¹ Water and wastewater

¹ Young, R. 2015. A Survey of Energy use in Water Companies. American Council for an Energy-Efficient Economy. <https://www.aceee.org/sites/default/files/water-company-energy-use.pdf>.

utilities are often the single largest municipal energy users in any given jurisdiction. In some cases, utilities will have considerable land available as well as the necessary infrastructure needed to develop renewable energy. Although the exact opportunities will vary based on local circumstances, they include but are not limited to:

- On-site renewables not directly related to water (such as wind, solar, and battery storage) with resilience opportunities through micro-grids^{2,3}
- On-site renewables directly related to water operations, including micro-hydro (for gravity fed systems), pumped storage, and reclamation of embodied energy from wastewater^{4,5}
- Reduction of energy use through energy efficiency opportunities such as pump optimization and upgrades, HVAC/lighting, operational improvements, and many others⁶
- Water conservation and water loss control activities that also reduce energy use through decreased need for acquisition, treatment, storage, pumping, wastewater collection, and hot water heating.^{7,8}
- Ability to implement other opportunities such as shifting some energy loads to times where use will result in lower GHG emissions, utilizing water for heating and cooling, and modernizing utility vehicle fleets.

The potential for reduction of demand on the electrical grid is particularly high in the water industry. Electrical power is often one of the largest ongoing expenses for water utilities. Many draw water from low-lying areas (or underground) and pump it to elevated water towers to feed distribution systems by gravity. This is particularly true in areas with varied elevations. Allowing the use of the Fund for alternative power production to serve water facilities could take a large, near-consistent demand from electrical facilities that are fired by coal or natural gas, reducing GHG emissions considerably.

Wastewater facilities sometimes use lift pumps to deliver untreated sewage to treatment facilities. While most sewage arrives by gravity in many systems, treatment requires substantial electrical usage as well, with aeration and other pumps used to power treatment processes of wastewater, all of which have opportunities for increased efficiency and often the ability to add renewable energy to help offset the energy demand.

²Mosetlhe, T. 2022. Mitigating water supply deficit through micro-grid powered pumping station. *International Journal of Energy and Environmental Engineering*, 13, 449-455. <https://doi.org/10.1007/s40095-021-00447-4>

³Black, L, W. Straker-Smith, J. Tapson, R. Thomas. 2015. Water Research Foundation, Report 4577. <https://www.waterrf.org/system/files/resource/2022-09/4577.pdf>

⁴ Ibid

⁵ Water Utility Climate Alliance. Unknown Date. Greenhouse gas mitigation case studies. <https://www.wucaonline.org/adaptation-in-practice/greenhouse-gas-mitigation/index.html>

⁶ Longo, S, M. Mauricio-Iglesias, A. Soares, P. Campo, F. Fatone, A. Eusebi, E. Akkersdijk, L. Stefani, and A. Hospido. 2019. ENERWATER – A standard method for assessing and improving the energy efficiency of wastewater treatment plants. *Applied Energy* 242, 897-910. <https://doi.org/10.1016/j.apenergy.2019.03.130>.

⁷ Stokes, J.R., T.P Hendrickson, and A. Horvath. 2022. *Save Water to Save Carbon and Money: Developing Abatement Costs for Expanded Greenhouse Gas Reduction Portfolios*. *Environ. Sci. Technol.* 48, 23, 13583-13591. <https://doi.org/10.1021/es503588e>

⁸ Spang, E., A. Holguin, and F. Loge. 2018. *The estimated impact of California's urban water conservation mandate on electricity consumption and greenhouse gas emissions*. *Environmental Research Letters* 13, 1 014016. <https://doi.org/10.1088/1748-9326/aa9b89>

Responses to selected EPA questions

Section 1, Question 1: What should EPA consider when defining “low income” and “disadvantaged” communities for purposes of this program? What elements from existing definitions, criteria, screening tools, etc. - in federal programs or otherwise – should EPA consider when prioritizing low-income and disadvantaged communities for greenhouse gas and other air pollution reducing projects?

For those funds that are limited to assistance to low-income and/or disadvantaged communities, EPA should assure its definition is not overly restrictive. For the purposes of energy efficiency and renewables in the water sector, for most programs the benefits accrue to all or a large portion of households in a service territory. EPA should define these terms in such a way to allow those who serve a large number of low-income or disadvantaged community households to access these resources even if some households will not meet this definition. For certain activities (such as deployment of conservation funds that reduce GHG emissions) it may be possible to target more directly to individual households. Furthermore, through the Safe Drinking Water and Clean Water State Revolving Loan Funds, states have already defined disadvantaged communities with regards to drinking water and clean water programs⁹, and these could be used as one way to qualify water utilities to access funds that will both reduce GHG emissions and ultimately control or reduce overall costs, thereby benefiting disadvantaged communities. However, given challenges in implementation of The Infrastructure Investment and Jobs Act (IIJA), it is expected that many of these definitions will change, and they often make it difficult for systems serving larger areas to participate, and thus they should be one way to qualify but not the only way.

Section 2, Question 10: What federal, state and/or local programs, including other programs included in the Inflation Reduction Act and the Infrastructure Investment and Jobs Act or “Bipartisan Infrastructure Law” could EPA consider when designing the Greenhouse Gas Reduction Fund? How could such programs complement the funding available through the Greenhouse Gas Reduction Fund?

Specifically with regards to projects within the water sector, the Fund could collaborate with the Safe Drinking Water Act and Clean Water Act state revolving loan funds, as well as the Water Infrastructure Finance and Innovation Act (WIFIA) to provide “piggyback” emissions reduction funds on top of direct water infrastructure investment. Although technologies to reduce GHG emissions or install renewable energy are eligible under the SRFs, because the states generally prioritize projects with the greatest public health and environmental needs (as defined under Safe Drinking Water Act and Clean Water Act rules), emissions are rarely the focus and most efficiency gains tend to be incidental. By pairing the two programs, EPA could provide grant funding that would allow for synergy in GHG reductions within the water sector that will happen during other projects, at the very time when it tends to be the most cost effective to do.

There is also considerable opportunity to coordinate with USDA’s Natural Resources Conservation Service on source water protection projects. The NRCS conservation programs, which also received funding under the Inflation Reduction Act, can help to reduce emissions while simultaneously protecting drinking water sources. Water utilities often have detailed source water protection plans which will involve activities covered by NRCS as well as other activities that can help protect (and in some cases treat when

⁹ Association of State Drinking Water Administrators. 2022. *State Actions: Drinking Water and Disadvantaged Communities*. <https://www.asdwa.org/environmental-justice/>

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protection is not sufficient) water, and those activities can both become more efficient and incorporate more renewable energy (for example, a project may incorporate both making irrigation and nutrient application more efficient while deploying solar energy to keep land in source watersheds economically viable as farmland instead of adding additional development.

Section 4, Question 1: Who could be eligible entities and/or indirect recipients under the Greenhouse Gas Reduction Fund consistent with statutory requirements specified in section 134 of the Clean Air Act?

As discussed at the beginning of this letter, water utilities, depending on the situation, should be eligible either as direct or indirect (or both) recipients under the Fund.

Conclusion

AWWA appreciates the opportunity to comment on this important notice, and we look forward to opportunities to engage throughout the development and implementation of this important Fund. If you have any questions regarding this correspondence or if AWWA can be of assistance in some other way, please contact Adam Carpenter at (202)326-6126 or acarpenter@awwa.org.

Best regards,

FOR THE AMERICAN WATER WORKS ASSOCIATION

A handwritten signature in black ink that reads "G. Tracy Mehan, III". The signature is written in a cursive style with a large, sweeping flourish at the end.

G. Tracy Mehan, III
Executive Director, Government Affairs

cc: John Lucey
Radhika Fox
Jennifer McLain
Andrew Sawyers

Who is AWWA?

The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. Founded in 1881, the Association is the largest organization of water supply professionals in the world. Our membership includes more than 4,500 utilities that supply roughly 80 percent of the nation's drinking water and treat almost half of the nation's wastewater. Our 50,000-plus total membership represents the full spectrum of the water community: public water and wastewater systems, environmental advocates, scientists, academicians, and others who hold a genuine interest in water, our most important resource. AWWA unites the diverse water community to advance public health, safety, the economy, and the environment.