







Company Update

July 2018

NASDAQ: FCEL www.fuelcellenergy.com









Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Reform Act of 1995, including, without limitation, statements with respect to the Company's anticipated financial results and statements regarding the Company's plans and expectations regarding the continuing development, commercialization and financing of its fuel cell technology and business plans. All forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected. Factors that could cause such a difference include, without limitation, changes to projected deliveries and order flow, changes to production rate and product costs, general risks associated with product development, manufacturing, changes in the regulatory environment, customer strategies, unanticipated manufacturing issues that impact power plant performance, changes in critical accounting policies, potential volatility of energy prices, rapid technological change, competition, and the Company's ability to achieve its sales plans and cost reduction targets, as well as other risks set forth in the Company's filings with the Securities and Exchange Commission (SEC). The forward-looking statements contained herein speak only as of the date of this presentation. The Company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any such statement to reflect any change in the Company's expectations or any change in events, conditions or circumstances on which any such statement is based.

The Company may refer to non-GAAP (generally accepted accounting principles) financial measures in this presentation. The Company believes that this information is useful to understanding its operating results and assessing performance and highlighting trends on an overall basis. Please refer to the Company's earnings release for further disclosure and reconciliation of non-GAAP financial measures.

The information set forth in this presentation is qualified by reference to, and should be read in conjunction with, our Annual Report on Form 10-K for the fiscal year ended October 31, 2017, filed with the SEC on January 11, 2018, our Quarterly Report on Form 10-Q filed with the SEC on June 7, 2018, and our earnings release for the second quarter ended April 30, 2018, filed as an exhibit to our Current Report on Form 8-K filed with the SEC on June 7, 2018.



FuelCell Energy

Delivering Clean Innovative Solutions for the Global Supply, Recovery and Storage of Energy

Global leader in fuel cell technology since 1969

- Danbury, CT Corporate, R&D
- Torrington, CT Manufacturing, Service
- Germany Manufacturing, Service
- South Korea Manufacturing, Service



Global Customers

























TOYOTA cenovus





- Serving utilities, industrial and large municipal customers with both utility-scale and on-site power generation
- Fuel cells are extremely efficient, non-combustion technology that emit negligible Nox, Sox and particulate pollutants.
- Advanced Technologies addressing needs in:
 - Carbon capture
 - Local hydrogen production for transportation / industry
 - Long duration energy storage









EDISON



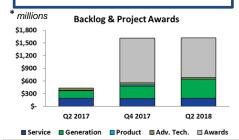






Focus Areas

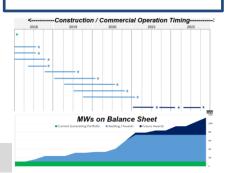
Execute on the \$1.9 billion of existing backlog and awards (84.5 MW of new project plant production)



* Note: Project awards are projects for which the Company has been selected but has not yet entered into definitive agreements.

Grow the Generation

Portfolio – business model delivers recurring and sustainable EBITDA

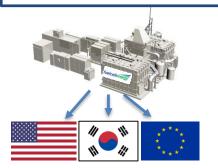


Compete and win in

the marketplace for new projects

Commercialize big ideas:

- Carbon Capture
- Hydrogen
- **Long Duration Energy Storage**





Recurring Revenue & Generation Portfolio Asset Growth



Predictable Power

- ✓ More than 100 SureSource plants in operation at more than 50 sites.
- ✓ More than 350 MW of SureSource modules in operation or on order
- ✓ More than 7,500,000 MWh generated by SureSource power plants

Grid Support with CHP

- Power sold to grid
- Heat sold to district heating system
- 59 MW on only 5.2 acres
- Only 14 mo. installation
- World's largest fuel cell park

Resiliency for Pharma

- 5.6 MW with steam for company campus
- Predictable power solving grid quality issues
- Immediate savings vs. grid
- Sustainability









Grid Support / Urban Redevelopment

- Power sold to grid
- Enhance resiliency
- Brownfield revitalization
- 15 MW on 1 1/2 acres
- Only 12 mo. installation

Fuel Cell / Solar Integration

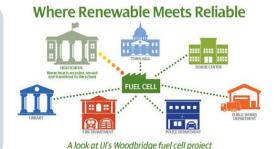
- · Utility-owned, rate-based
- Enhance resiliency
- 2.8 MW fuel cell on ¼ acre
 ~23,000 MWh annually
- 2.2 MW solar on ~9 acres
- ~3,000 MWh annually



Energy As A Service







- -Power supplied with predictable on-island generation avoiding transmission investments
- -Unused industrial land converted to income generating property

- -State-of-the-art utility microgrid application supporting critical building loads with independent capabilities
- -Replicable model for other customers evaluating similar structures



- Making the Power Grid Cleaner and More Resilient
- Adding Reliable Microgrid to a Utility Energy Portfolio



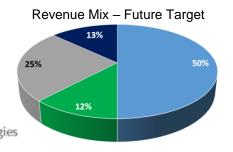
Revenue Drivers

Revenue Classification	Sources of Revenue	Growth Drivers
Product	Plant Sales Project Sales	International and Utility Market Financial Investors upon Completion
Generation	11.2 MW Operation Portfolio 84.5 MW in Backlog / Awarded	PPA and Service Model Project Execution / New Awards
Services & License	Long Term Recurring Revenue Growing Fleet	International and Utility Market Expanding installed base
Advanced Technologies	Expanding Private Contracts Commercialization	Carbon Capture, Hydrogen, and Storage



Revenue Mix to Shift to Strong Margin Recurring Generation

Generation to expand with project execution in 2018 - 2021 Complemented by product sales in Korea / U.S.



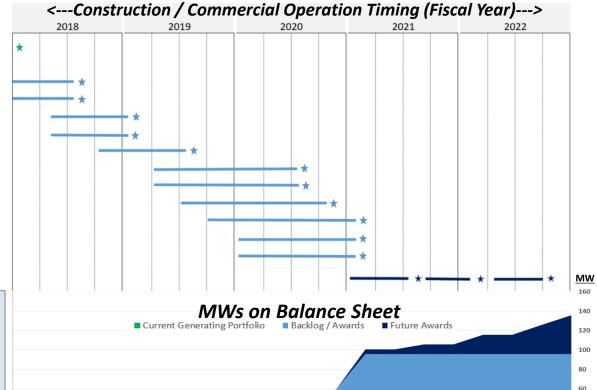


Building Sustainable Profitability

Project Name	Location	Off-Taker	Rated Capacity (MW)
Existing Portfolio	Various	Various	11.2
Under Construction			84.5
Triangle St	Danbury, CT	Eversource (CT Utility)	3.7
Trinity College	Hartford, CT	Trinity College (University)	1.4
Tulare BioMAT	Tulare, CA	PG&E CA (CA Utility)	2.8
Bolthouse Farms	Bakersfield, CA	Bolthouse Farms (Campbells)	5
Groton Sub Base	Groton, CT	CMEEC (CT Municipal Utility)	7.4
Toyota	Los Angeles, CA	SCE; Toyota	2.2
LIPA #1	Long Island, NY	PSEG / LIPA, LI NY (Utility)	7.4
LIPA #2	Long Island, NY	PSEG / LIPA, LI NY (Utility)	18.5
LIPA #3	Long Island, NY	PSEG / LIPA, LI NY (Utility)	13.9
CT RFP Derby	Derby, CT	Avangrid (CT Utility)	14.8
CT RFP Hartford	Hartford, CT	Eversource (CT Utility)	7.4
New Projects	CT / CA	Utilities	40

Building sustainable recurring cash flow

- 11.2 MW existing generation generates ~\$7 \$8 million per year in revenue
- 84.5 MW under construction would contribute ~\$70 \$80 million per year in additional revenue
- New projects under development are incremental
- Assets expected to be built with project debt.





Generation Portfolio Financing

Portfolio Overview / Approach

- Tier 1 off-takers
- COD Dates between third quarter of 2018 and first quarter of 2021
- Recycle capital
 - Prudent Project Sales
 - Back leverage
 - Other revenue streams



\$40 Million Fuel Cell Power Plant Project Example *

Construction Phase



Plant Operational with PPA



FuelCell Energy Result

- 60-70% Debt Financed
- 30-40% Working capital
- Permanent project financing with 80-90% project debt and tax equity
- Net FCE investment \$4-\$8 million
- PPA cash flow begins

Projected Annual Financial Impact:

- \$10 million in revenue
- \$4 million in EBITDA
- \$1-\$2 million in Free Cash Flow

^{*} Note: This is a hypothetical example and not an actual specific project

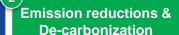


Energy Trends Driving Demand

NRG YIELD

Grid resiliency & reliability

- ✓ Predictable on-site generation enhances resiliency and reliability
- ✓ Avoids costs and risks of interruption and transmission siting issues



- ✓ Highly efficient electrochemical process, no burning
- ✓ Scalable & cost effective carbon capture that also generates power

Distributed hydrogen

- ✓ Tri-generation for highpurity hydrogen plus power & heat
- ✓ Affordable and significantly cleaner than steam reforming

Supporting intermittent renewable deployment

✓ Storage supports intermittent power: short duration (<4 hours) & long duration (6+ hours or days)



Predictable distributed clean power generation



- Carbon capture for power generation and industry
- Distributed hydrogen for transportation and industrial applications
- Long-duration storage supports increased renewables penetration









ExonMobil



Global Market

2 GW Equipment Market

\$7 B Equipment Market \$11 B Services Market \$29 B 20-year fuel sales 16 GW Equipment Market

\$49 B Equipment Market \$73 B Services Market \$215 B 20-year fuel sales 1 GW Equipment Market

\$4 B Equipment Market \$5 B Services Market \$8 B 20-year fuel sales 3 GW Equipment Market

\$10 B Equipment Market \$15 B Services Market

\$70 B Equipment Market

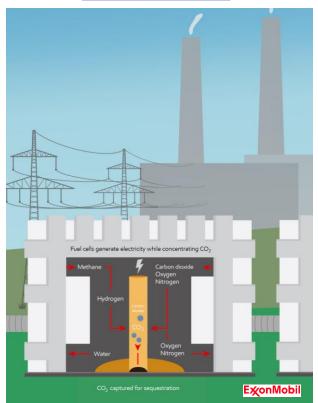
\$104 B Services Market

\$252 B 20-year fuel sales



SureSource Carbon Capture

How it works



Benefits

- Fuel cells separate carbon dioxide from a power plant's exhaust stream, making the carbon dioxide easier to capture and sequester (90% CO₂ capture, 70% NOX elimination)
- This process could vastly reduce carbon dioxide emissions by dramatically reducing carbon capture costs
- · A breakthrough in commercialization would lead to a global marketplace

Concentrates CO₂



Carbonate fuel cells can concentrate up to 90% of carbon emissions that come out of power plants – concentrated emissions can be captured and stored deep underground

Cleaner air



Removing carbon dioxide from the power plant exhaust eliminates a majority of smogproducing emissions



Energy By ExxonMobil Factor

Generates power



Carbon capture using fuel cells generates power, critical to the commercialization of carbon capture

Customizable



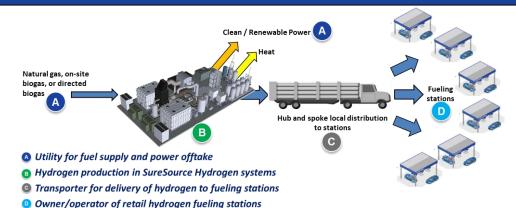
Modular solutions, allowing for gradual investments that help utilities meet carboncapture targets over time



SureSource Hydrogen and SureSource Storage

Power Generation and Hydrogen for Mobility and Industrial Use

- Efficient, clean production of hydrogen near end users
- Co-production of power enhances hydrogen affordability. Reduced transport distance reduces cost and emissions of hydrogen delivery
- Power, heat and hydrogen produced electrochemically, avoiding pollutants such as nitrogen oxide (NOx) that causes smog, sulfur dioxide (SOx) that contributes to acid rain, or particulate matter that aggravates asthma



Electrolysis, Storage and Hydrogen for Mobility and Industrial Use

Owner/operator of retail hydrogen fueling stations

- Efficient and cost effective energy storage for long discharge durations where input power is converted to hydrogen and stored
- Stored hydrogen can be converted back to <u>power</u> at high efficiency <u>or</u> exported to <u>hydrogen</u> user, e.g. industrial user or vehicle fueling station





Summary: Attractive Long Term Model



- \$1.8 billion backlog & awards
- Diverse revenue streams
- Expanding recurring Services & Generation revenue

Gross Margin

- Strong Generation margins & strengthening Services business
- Strong incremental margins from increased volume
- Advanced Technology benefiting from private contracts with industry leaders



- G&A / R&D positioned to support growth
- Manufacturing capacity available to support growth

Long-Term Model

- Grow recurring
 Generation & Service
 revenue
- Expand global installed base with new projects
- Target Gross Margin: >25%
- Estimated EBITDA
 Breakeven with
 blend of Product
 sales and Generation
 portfolio











Questions?

For further information contact:

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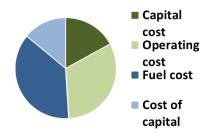
APPENDIX





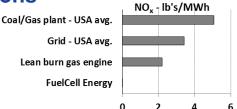
Compelling Economics

- Avoids transmission (line losses, cost & permitting)
- Rec's / Capacity payments / Carbon credits
- Site in high population density locations



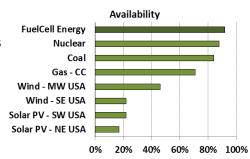
Negligible Emissions

- Easy-to-site
- Accelerate RPS,
 CO₂ & NO_x
 reduction goals



High Availability

- High availability supports economics
- High level of Renewable Energy Credits (REC's) generated (3-5x the REC's of solar)



Economic Development Driver

- Urban renewal
- Property & sales tax revenue
- Job creation
- Modest land usage
- Projects attract private capital

	MW's	<u>land</u>	MWh's
FCE	10	1	~83,000
Solar	50	395	~83,000
Challenge: Limited land availability			
		Acres of	Annual
	MW's	<u>land</u>	MWh's
FCE	10	1	~83,000
Solar	0.13	1	~220

Goal: Meet RPS mandates (i.e. max. REC's,

Acres of



Product Attributes



Easy to Site

- Low emissions and near-zero pollutant profile
- Vibration-free and relatively quiet operation
 - Lack of large moving parts
- Minimal land use
 - 1 acre of land = 10 MW of fuel cell
 - 10 MW of solar (northeast) = 395 acres of land
 - 15MW on 1.5 acres –North America
 - 59MW on 5.1 acres World

Highly Efficient

- 47% to 60% electrically efficient
- Achieve total thermal efficiency of up to 90 percent in a combined heat and power (CHP) configuration
- Avoided transmission losses
 - Grid losses of 8 10 percent





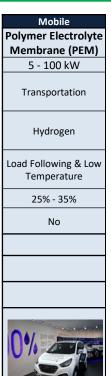
Fuel Cell Technologies

Technology	
System Size Range	
Typical Application	
Fuel	
Advantages	
Electrical Efficiency	
Combined Heat &	
Power (CHP)	
Carbon Capture	
Distributed	
Hydrogen	
Reversible for	
Storage	

MW - Class
Carbonate (CFC)
1.4 MW – 3.7 MW
Utilities, Universities, Industrial
Natural Gas, On-site or Directed Biogas, Others
High Efficiency, Scalable, Fuel Flexible & CHP
43% - 47% to 60%
Yes; steam & chilling
✓
→

Sub-MV	Sub-MW - Class			
Solid Oxide (SOFC)	Phosphoric Acid (PAFC)			
Up to 250 kW	Up to 440 kW			
Commercial Buildings & "big-box" retail stores	Commercial Buildings & grocery stores			
Natural Gas	Natural Gas			
High Efficiency	СНР			
50% - 65%	40% - 42%			
Depends on Technology Used	Limited: Hot Water, Chilling			
✓				
✓				

Micro CHP	ı
PEM/SOFC	
< 10 kW	
Residential & Small Commercial	
Natural Gas	
Load Following & CHP	
25% - 35%	
Suitable for Facility Heating	
	Ī





Superior Alternative to Conventional Generation

- Superior delivered electrical efficiency
- Compelling total cost ownership
- Site directly adjacent to urban economic development



Construction/Siting

Electrical Efficiency

Clean Emission Profile (virtually zero NO_x, SO_x, or PM)

Renewable Fuel Option/REC's

Combined Heat & Power

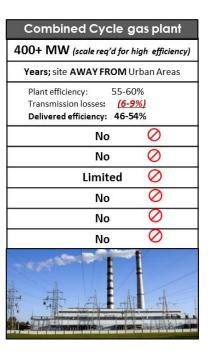
Scalable

Supports Urban Redevelopment

Affordable Carbon Capture

Size





Clean & Affordable Distributed Generation with Combined Cycle Electrical Efficiencies



Municipal Utility Case Study

Challenge

Utility need to retain a large customer that desires security of on-site power, delivered predictably and cleanly

Approach

- Site 7.4 megawatt fuel cell park on the power user's property, which is a U.S. Navy submarine base
- Utilize PPA structure to sell power to utility as produced
- FuelCell Energy operates and maintains fuel cell plants

Utility & Community Benefits

- Utility retains top customer with distributed generation solution
- Utility avoids capital investment as paying for power as produced
- Turn-key project delivery by FuelCell Energy minimizes use of utility resources
- Fuel cell solution supports sustainability goals of Navy
- Project structured to support future micro-grid













World's Largest Fuel Cell Installation



- Scalable consisting of 21 SureSource 3000™ power plants
 - Only ~ 5.2 acres for 59 MW
- Supplying electric grid and district heating system
- Constructed in only 14 months
- Adequate to power ~ 140,000 S. Korean homes

"The scale of this installation is contributing to the power and heating needs of an urban population and generating the electricity in a **highly efficient and ultra-low emission** profile that supports our National renewable portfolio standard,"

Tae-Ho Lee, Chief Executive Officer, Gyeonggi Green Energy

19 MW in Bridgeport



"These [fuel cell] projects aren't just good for the environment, they are good for our economy. They create jobs. They help reduce asthma and breathing ailment rates for kids. They grow our tax base." Bridgeport Mayor

Bill Finch (term expired Jan-2016)



"Purchasing these fuel cell power plants supports our goal of investing in renewable distributed generation to enhance the reliability of our power delivery system and offer our customers cleaner energy." James P.

Torgerson, President &

CEO, Avangrid

UNIVERSITY OF BRIDGEPORT

Type: On-site CHP Size: 1.4 MW Owner: Project investor

"Sustainable and affordable energy is an increasingly important component of the new energy mix at the University of Bridgeport."

University of Bridgeport

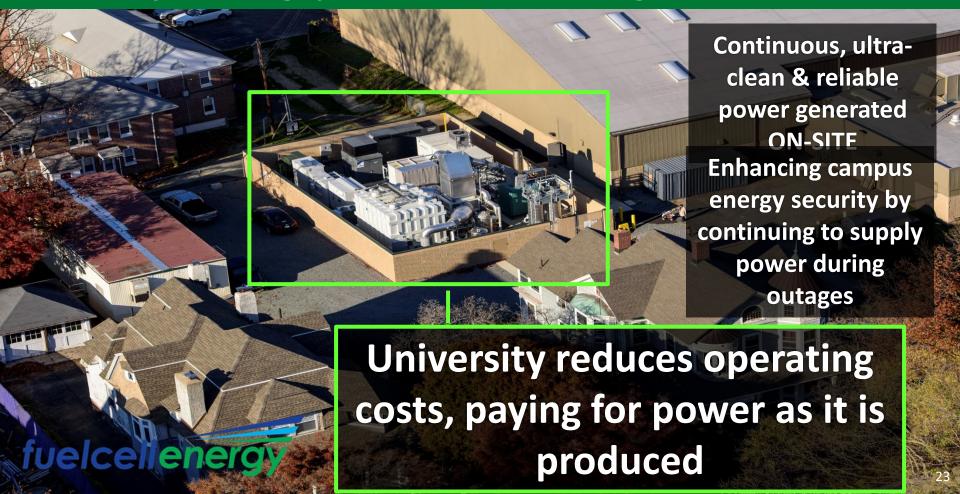


Type: Grid support Size: 14.9 MW

Owner: Utility – PPA structure

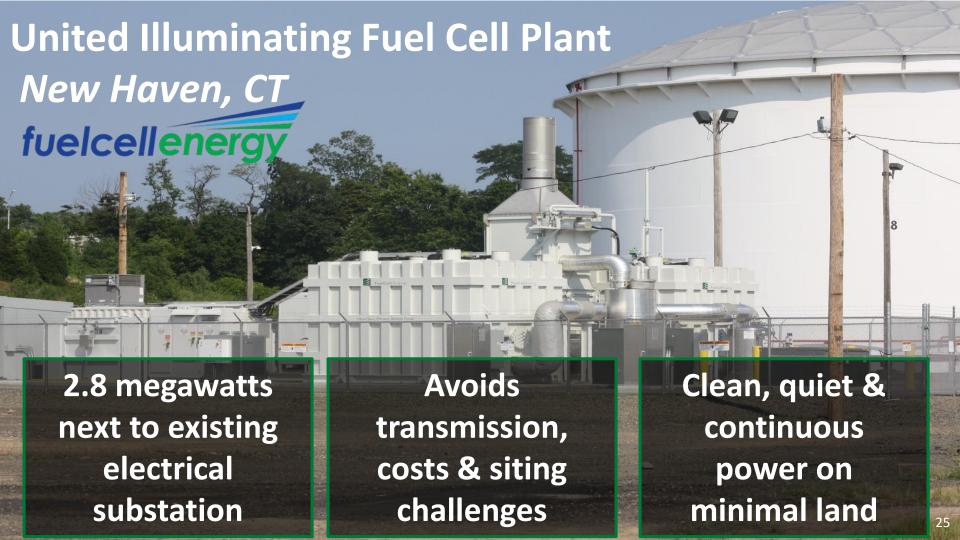
"The Dominion Bridgeport Fuel Cell Park is another important step in our efforts to identify and develop opportunities to produce clean energy that is reliable and cost effective." Thomas F. Farrell II, CEO, Dominion

University of Bridgeport Fuel Cell Micro-grid











Utility-owned energy park with continuous fuel cell power complementing intermittent power

Fuel Cell:
2.8 MW on
ONLY ¼ acre
~23,300 MWh/year

Solar:
2.2 MW on
8.5 acres
~3,700 MWh/year

