

Siemens Westinghouse SECA Industrial Team Program Review

Mike Jaszcar

**Stationary Fuel Cells
Siemens Westinghouse Power Corp.
Pittsburgh, Pa.**

November 16, 2001

SECA Program Objectives

- Develop an SOFC system prototype with a net power of 3-10 kW
- Ultimate cost goal - \$400/kW

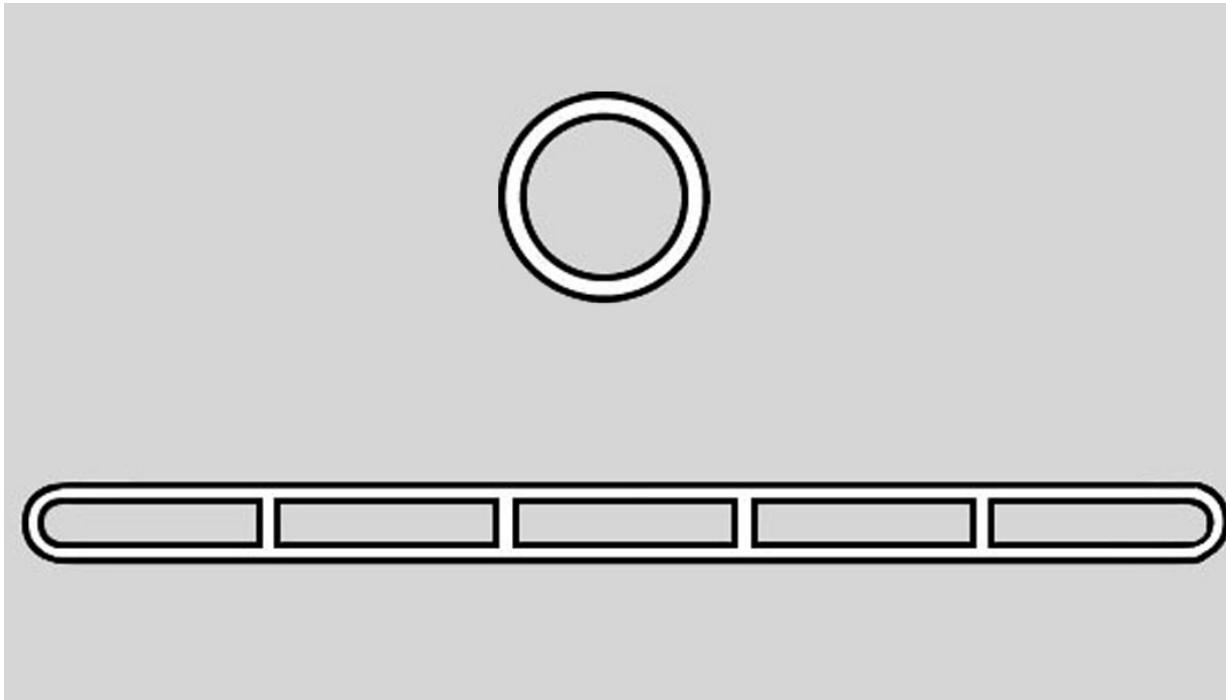
SWPC Program Status

- Award notification received
- Statement of work negotiations underway
- DOE contract not in place

- Technology Team
 - SWPC
 - Fuel Cell Technologies
 - Blasch Ceramics
 - Georgia Tech
- Customer/Market Teams
 - Stationary
 - Fuel Cell Technologies
 - Lennox Industries
 - Trane
 - Dominion Resources
 - Transportation
 - Fuel Cell Technologies
 - Ford Motor Company
 - Eaton Corporation
 - Military
 - Fuel Cell Technologies
 - Newport News Shipbuilding
 - Eaton

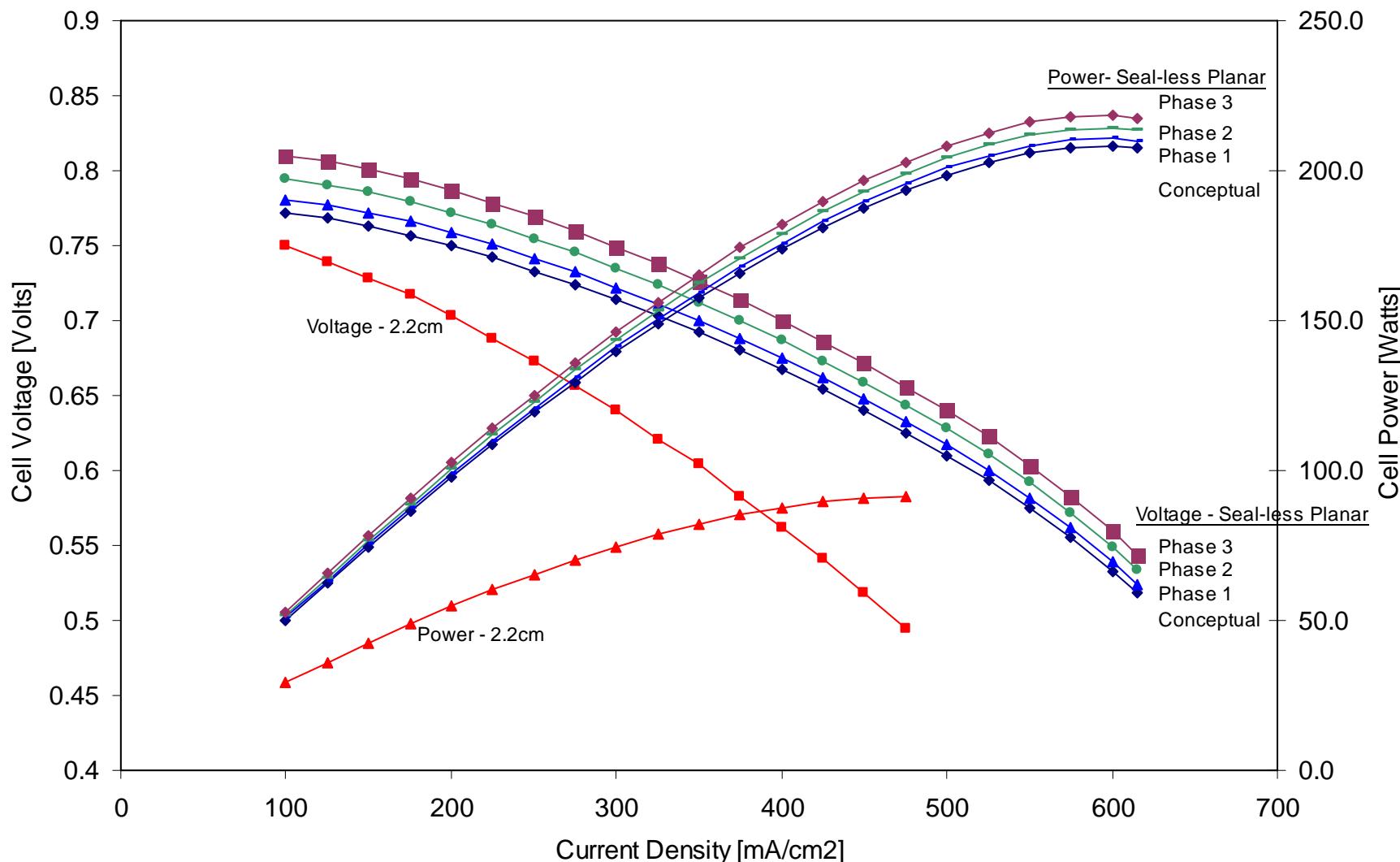
Technical Issues

- Improve cell performance
- On-cell reformation
- Cost-effective fuel processing
- Sulfur tolerant anode
- Low-cost insulation and containment vessel
- High efficiency power conditioning

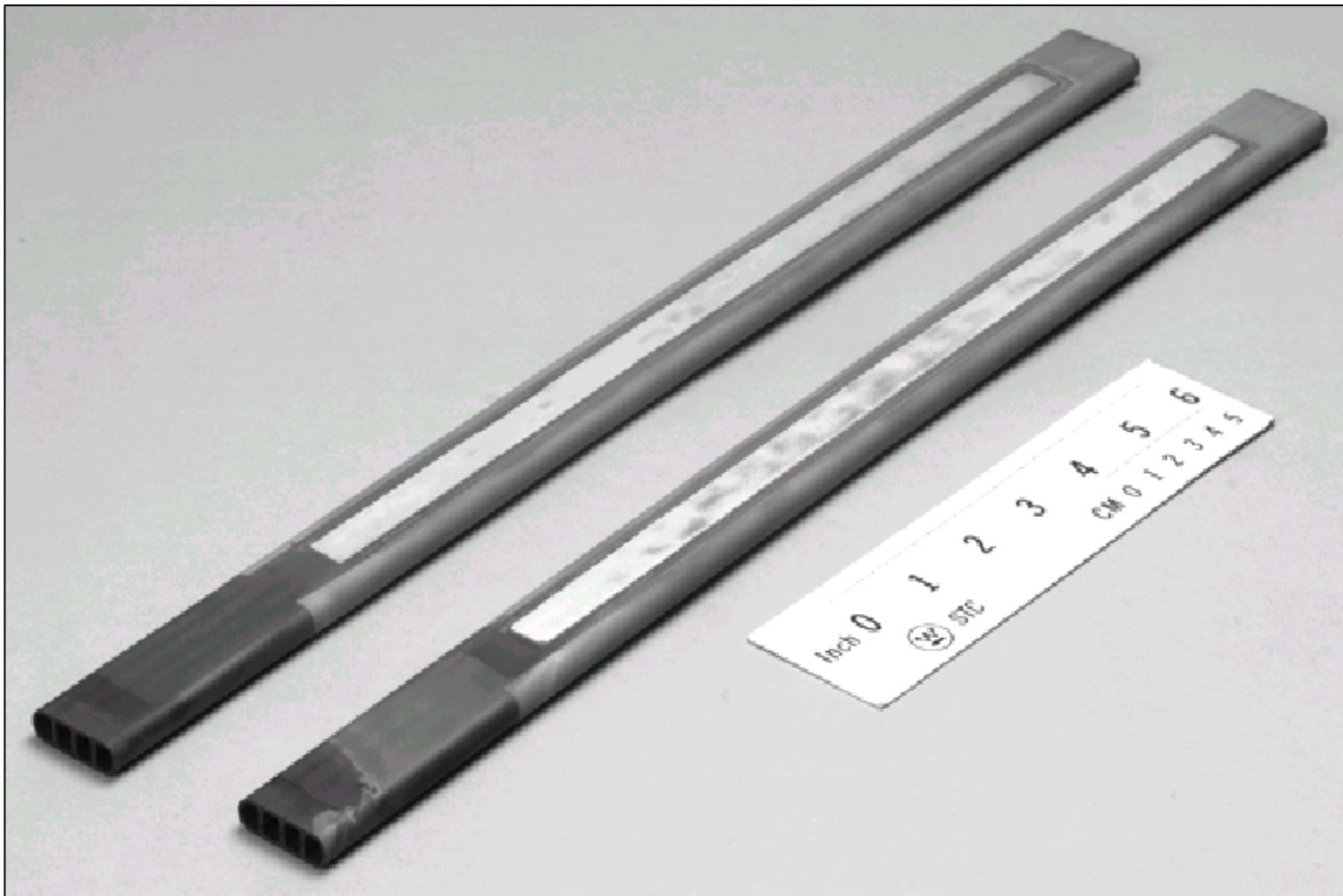


- Based on SWPC cylindrical cell design
- Maintains Seal-less planar design
- Reduction in resistance and cell cost
- Increase in cell power
- More compact stack

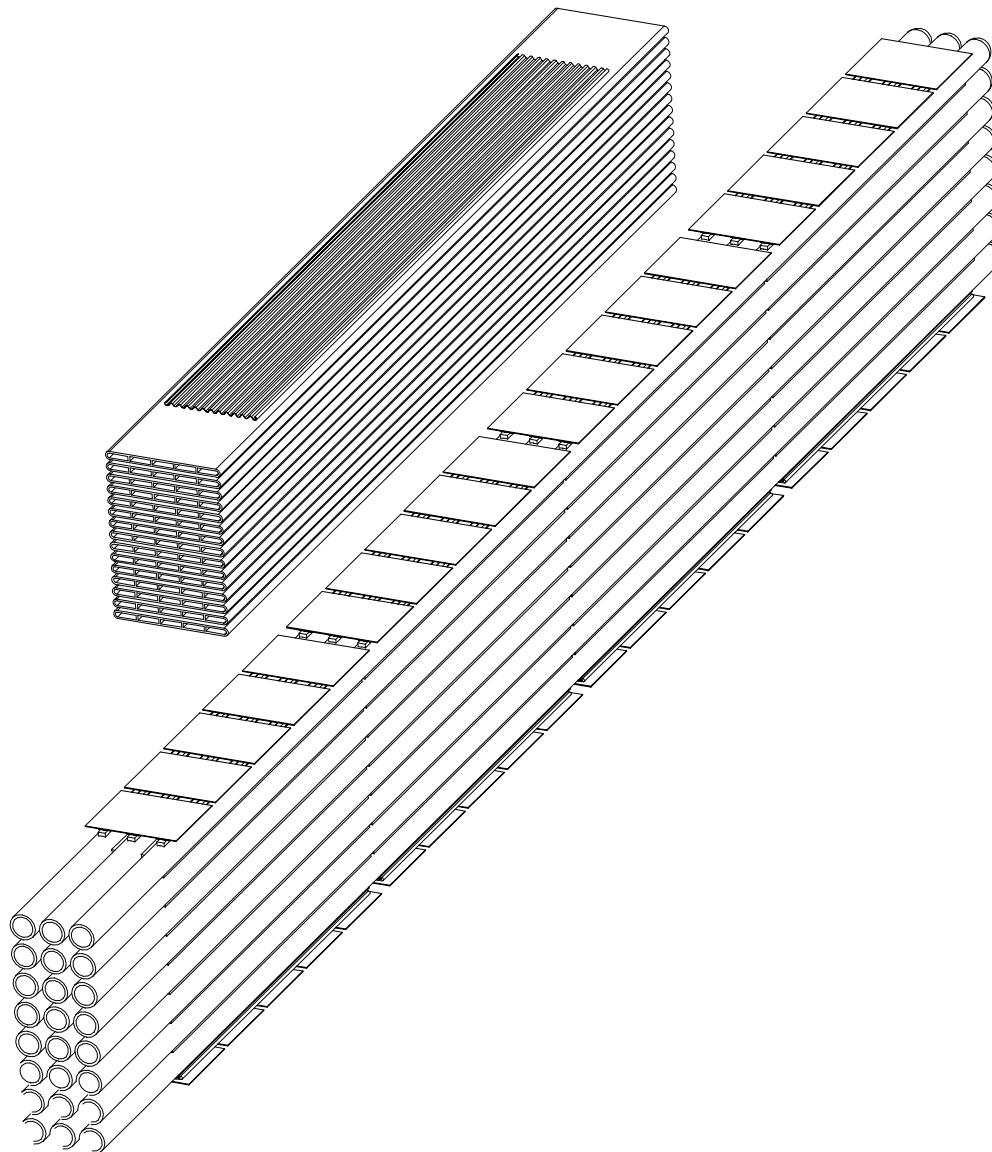
Cell Performance Comparison



SWPC Seal-less Planar Cell



Bundle Comparison



Fuel Cell Technology Siemens Westinghouse



- Conclude DOE contract negotiations - EOY '01
- Industrial team partners under contract - Jan. '02