

Company Update

November 2019



Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation 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 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. (As used herein, the term "GAAP" refers to generally accepted accounting principles in the U.S.)

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, 2018, filed with the SEC on January 10, 2019 and our earnings release for the third quarter ended July 31, 2019, filed as an exhibit to our Current Report on Form 8-K filed with the SEC on September 9, 2019.

The Global Leader in Fuel Cell Technology

Global leader in fuel cell technology since 1969

- Danbury, CT - Corporate, R&D
- Torrington, CT – Manufacturing, Service
- Taufkirchen, Germany – Manufacturing, Service
- Calgary, Canada – R&D
- South Korea – Manufacturing, Service (via Licensee)



Global Customers



- Serving utilities, industrial, commercial and large municipal customers with both utility-scale, on-site power generation, and micro-grid applications
- FuelCell's platform cells are extremely efficient, non-combustion technology that can achieve zero carbon, emit negligible NOx, SOx and particulate pollutants.
- FuelCell's Advanced Technologies addressing needs in:
 - Carbon capture
 - Hydrogen production for transportation / industry
 - Long duration energy storage
 - Power generation
- Unmatched experience
 - Over 9 million Total MWH generated by SureSource™ plants around the world (As of July 2019)

Carbonate Fuel Cell Systems



Individual fuel cell &
400-cell fuel cell stack



Single-stack Module
250 – 400kW



Four-Stack
Module 1.4MW



250 - 400kW
SureSource250™
SureSource400™
47% Electrical Eff.
up to 90% Total Eff.



1.4 MW
SureSource1500™
47% Electrical Eff.
up to 90% Total Eff.



2.8 MW
SureSource3000™
47% Electrical Eff.
up to 90% Total Eff.



2.35 MW
**SureSource
Hydrogen™**
2.35 MW Power plus
1270 kg/day Hydrogen



3.7 MW
SureSource4000™
60% Electrical Eff.
Up to 80% total Eff



59 MW



11 MW

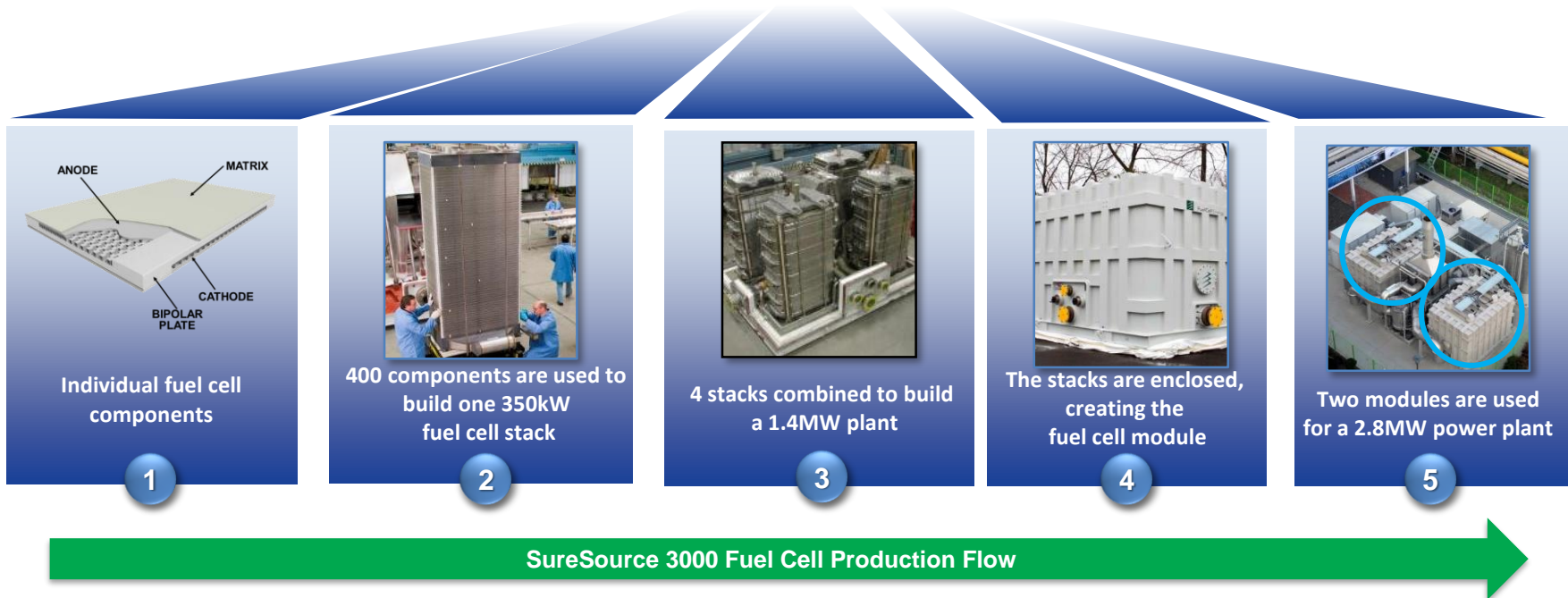


15 MW

Larger Scale Fuel Cell Parks

Fuel Cell Manufacturing Expertise

FuelCell utilizes proprietary designs and processes, along with state-of-the-art manufacturing equipment, to produce the fuel cell components at the core of the Company's SureSource systems



FCE Value Drivers

FuelCell's Business Segments & Revenue Mix

Product Sales

Sell projects & systems directly to customers

Service Offerings

Long-term service agreements associated with all projects & systems sales

Generation

Develop and own projects, and sell power to utilities and end-users under long-term power purchase agreements

Advanced Technologies

Private & publically funded research activities advancing fuel cell technology

Differentiated Product Offerings

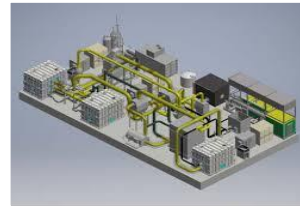
SureSource 250 & 400 250–400KW Production



SureSource 1500 & 3000 1.4 – 2.8MW Production



SureSource 4000 – 3.7MW Production



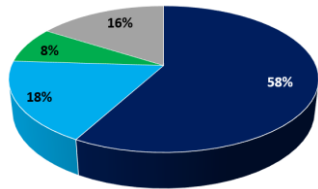
Advanced Technologies

**SureSource
Carbon Capture
(ExxonMobil
Partnership)**

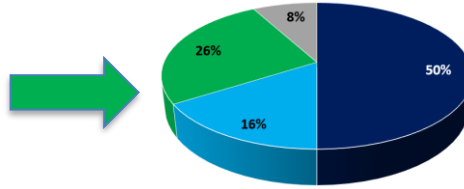
SureSource Hydrogen

**Solid Oxide
Fuel Cells**

— FY18 Revenue Mix —



— Illustrative FY23 Revenue Mix —



FuelCell is actively growing its owned Generation portfolio, which has positioned the business for substantial growth through recurring revenue and cash flow over the next five years

Multiple Use Cases

FuelCell's technology has been successfully deployed in these applications:

Provides electric utilities with an **economical, clean and scalable solution** that supplies power where needed, enhancing grid resiliency

Noeul Green Energy
Seoul, South Korea



FuelCell's on-site, customer-side-of-the-meter applications, quietly supply **continuous, clean and affordable power at the point of use** for C&I, hospitals, universities, office buildings, industrial parks, and more



California State University
- East Bay
Hayward, CA

Bridgeport Fuel Cell Park
Bridgeport, CT



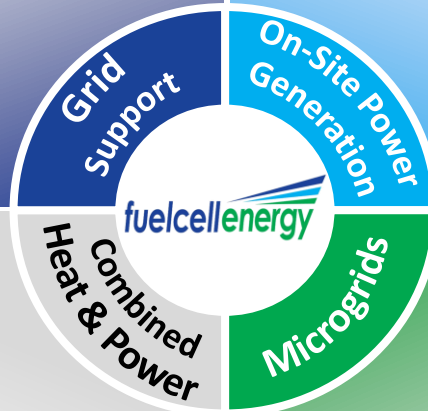
Multi-faceted platform delivers **electricity and usable high quality heat or steam** Which can be used for heating buildings and meeting hot water needs or for cooling using conventional absorption chilling equipment



University of Bridgeport
Bridgeport, CT

Micro-grid ready

The SureSource solution is configurable for micro-grids, powering the grid during normal operation, and disconnecting from the grid in the event of a disturbance (critical for facilities where reliable continuous power makes the difference)



Baseload is the Largest Segment of the Market

U.S. Electricity Generation (2016)

U.S. Electricity Generation
4,076,675,000 Megawatt hours (MWh)

U.S. Electricity Baseload
3,139,039,750 MWh

~85% of fuel cell capacity has come online since 2013

Alternative Energy Baseload
1,100,000,000 MWh

Fuel Cell Baseload
810,000 MWh

Baseload is the largest segment of the U.S. electricity market

Source: U.S. Energy Information Administration (EIA), April 2018.

Note: Alternative energy includes Hydro power, nuclear power, geothermal, bio power and fuel cell energy.

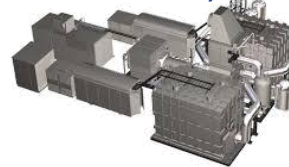
Note: Fuel cell baseload assumes all fuel cell electricity production is baseload production.

1) 1 MW FCEL Energy from SureSource 3000 = 122 m² and 1MW Solar PV = 22,257 m².

Power Density



2.8MW FCEL Energy
(SureSource 3000)



2.2MW Solar PV Facility

Solar Requires

~45,000% More Space than our fuel cells
to produce the same annual MWh's output

Or

450 times more space to produce
the same annual MWh's

FCEL's power density is well suited to customer on-site solutions

Application Examples

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



Grid Support / Urban Redevelopment

- Power sold to grid
- Enhance resiliency
- Brownfield revitalization
- 15 MW on 1 ½ acres
- Only 12 mo. Installation
- Avoids high-voltage transmission lines

Resiliency for Pharma

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



Sub-MW CHP for Hospitality

- 400kW with hot water production for water and space heating
- Clean baseload power
- No noise and no emissions
- Immediate savings vs. grid
- Only 9 mo. Installation
- Integrated in hotel (inside)

Modern Urban Distributed Energy

“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⁽¹⁾.”

Bridgeport Mayor Bill Finch (term expired Jan-2016)



UNIVERSITY OF
BRIDGEPORT

Clearway

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.”
Neil A. Salonen President,
University of Bridgeport*



fuelcellenergy
Type: Grid support
Size: 14.9 MW
Owner: Utility – PPA structure

The addition of this project asset to FCE’s generation portfolio is a major step towards our long-term strategy to diversify FCE’s generation portfolio, transitioning FuelCell Energy into a services focused business that delivers recurring revenue with strong EBITDA margins



Type: Grid support
w/ solar array
Size: 2.8 MW
Owner: Utility – rate base

*“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*

(1) Unlike solar and wind, fuel cell power plants pay taxes, helping local municipalities

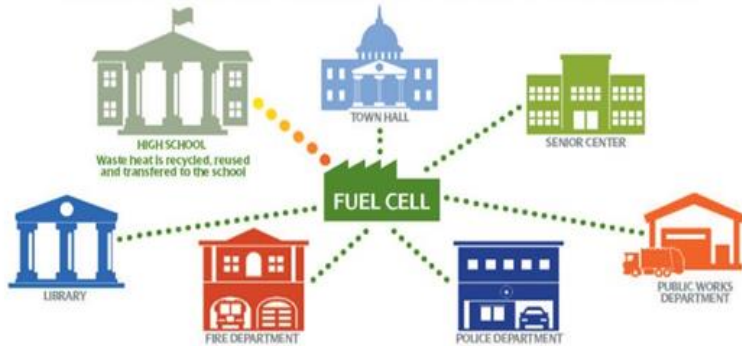
Power Security with Microgrids



Woodbridge
Connecticut



Where Renewable Meets Reliable



A look at UI's Woodbridge fuel cell project

WOODBIDGE UTILITY MICROGRID



State-of-the-art utility microgrid application supporting critical building loads with independent capabilities

Replicable model for other customers evaluating similar structures

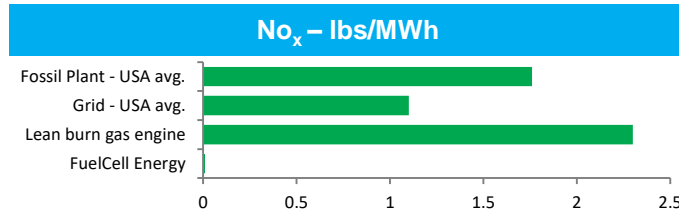
Multi-faceted Benefits of FuelCell Platform

Electrochemical conversion of fuel energy to power reduces emissions, increases efficiency, and improves siting

1

Ultra-Clean

Generates **negligible emissions of particulates, NO_x and SO_x**, avoiding health impacts and the creation of smog associated with traditional combustion baseload power generation.
High efficiency and the ability to operate on renewable fuels results in low or zero CO₂ emissions



2

Attractive Economics & Energy Security

Providing **power at the point of use** (distributed power generation), rather than central generation that requires transmission, greatly improves efficiency and reduces cost

Fact: Transmission of power over long distances results in line power losses of 7% to 9% of the centrally-generated power

3

Easy to Site

The **compact footprint** of a SureSource system is a large differentiating factor, specifically in urban settings where land is limited and / or expensive

Baseload fuel cells produce more than **450 times the annual MWh** than a comparable sized solar system

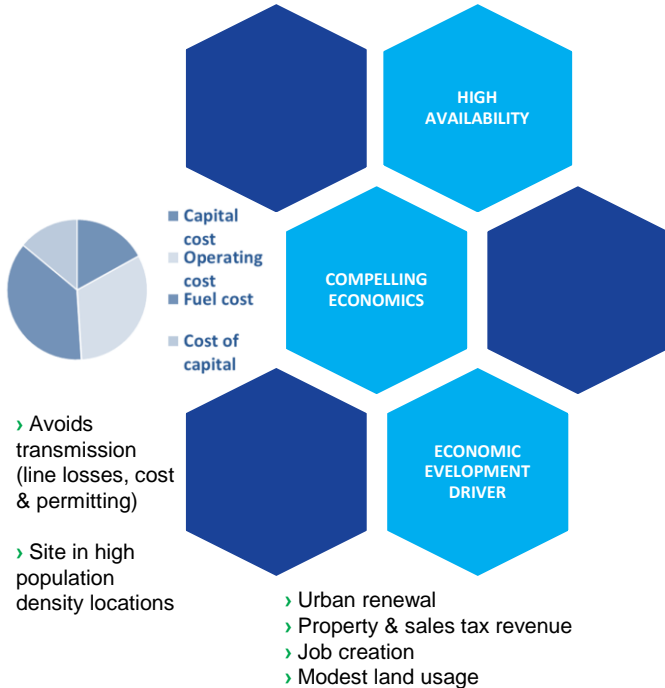


4

Fuel Flexible

Natural gas, biogas, and a variety of other fuels, both gaseous and liquid, have been proven effective with FuelCell's technology delivering low to zero carbon.

FCE's Performance vs Benchmarked Technologies



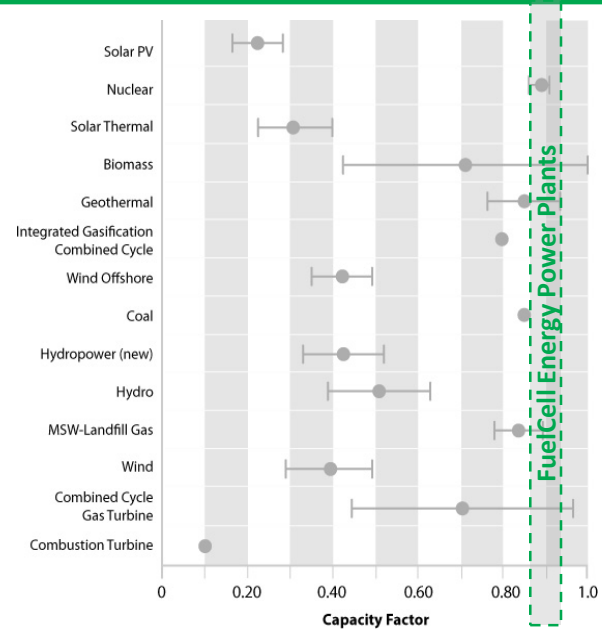
Goal: Meet RPS mandates (i.e. max. REC's)

	<u>MW's</u>	<u>Acres of land</u>	<u>Annual MWh's</u>
FCE	10	1	~83,000
Solar	50	395	~83,000

Challenge: Limited land availability

	<u>MW's</u>	<u>Acres of land</u>	<u>Annual MWh's</u>
FCE	10	1	~83,000
Solar	0.13	1	~220

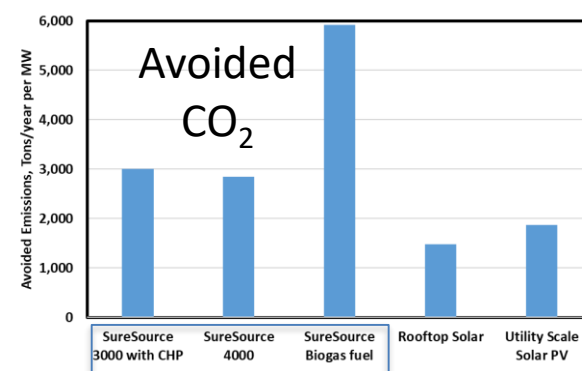
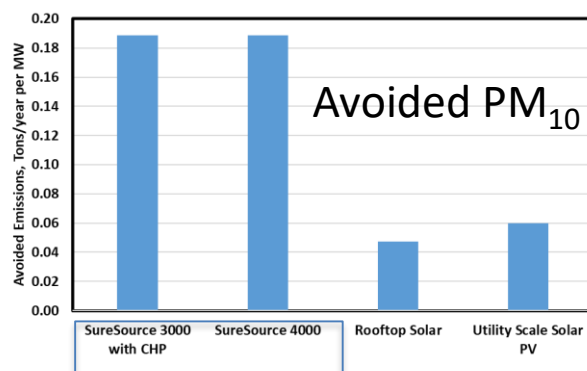
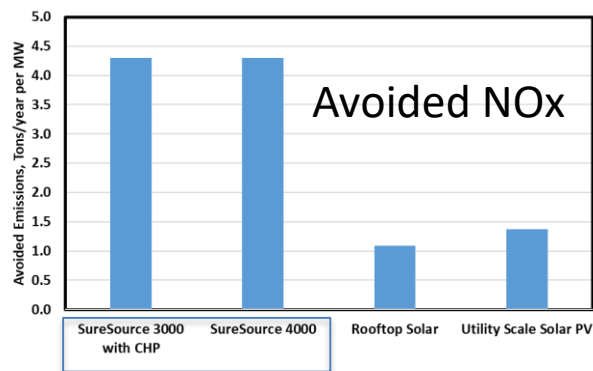
High level of Renewable Energy Credits (REC's) generated (3-5x the REC's of solar)



Source for capacity factor for non fuel cell technologies: NREL

Significant Avoided Emissions from Baseload Clean Power

	Capacity Factor, %	Emissions, lb/MWh			Avoided Emissions, Tons/y per MW		
		NOX	PM10	CO2	NOX	PM10	CO2
Average US Grid		1.10	0.05	1501			
SureSource 3000 with CHP	90%	0.01	0.00	738	4.3	0.19	3,008
SureSource 4000	90%	0.01	0.00	778	4.3	0.19	2,848
SureSource with Biogas fuel	90%	0.01	0.00	0	4.3	0.19	5,917
Rooftop Solar	23%				1.1	0.05	1,479
Utility Scale Solar PV	29%				1.4	0.06	1,874



Low Emissions and High Capacity Factor Make Fuel Cells an Important Part of an All-of-the-Above Strategy

Grid emissions rates for NOX and CO2 From EPA eGrid 2016, US Average non-baseload rates
Capacity factor for solar are averages of ranges from Lazard LCOE Analysis version 12, November 2018
Utility scale avoided emissions assumes 5% T&D losses

What is the latest news?

Quelles sont les dernières nouvelles?

최신 뉴스는 무엇입니까?

Was sind die neuesten Nachrichten?

Jakie są najnowsze wiadomości?

Quali sono le ultime notizie?

Wat is het laatste nieuws?

New Strategic Corporate Loan Facility with Orion Energy

CORPORATE LOAN FACILITY OVERVIEW

- \$200M strategic corporate loan facility in total with an 8-year term
- Initial draw of \$80M to primarily support execution of certain projects within the Company's \$2B project backlog
- The balance of the Facility, or \$120M, is available over the first 18 months to invest in strategic growth, providing working capital as needed
- In connection with the Facility, the Company has issued Orion warrants to purchase up to 20M shares of the Company's common stock, 60% of which are priced at a premium to the closing price on October 31, 2019

FUELCELL IMPACT



- ▶ **Stronger Balance Sheet** focused on prudent balance sheet management
- ▶ **Supports execution** of current inflight projects and provides capital for future growth
- ▶ **Refinanced** existing debt and **enable** payment of dividend obligations
- ▶ 8-Year loan facility provides **capital structure stability**
- ▶ Provides **continued financial flexibility** to support FuelCell's long-term strategy

New, Expanded Joint-Development Agreement with ExxonMobil

JOINT-DEVELOPMENT AGREEMENT OVERVIEW

- New, expanded joint-development agreement with Exxon Mobil Research and Engineering, to further enhance carbonate fuel cell technology for large scale deployment, including capturing CO₂ from industrial facilities
- **Two-year, up to \$60 million agreement**, focuses on optimizing the core technology, overall process integration and large-scale deployment of carbonate fuel cell CO₂ capture solutions
 - \$15 million of milestone payments
 - \$45 million of enhanced research and development

FuelCell Impact



- ▶ **Optimizes FuelCell Energy's fuel cell design** to achieve large-scale carbon capture deployment
- ▶ **Supports strategy** related to the development of more cost-efficient technology, which could lead to a broader global opportunity
- ▶ **FuelCell Energy's proprietary technology and innovation is essential to this joint agreement**, using our carbonate fuel cells to efficiently capture and concentrate carbon dioxide streams from large industrial sources
- ▶ FuelCell Energy's MCFC – the only power source that can capture carbon and produce more power

Areas of Execution

Near Term

- Cash management / operating expense improvement ✓
- Sales re-acceleration to capture extensive market opportunities ✓
- Relaunch in the European market ✓
- Tulare BioMAT (Dec. 2019) and Groton (Spring / Summer 2020) construction completion
- Capital structure optimization ✓

Medium Term

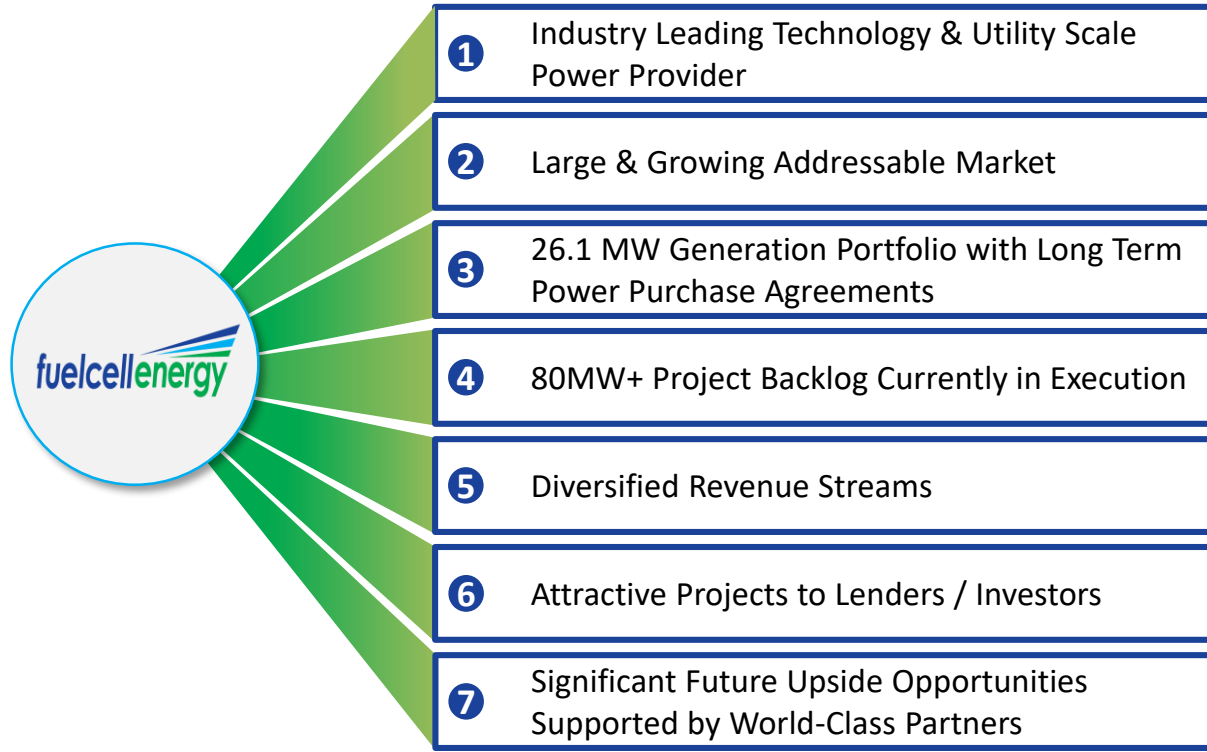
- Restructure the capital stack and corporate structure
- Ramp factory activity to meet increased module demand for projects and service ✓
- Break ground on construction on the LIPA, Derby, CT and San Bernardino projects
- Expand distribution and project financing projects ✓
- Engage the broader markets to ensure the clear benefits of fuel cells are understood and appreciated

Long Term

- Execute on the remainder of the 83.1 MW of projects under development
- Grow the generation portfolio of owned project assets prudently with efficient project level debt ✓
- Win new global business
- Deploy our Advanced Technology solutions



Investment Highlights



Near-Term Focus Areas

Execute on the largest project backlog in Company history — 80MW+ across nine projects

Continue to develop Carbon Capture MCFC-based Solution and market opportunity with ExxonMobil

Execute on relaunched opportunity for SureSource-based solutions in Europe

Rigorous review and control over expenses, with a focus on efficiency and operational leverage