California Higher Education Sustainability Conference (CHESC)
San Francisco State University - July 20th-24th 2015

Ultra-Clean | Efficient | Reliable Power
Research & Development
Design megawatt–class distributed power generation solutions
- Global fuel cell platform
- Robust intellectual property portfolio
- Developing hybrid applications of existing technology for new markets

Sales, Manufacture & Project Execution
Project development
- Direct sales
Global manufacturing profile
- North America
- Asia via partner
- Europe
Engineering, Procurement and Construction
- Project Financing

Services
Operate & Maintain power plants
- Over 100 DFC® plants operating at more than 50 sites in 9 countries
- >3 billion kWh ultra-clean power produced
- > 300 MW installed/backlog

Providing turn-key distributed power generation solutions
NASDAQ: FCEL
Scalable Solutions

Global platform – scale enhances economics

- Individual fuel cell & 350 kW fuel cell stack
- Completed module 1.4 megawatts
- Four-Stack Module 1.4 megawatts
- 59MW fuel cell park
  - Utilizes 21 DFC3000 plants
- 2.8 MW DFC3000®
  - Utilizes two modules
  - Adequate to power 2,800 homes
- 1.4 MW DFC1500®
  - Utilizes one module
  - Adequate to power 1,400 homes
Why Fuel Cells?

✓ Clean, Quiet & Efficient
✓ Energy Cost Savings
✓ Financeable, Low-Risk
✓ Improved Reliability

<table>
<thead>
<tr>
<th>Power Source</th>
<th>Efficiency (%LHV)</th>
<th>NOx (lb/MWh)</th>
<th>SOx (lb/MWh)</th>
<th>PM\textsuperscript{10} (lb/MWh)</th>
<th>CO\textsubscript{2} (lb/MWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average U.S. Grid</td>
<td>33%</td>
<td>3.43</td>
<td>7.9</td>
<td>0.19</td>
<td>1,408</td>
</tr>
<tr>
<td>Average U.S. Fossil Fuel Plant</td>
<td>36%</td>
<td>5.06</td>
<td>11.6</td>
<td>0.27</td>
<td>2,031</td>
</tr>
<tr>
<td>DFC\textsuperscript{®} Fuel Cell on Nat Gas</td>
<td>47%</td>
<td>0.01</td>
<td>0.0001</td>
<td>0.00002</td>
<td>940</td>
</tr>
<tr>
<td>DFC\textsuperscript{®} Fuel Cell on Nat Gas (CHP)</td>
<td>80%</td>
<td>0.006</td>
<td>0.00006</td>
<td>0.00001</td>
<td>550</td>
</tr>
<tr>
<td>DFC\textsuperscript{®} Fuel Cell on Biogas (CHP)</td>
<td>80%</td>
<td>0.006</td>
<td>0.00006</td>
<td>0.00001</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: The Regulatory Assistance Project report to NREL, October 15, 2002
How the Direct Fuel Cell Works?

- **High Temperature** Operation
  - Hydrogen produced in the stack from available hydrocarbon fuels
- **Electrochemical Conversion** *(NO Combustion)*:
  - **More efficient** than conventional DG-CHP
- **Cleaner**:
  - Negligible NOx or SOx
  - Lowest GHG Emissions
- **Quiet**
- **Scalable** from sub-MW to multi-MW
Value Drivers:

- Technology leadership
- Environmental compliance
- Health and safety
- Energy cost volatility
- Power reliability
- Power security
- Emission reductions/credits
- Infrastructure spending offset
- Productivity
- Energy savings
- Environmental stewardship
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