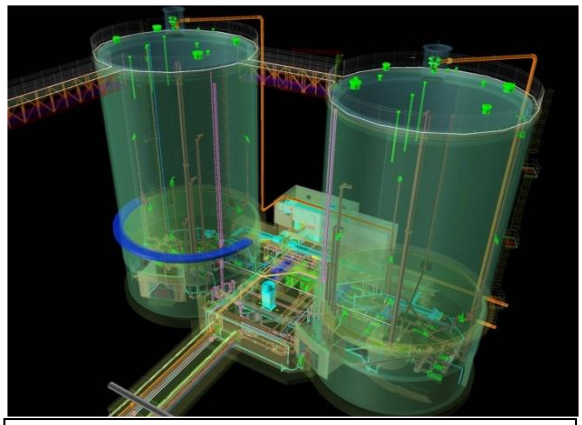
NEW Water
The brand of the Green Bay Metropolitan Sewerage District

What is R2E2?



3D rendering of R2E2's two anaerobic digesters currently under construction. Watch the digest walls being raised in our video "Walls Up!" on our YouTube Channel (link is on www.newwater.us).

R2E2, or Resource Recovery and Electrical Energy, represents a change in philosophy for NEW Water: valuing waste as a resource to recover, rather than something to dispose.

Construction launched in 2015, with completion expected in 2018. NEW Water is replacing its solids handling facility to meet stricter environmental regulations, address the needs for increased capacity, and to replace aging infrastructure. The project harnesses resource recovery of nutrients and gas for cost savings and environmental benefit.

The total capital cost of the R2E2 Project is approximately $169 million. Construction contracts were awarded to Northeast Wisconsin firms, and the project will provide 100s of construction and manufacturing jobs to the community and local economy.

To determine the best solids handling solution for the community, NEW Water took a collaborative approach. A Stakeholder Advisory Committee comprised of external stakeholders and internal staff analyzed solids handling processes across the U.S., and the globe. The committee's criteria were: technology that was feasible, reliable, safe, stakeholder supported, environmentally friendly, and cost-effective. The final result: R2E2.

Facts about R2E2:

20,370: *linear feet of steel piling supports placed for digester foundation*

5,324: *cubic yards of redi-mix concrete placed (665 concrete trucks)*

663: *tons of rebar for cast-in-place concrete*

The design includes two anaerobic digesters that will break down biodegradable material in the absence of oxygen, and reduce the volume of material to be processed. Methane gas will be captured and used to produce electricity. In the first year of operation, NEW Water's energy costs are estimated to be reduced by 50%, resulting in an estimated savings of more than $2 million. Greenhouse gas emissions are expected to be reduced by about 22,000 metric tons per year, the equivalent to removing about 4,600 vehicles from the road. R2E2 also features a nutrient recovery process that will create a fertilizer for commercial sale, bringing in additional non-rate based revenue. Further, R2E2 will allow NEW Water to accept different types of wastes it currently cannot, such as dairy, sugar, and food processing waste, which would otherwise be spread onto nearby fields or land-filled. These wastes can increase digester energy production, and provide a consistent and environmentally friendly disposal outlet.

R2E2 will allow NEW Water to continue to provide the safe, reliable, around-the-clock service the community has come to expect, for generations to come.

Protecting our most valuable resource, water

www.newwater.us