Cross-posted at the ReNUWIt blog. A pilot project to convert biosolids from Delta Diablo Sanitation District's wastewater treatment plant will begin next year in Antioch. The prize would be recovery of energy content from biosolids that, if successful and expanded to a national scale, will move the entire wastewater treatment industry in the direction of producing more energy than is currently required to treat sewage.

Energy recovery from wastewater during the anaerobic digestion process has been developed successfully and is increasingly of interest in the industry. The key difference is that the pilot project focuses downstream of the anaerobic digestion, in a sludge-to-energy process that could access heretofore-unexploited waste material. If it works and proves economically feasible, it would be a big step towards resource recovery in the wastewater sector.

The project seems to illustrate a number of elements of the challenges to innovation that we touch on in our recent review article on the Innovation Deficit in Urban Water. Just a couple of examples:

First, the importance of risk sharing in early concept projects is a key element. While the direct beneficiary (Delta Diablo Sanitation District) contributed space, staff time, and other in-kind elements, funding comes primarily from the private company interested in proving their concept and a grant from the California Energy Commission. Further, the Bay Area Biosolids to Energy Coalition continues to pool resources in support of the development of experimental solutions for a common challenge among Bay Area utilities.

Another important element is that there may be a common theme of indirect motivation for innovation in the water sector. In this case, energy savings or production – rather than the treatment of the wastewater itself – is one of the key drivers of an advance in wastewater treatment. It also happens to have the potential to address a vexing challenge for wastewater plan operators – what to do with sludge resulting from existing treatment processes.

This type of multi-benefit innovation will drive change towards the urban water system of the future. From the perspective of innovation systems, what makes this interesting is the importance of the non-technological context in which this technological pilot is being conducted. The formulation of the Bay Area Biosolids to Energy coalition, now 19 agencies strong and still growing, holds the promise of experimentation and leadership in a traditionally risk averse public agency setting.