

POSTER DESCRIPTION:

Poster Title: “Distributed Electric Power from Bio-based and Fossil Fuels”
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Abstract: Technology Management, Inc. (TMI) of Cleveland, Ohio, is currently developing a small, 1-kW, residential scale, prototype solid oxide fuel cell (SOFC) system for distributed generation applications. TMI has initiated efforts under the DOE project entitled “Small Scale SOFC Demonstration using Bio-based and Fossil Fuels” and will conduct a research effort to engineer and demonstrate a fuel-flexible kilowatt scale high temperature solid oxide fuel cell (SOFC) system producing electricity for 30-90 days from both fossil and bio-based fuels at the site of a potential end-user. TMI will conduct the demonstration to validate the potential of this environmentally friendly power generation system by showing a) the system can generate electricity on fossil and bio-based fuels at higher efficiency than the national electric grid or backup power generation systems, such as reciprocating engines and b) can ultimately be a ‘drop-in’ replacement for these systems. The TMI represents a new paradigm for distributed generation – a Massively Distributed Generation system – that extends the potential for smart grids to have intelligent on-site generation that can adapt to user loads and augment broader grid needs. In this poster, TMI will describe the past demonstration efforts on renewable fuels and small scale systems development and provide an update on overall progress of the current DOE project.