

Abstract
**High Solids Anaerobic Digestion:
A Component of the Renewable Energy Portfolio**

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Anaerobic digestion of solid organic waste can be a significant component in meeting a utility's renewable energy portfolio requirements. One challenge in developing a renewable energy portfolio for utilities is meeting baseload requirements. Complementary to solar and wind energy, high solids anaerobic digestion is a renewable energy technology that provides baseload power. Whereas the wind does not blow every day nor does the sun shine every day, energy produced from High Solids Anaerobic Digestion comes from food waste produced by a utility's client base on a daily basis. Where there are people, there is food waste, and these same people consume power. Therefore, high solids anaerobic digestion is well-suited to providing distributed power and, organic waste resources are available in all 50 states. In the U.S., anaerobic digestion has been used commercially for decades in the treatment of wastewater and sewage sludge (wastes that are 2 and 10 percent solids). Anaerobic digestion produces biogas that can be used to produce renewable power. High Solids Anaerobic Digestion is an extension of this proven technology that can process organic solids and slurries with solids contents of up to 45%. By processing higher solids, greater energy production is achievable at lower costs (e.g., do not need to treat/evaporate as much water). Solid organic wastes, such as food waste, yard waste, food processing wastes, and animal manures are readily available renewable resources in all 50 states. In the U.S., more than 30 million tons of food wastes alone are sent to landfills annually. If 50 percent of this food waste was anaerobically digested, enough electricity would be generated to power 2.5 million homes for a year. With a growing focus on diverting food waste from landfills, High Solids Anaerobic Digestion represents an opportunity to address renewable energy portfolio needs as well as sustainable waste disposal practices.