

# Tortoise QuickTake

## Social Infrastructure Podcast

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**Welcome to the Tortoise QuickTake podcast. Thank you for joining us. Today, senior members of Tortoise provide a timely update on trending topics in the market.**

Hi, I'm David Roeder, vice president and originator for Tortoise's social infrastructure platform. Our platform makes an impact by providing capital for a variety of social infrastructure projects including healthcare, housing and education initiatives, in addition to certain project finance facilities and energy efficiency projects. I'm going to provide some insight into the types of projects that Tortoise supports within project finance and energy efficiency, which are my focus areas in terms of sectors.

Within project finance, Tortoise specializes in providing capital to waste-to-energy projects. These projects involve the conversion of waste products into renewable energy, such as electricity, steam and biogas. Absent these projects, the waste streams would be burned, producing harmful greenhouse gases, or would be transported and dumped into space-constrained landfills --- neither of which is a socially responsible outcome.

By implementing these waste-to-energy projects, the waste achieves a second life in the form of renewable energy that can power buildings, production facilities and even fleet vehicles. Often, the renewable energy can be purchased by off-takers at a lower cost than traditional supply, and also helps utilities and off-takers meet their renewable energy targets.

By way of example, three types of waste-to-energy projects are landfill biogas, biomass and digester projects.

With landfill biogas projects, the naturally-occurring methane from organic waste is captured and processed to produce clean biogas. The biogas can be utilized to power turbines to produce electricity, or may be converted to renewable natural gas to power fleet vehicles. This is a very mature market, with more than 600 landfill biogas projects in use throughout the United States.

With biomass projects, the supply stock is often wood-based, such as scrap wood or sawdust, and a common output produced by such facilities is wood pellets. These wood pellets are used as a renewable form of fuel for heating, both in residential and manufacturing settings. Many of these biomass facilities are located in the Southeastern region of the United States, in the so-called "Pine Belt" region, and there are large off-take markets throughout Europe and Asia.

With anaerobic digestion, organic waste is broken down in a controlled manner to produce biogas and other products, such as feed or fertilizer. The organic waste can be supplied from a variety of sources, including waste-water treatment facilities, agriculture farms and animal production facilities. Similar to landfill biogas, the digester gas can be utilized to produce clean electricity or renewable natural gas for a variety of power applications.

Turning to energy efficiency...the energy efficiency sector is a very mature space, estimated at more than \$5 billion per year in new project costs. The sector is dominated by large, publicly-held contractors that provide their products and services primarily to governmental entities, including the federal government, state governments and local governments such as cities, counties and school districts.

Under a typical energy performance contract, the contractor will replace outdated and inefficient energy-related equipment located at governmental facilities. The equipment often involves LED lighting fixtures, heating-ventilation and air-conditioning or "HVAC" equipment, as well as electronic building controls.

Typically, the new equipment produces energy and utility savings in the 20-30% range, while also reducing the downtime and repair costs associated with the replaced equipment. In many cases, the contractor guarantees a portion of the savings to the governmental entity, which can then be used as a revenue stream in support of the project financing.

Historically, many of these energy efficiency projects have been financed with debt-like loan instruments, but there is a growing need for alternative investment structures, particularly utilizing public-private partnerships, which provide higher-yield opportunities for the capital provider.

I hope that this podcast has provided you with a good overview of the project finance and energy efficiency sectors of our social infrastructure platform. Thank you for listening.

**Thank you for joining us. And stay tuned for our next cast. Have topics you want covered or other feedback to share? Write us at [info@tortoiseadvisors.com](mailto:info@tortoiseadvisors.com).**

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