

This presentation will report on work underway to inventory facilities currently utilizing biogas from anaerobic digestion and speak with practitioners to learn: techniques for preparing residuals for digestion, methods to use for cleaning biogas (e.g., of siloxane), and how gas can be optimally utilized. In addition, EPA is talking with facilities treating or planning to treat residuals by gasification, combustion alone and with other waste materials, the SlurryCarb process, and a chemical or microbial fuel cell. It is estimated that the 16,583 municipal wastewater treatment facilities (WWTFs) in the USA use more than 1% of all electricity produced. Managing the residuals from these facilities is estimated to cost the nation as much as \$10 billion annually. Only about 6% of the WWTFs or 1,066 treat more than 5 MGD and of these only 544 or a half have anaerobic digesters. Surprisingly, too, only 106 of these facilities bother to use the gas produced to provide heat or power. So the questions, what can be done to change this situation? Research work is underway to optimize the feed to digesters, the operation of the digesters, and utilization of the gas for heating and power generation. Significant developments have occurred in gas cleanup as well as in methods for power generation (gas turbines, IC engines, microturbines, and chemical/microbial fuel cells). The findings of these developments will also be presented and compared.