

## 16<sup>th</sup> Annual Solid Oxide Fuel Cell Workshop

The 16<sup>th</sup> annual Solid Oxide Fuel Cell (SOFC) Workshop was held in the Pittsburgh, Pennsylvania, on July 14–16, 2015, hosted by the U.S. Department of Energy (DOE), National Energy Technology Laboratory (NETL). A total of 132 attendees from 29 companies, 20 universities, and 10 national laboratories and government agencies attended the workshop. In her opening remarks, NETL Director, Dr. Grace Bochenek, welcomed the participation of the Advanced Research Projects Agency–Energy (ARPA-E) Reliable Electricity Based on Electrochemical Systems (REBELS) program and acknowledged how “SOFC research and technology development is playing a critical role in America’s energy future.”

The NETL fuel cells Technology Manager, Dr. Shailesh Vora, initiated the presentations with an overview of the DOE Office of Fossil Energy’s Solid Oxide Fuel Cell program covering the tremendous accomplishments that have occurred, the role of early demonstration on natural gas followed by coal-derived syngas, the recent uptick in program funding, and the 16 new awards from this year’s two funding opportunity announcements.

The SOFC program’s three Industry Teams presented their most recent accomplishments; highlighting their respective improvements in cell and stack performance, cost reduction, and reduced performance degradation rates.

Dr. John Lemmon, ARPA-E REBELS program director, discussed ARPA-E’s mission to catalyze and support the development of transformational, high-impact energy technologies and the REBELS focus on the development of intermediate temperature fuel cells (ITFC) for natural-gas-fueled distributed generation applications.

Researchers addressing core issues gave 18 presentations covering mitigation of SOFC cathode degradation, manufacturing and materials development, model integration, and investigations of electrochemical performance and durability of cathodes. Researchers for 16 REBELS projects gave presentations covering distributed generation applications, load following response, and liquid fuels producing ITFCs.

An evening poster session included 38 posters on topics ranging from fundamental investigations on cathode performance and durability, to cell and novel stack architectures. This open forum provides a less formal environment and encourages and facilitates discussion amongst the presenters and attendees. All presentations and poster abstracts may be found on the [NETL website](#).