

Hydrogen-Powered Vehicle Stocks

SCS Investment Club

January 2021

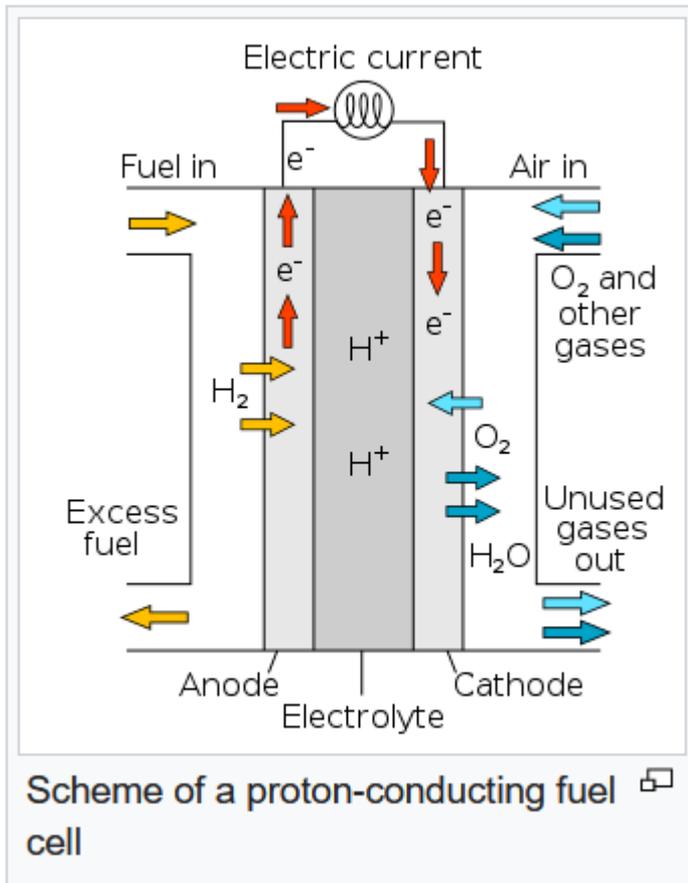
Assignment

- Norm will do a study of hydrogen-powered vehicles for next meeting

What is a Hydrogen-Powered Vehicle?

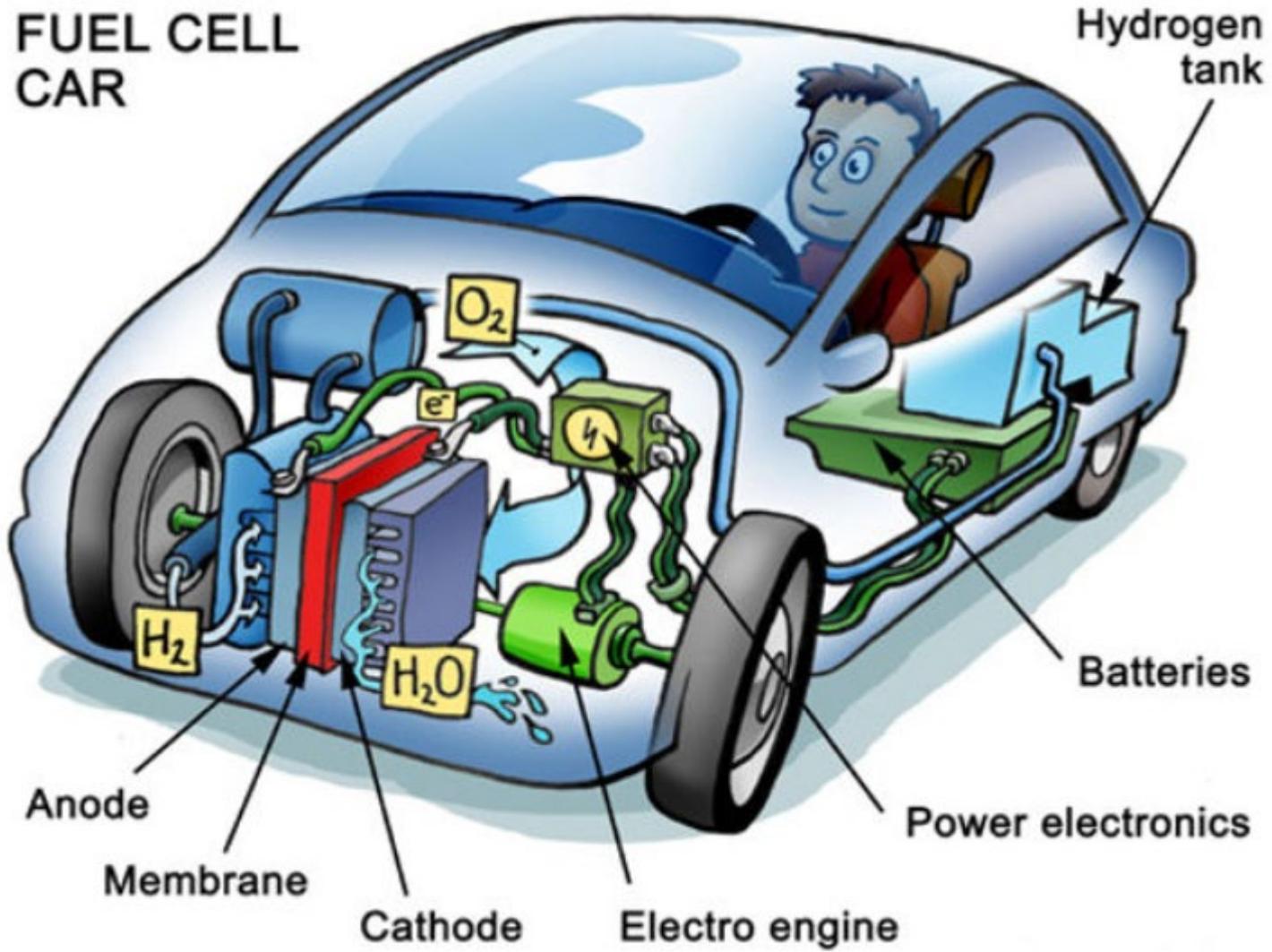
- https://en.wikipedia.org/wiki/Hydrogen_vehicle
- A **hydrogen vehicle** is a [vehicle](#) that uses [hydrogen fuel](#) for [motive power](#). Hydrogen vehicles include hydrogen-fueled [space rockets](#), as well as [automobiles](#) and other transportation vehicles.
- The power plants of such vehicles convert the [chemical energy](#) of hydrogen to [mechanical energy](#) either by burning hydrogen in an [internal combustion engine](#), or, more commonly, by reacting hydrogen with oxygen in a [fuel cell](#) to power [electric motors](#).
- Widespread use of hydrogen for fueling transportation is a key element of a proposed [hydrogen economy](#).^[2]
- As of 2019, there are three models of hydrogen cars publicly available in select markets: the [Toyota Mirai](#), the world's first mass produced dedicated fuel cell electric vehicle, the [Hyundai Nexu](#), and the [Honda Clarity](#). Several other companies are working to develop hydrogen cars.

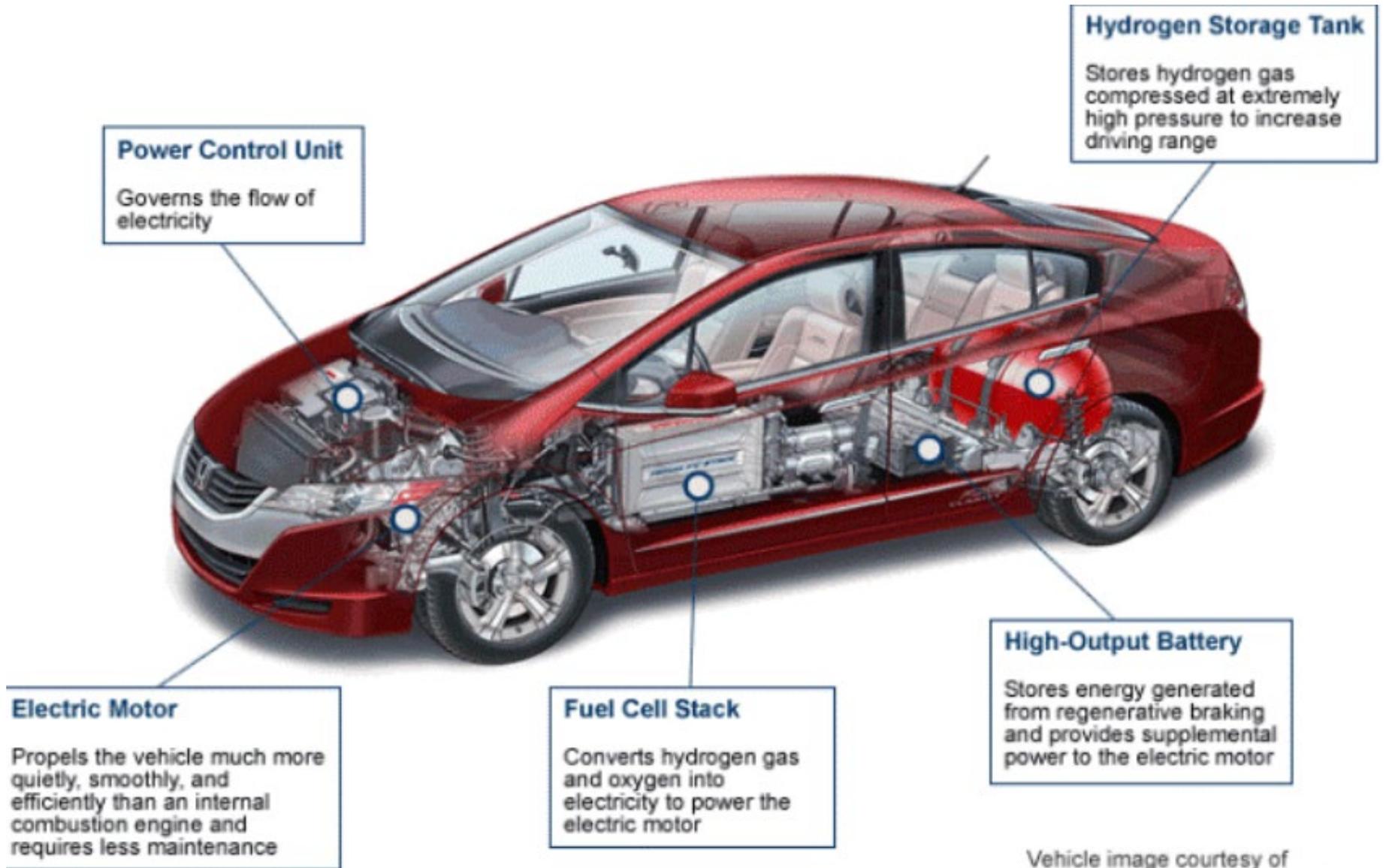
Fuel Cell schematic



- There are many types of fuel cells, but they all consist of an [anode](#), a [cathode](#), and an [electrolyte](#) that allows ions, often positively charged hydrogen ions (protons), to move between the two sides of the fuel cell. At the anode a catalyst causes the fuel to undergo oxidation reactions that generate ions (often positively charged hydrogen ions) and electrons. The ions move from the anode to the cathode through the electrolyte. At the same time, electrons flow from the anode to the cathode through an external circuit, producing [direct current](#) electricity. At the cathode, another catalyst causes ions, electrons, and oxygen to react, forming water and possibly other products

FUEL CELL CAR

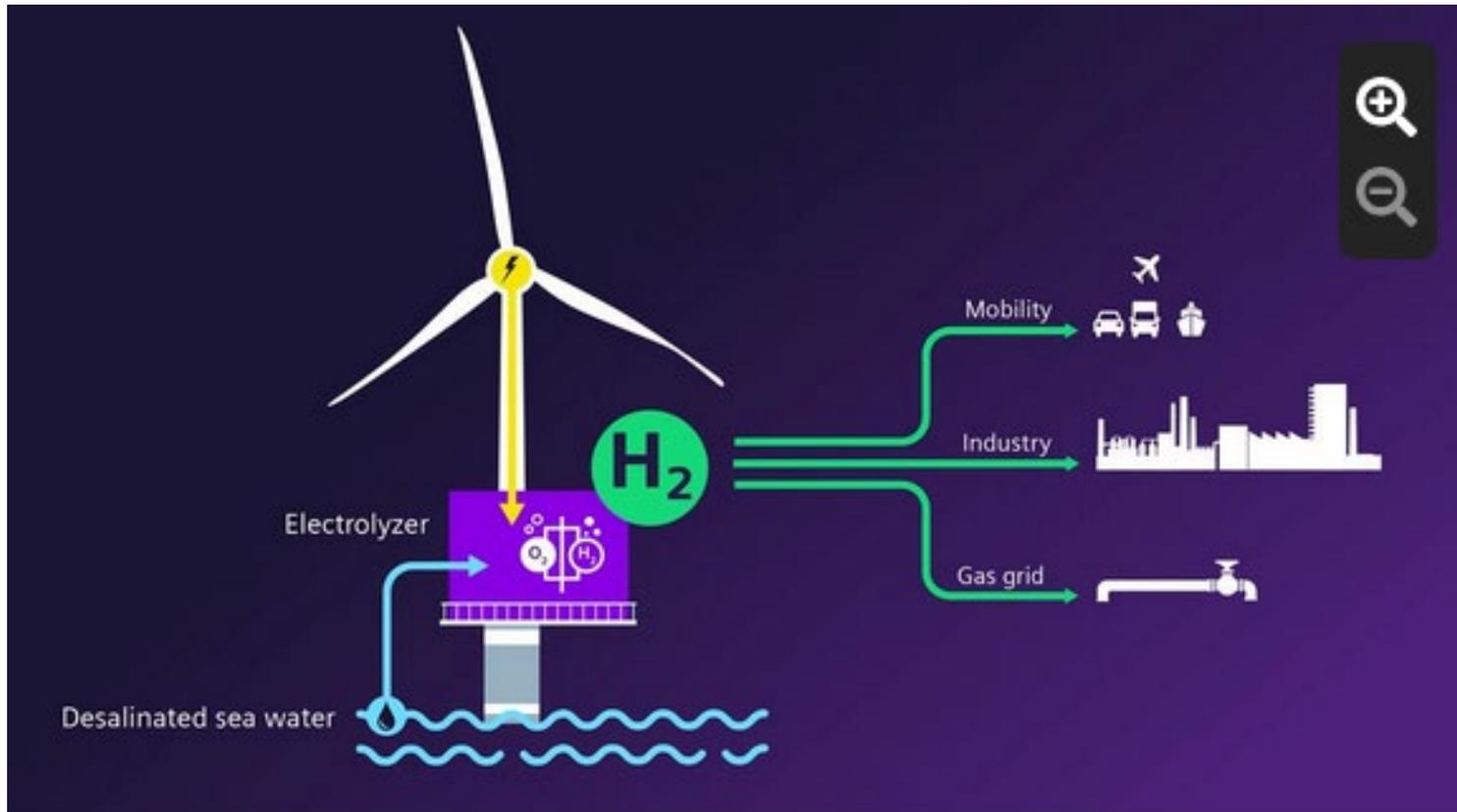




Vehicle image courtesy of American Honda Motor Co., Inc.

Siemens Energy, Gamesa plan 'game-changing' hydrogen solution

By Jack Burke | 13 January 2021



<https://www.diesलगasturbine.com/news/Siemens-Energy-Gamesa-plan-game-changing-hydrogen-solution/>

Total, Engie developing 'green' hydrogen plant

By Jack Burke | 12 January 2021



<https://www.diesलगasturbine.com/news/Total-Engie-developing-green-hydrogen-plant/>

Hydrogen-powered train planned for Scotland

By Jack Burke | 12 January 2021



Ballard announces order for modules to power Scotland's first fuel cell-powered train.

<https://www.diesलगasturbine.com/news/Hydrogen-powered-train-planned-for-Scotland/>

Approach

- Google Search
 - hydrogen powered vehicles
 - Hydrogen power
 - Fuel cells
 - Alternative energy stocks
- From stocks listed:
 - Went to web sites for public information
 - **Morningstar and Value Line reports if available**
 - Fidelity research reports if available
 - Manifest Investing and Yahoo recommendations
 - Better Investing SSGs
 - Toolkit 6 strawman portfolio

Google Search – Barrons (alternate power)

Company / Ticker	Recent Price	Market Cap (bil)	Trailing Revenue (mil)*	Trailing Ebitda (mil)*	EV/Revenue*
Air Products and Chemicals / APD	\$295.51	\$65.3	\$8,819	\$3,417	7.6
Cummins / CMI	190.26	28.1	22,578	3,479	1.4
Plug Power / PLUG	8.95	2.9	246	-14	13.3
Ballard Power Sys / BLPD	18.10	4.4	114	-23	34.3
Bloom Energy / BE	18.71	2.3	741	-48	3.9

* Adjusted. Last four quarters.

Google Search: Motley Fool

Why Fuel Cell Stocks Were Rising Today

The coronavirus stimulus bill has a green energy kicker.



 **Rich Smith** (TMFDitty)

 Dec 22, 2020 at 12:16PM

 [Author Bio](#)



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What happened

Two of the biggest names in [hydrogen fuel cells](#), **Plug Power** ([NASDAQ:PLUG](#)) and **Bloom Energy** ([NYSE:BE](#)), both gained on Monday, and Tuesday is seeing continued momentum for both, with a third fuel cell stock, **FuelCell Energy** ([NASDAQ:FCEL](#)), joining the party this morning. As of 10:15 a.m. EST today, Plug shares were up 11.1%, Bloom 12.3%, and FuelCell 16.7%.

Meanwhile, peer **Ballard Power Systems** ([NASDAQ:BLDP](#)) had a 7.7% gain.



Google Search - Yahoo

The 6 hydrogen stocks powering the next generation of travel here represent the companies that are pioneering the next big move in energy.

- **Air Products & Chemicals** (NYSE:**APD**)
- **Bloom Energy** (NYSE:**BE**)
- **Ballard Power Systems** (NASDAQ:**BLDP**)
- **Cummins** (NYSE:**CMI**)
- **FuelCell Energy** (NASDAQ:**FCEL**)
- **Plug Power** (NASDAQ:**PLUG**)

Air Products & Chemicals (APD)

Google Search – Forbes/Trefis

Hydrogen Economy Stocks

Average Portfolio Return of 83% Since 12/31/2017 vs. 38% for S&P 500 (as of 12/24/2020)

Individual Stock Returns Since 2017:

- 1) [Sunpower \(SPWR\)](#): 398% ([chart](#), [10-k](#))
- 2) [Air Products and Chemicals \(APD\)](#): 61% ([chart](#), [10-k](#))
- 3) [First Solar \(FSLR\)](#): 43% ([chart](#), [10-k](#))
- 4) [Cummins \(CMI\)](#): 27% ([chart](#), [10-k](#))
- 5) [Bloom Energy \(BE\)](#): 22% ([chart](#), [10-k](#))
- 6) [FuelCell Energy \(FCEL\)](#): -54% ([chart](#), [10-k](#))

▼ YTD Returns:

Individual Stock Returns YTD:

- 1) [Sunpower \(SPWR\)](#): 438% ([chart](#), [10-k](#))
- 2) [FuelCell Energy \(FCEL\)](#): 274% ([chart](#), [10-k](#))
- 3) [Bloom Energy \(BE\)](#): 269% ([chart](#), [10-k](#))
- 4) [First Solar \(FSLR\)](#): 72% ([chart](#), [10-k](#))
- 5) [Cummins \(CMI\)](#): 26% ([chart](#), [10-k](#))
- 6) [Air Products and Chemicals \(APD\)](#): 13% ([chart](#), [10-k](#))

Portfolio Performance Since 2017

Average Return: 83% | Median Return: 35%

Performance For Benchmarks

S&P500: 38% | Dow Jones 30: 22%
NASDAQ: 82% | NASDAQ-100: 98%

Portfolio Performance YTD

Average Return: 182% | Median Return: 171%

Performance For Benchmarks

S&P500: 14% | Dow Jones 30: 5.9%
NASDAQ: 41% | NASDAQ-100: 45%

Manifest Investing Mock Dashboard

My Dashboards: Hydrogen Powered Vehicle Stocks

Edit ▼

For SCSIC January 2021 meeting

12/24/2020

Company	Symbol	Shares	Price	Value	% of Total	Growth	Proj P/E	Proj Yield	Fin Str	EPS Stab	Qty	PAR
Air Products & Chem	APD	10.00	\$266.25	\$2,662.50	40.9%	7.2%	25.0	2.0%	100%	70	100	7.4%
Cummins Inc.	CMI	10.00	\$224.22	\$2,242.20	34.4%	3.6%	15.0	2.3%	77%	97	78	1.3%
First Solar, Inc.	FSLR	10.00	\$101.83	\$1,018.30	15.6%	5.9%	16.0	0.0%	31%	35	45	1.8%
Ballard Power*	BLDP	10.00	\$23.48	\$234.80	3.6%	11.8%	30.0	0.0%	0%	3	18	-49.5%
Sunpower	SPWR	10.00	\$30.04	\$300.40	4.6%	0.5%	41.0	0.0%	3%	5	5	-10.4%
	BE	10.00										
FuelCell Energy, Inc.	FCEL	10.00	\$2.19	\$21.90	0.3%							
Plug Power, Inc.	PLUG	10.00	\$2.85	\$28.50	0.4%							
Averages				\$6,508.60		5.6%	21.0	1.6%	73%	68	76.0	1.5%

Yahoo – Mock Portfolio

[Summary](#)
[My Holdings](#)
[Fundamentals](#)
[Performance](#)
[Characteristics](#)
[Risk Analysis](#)
[+ Create New View](#)

[+ Add Symbol](#)
[↑↓ Reorder](#)
 Currency in USD

<input type="checkbox"/> Symbol	Last Price	Change	Chg %	Currency	Market Time	Volume	Shares	Avg Vol (3m)	Day Range		52-Wk Range	Day Chart	Market Cap	
<input type="checkbox"/> APD	266.25	+2.24	+0.85%	USD	4:00PM EST	830,978	-	1.232M	265.00	268.98	167.43	327.89		58.854B
<input type="checkbox"/> CMI	224.22	+0.68	+0.30%	USD	4:02PM EST	490,898	-	1.066M	222.04	225.73	101.03	244.67		33.186B
<input type="checkbox"/> PLUG	36.14	+0.45	+1.26%	USD	4:00PM EST	39.794M	-	34.183M	34.72	37.11	2.53	37.11		15.02B
<input type="checkbox"/> FSLR	101.83	-3.33	-3.17%	USD	4:00PM EST	2.914M	-	3.161M	101.34	109.09	28.47	109.09		10.792B
<input type="checkbox"/> BLDP	23.48	+0.77	+3.41%	USD	4:00PM EST	7.071M	-	4.694M	22.49	23.61	6.71	23.62		6.596B
<input type="checkbox"/> SPWR	30.04	-0.61	-1.99%	USD	4:00PM EST	7.625M	-	8.962M	29.64	31.89	2.64	32.19		5.112B
<input type="checkbox"/> BE	30.59	+0.27	+0.89%	USD	4:00PM EST	58	-	6.946M	29.13	31.06	3.00	31.45		5.084B
<input type="checkbox"/> FCEL	13.42	+2.68	+24.90%	USD	4:00PM EST	173.722M	-	55.282M	11.43	13.91	0.84	13.91		4.327B

Fidelity – Mock Portfolio

Watch List

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Own

As of 12/24/2020 7:56 AM ET

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List H2 powered vehicles New Watch List Edit Watch List Delete Watch List												
											View	
											Basic	
<input type="checkbox"/>		Symbol	Name	Notebook	Last Trade	Change Since Close	Change Since Close (%)	Day High	Day Low	Volume	52Wk High	52Wk Low
<input type="checkbox"/>		APD	AIR PRODUCTS AND CHEMICALS INC		\$266.25	+\$2.24	+0.85%	\$268.98	\$265.00	0	\$327.89	\$167.43
<input type="checkbox"/>		CMI	CUMMINS INC		\$224.22	+\$0.68	+0.30%	\$225.73	\$222.04	1	\$244.67	\$101.025
<input type="checkbox"/>		PLUG	PLUG POWER INC		\$36.14	+\$0.45	+1.26%	\$37.11	\$34.68	18,476	\$37.11	\$2.53
<input type="checkbox"/>		FSLR	FIRST SOLAR INC		\$101.83	-\$3.33	-3.17%	\$109.09	\$101.34	54	\$109.09	\$28.47
<input type="checkbox"/>		BLDP	BALLARD POWER SYSTEMS INC		\$23.48	+\$0.775	+3.41%	\$23.615	\$22.48	8,667	\$23.615	\$6.71
<input type="checkbox"/>		SPWR	SUNPOWER CORP		\$30.04	-\$0.61	-1.99%	\$31.89	\$29.64	1,845	\$32.19	\$2.6386
<input type="checkbox"/>		BE	BLOOM ENERGY CORP		\$30.59	+\$0.27	+0.89%	\$31.06	\$29.13	973	\$31.45	\$3.00
<input type="checkbox"/>		FCEL	FUELCELL ENERGY INC		\$13.42	+\$2.675	+24.90%	\$13.91	\$11.43	329,067	\$13.91	\$0.81



Select Action

Submit

Company	Ticker	Sector Industry	Quality	PAR
Air Products & Chem	APD	Materials Chemicals	100	7.4%

BUSINESS: Air Products and Chemicals, Inc. supplies a variety of atmospheric (oxygen, nitrogen) and process (hydrogen, helium) gases to energy, industrial, technology, and healthcare customers worldwide. The company is the world's largest supplier of hydrogen, with leading positions serving the refinery hydrogen, semiconductor materials, and natural gas liquefaction markets.

FY2018: R&D: .8% of sales; foreign business: 62% of sales. Has about 17,700 employees. Vanguard Group owns 8.3% of shares out.; BlackRock, 8.0%; State Farm Mutual, 7.1%; officers & directors, less than 1% (12/19 Proxy). Chairman, Pres. & CEO: Seifi Ghasemi. Inc.: DE. Addr.: 7201 Hamilton Blvd, Allentown, PA 18195. Telephone: 610-481-4911. Internet: www.airproducts.com.

SAFETY

1

Upgraded on May 2, 2014

TIMELINESS

2

Upgraded on Dec 18, 2020

FINANCIAL STRENGTH

A++

Upgraded on Feb 4, 2017

APD Equity Summary Score
8 Firms†

Bearish
1.1



Valuation Jul 24, 2020 Currency in USD

APD is Undervalued at a 13% Discount.

★

★★

★★★

★★★★★

★★★★★

Fair Value
305.00
Uncertainty: Medium

Last Close
266.25

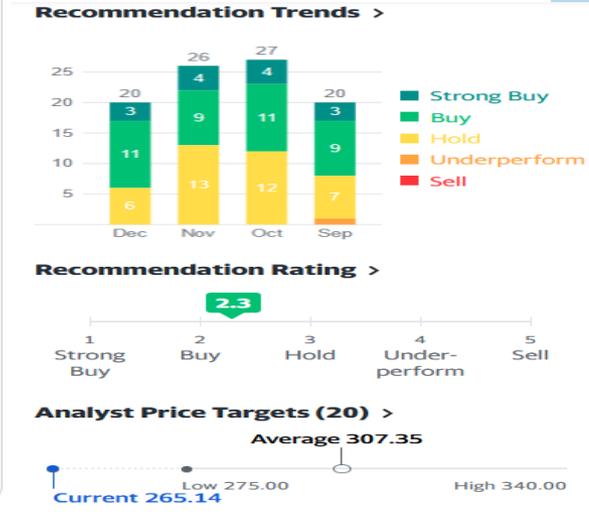
1-Star Price > 411.75

5-Star Price < 213.50

Economic Moat Narrow

Stewardship Exemplary

Trend: Positive



2012	2013	2014	2015	2016	2017	2018	2019	2020	Growth%	Forecast (%)	5 yr Est
9.612	10.180	10.439	9.895	9.524	8.188	8.930	8,919	8,856	-1.9%	8.2	13.134
4.66	4.73	4.59	5.88	6.94	5.16	6.59	7.94	8.55	6.1%	16.7	18.51

SSG Results Summary

Zone: **HOLD**

Upside Downside Ratio: **2.5 To 1**

Total Return (High P/E): **18.3%**

Projected Return (Avg P/E): **14.4%**

Buy price to satisfy US/DS of 3 to 1 and 15% total return: **254.8**

Buy Below price based on zoning selection: **254.8**

Closing Price (12/29/20): **268.73**

Company	Ticker	Sector Industry	Quality	PAR
Cummins Inc.	CMI	Industrials Specialty Industrial Machinery	78	1.3%

BUSINESS: Cummins Incorporated designs, manufactures, distributes, and services diesel engines for the heavy-duty, medium-duty, and light-duty truck, bus, auto, and industrial markets, electric-power-generation systems, and engine-related component products. CMI serves customers in 190 countries through 600 company-owned and independent distributors and through 7,600

dealers. Foreign sales: 43% of '19 total sales. '19 depr. rate: 7.7%. Has about 61,615 employees. Off. & dir. own less than 1% of common stock; The Vanguard Group, 8.2%; BlackRock, Inc., 8.1% (3/20 proxy). Chairman & CEO: N Thomas Linebarger. Inc.: IN. Address: 500 Jackson St., Box 3005, Columbus, IN 47202. Telephone: 812-377-5000. Internet: www.cummins.com.

SAFETY

2

Upgraded on May 12, 2017

TIMELINESS

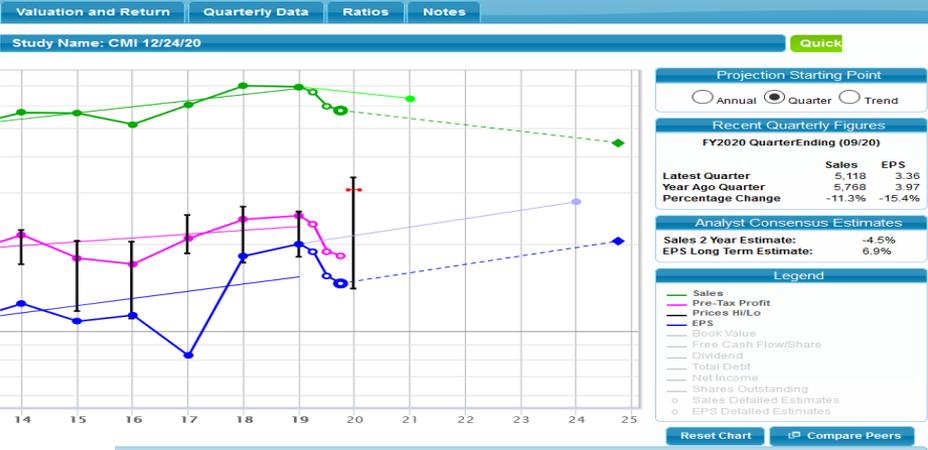
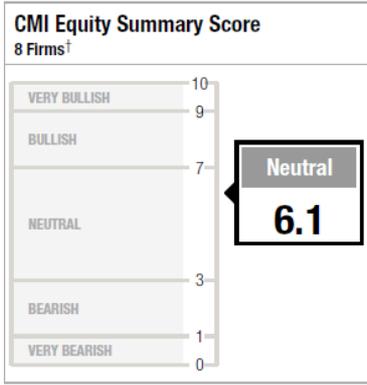
3

Downgraded on Nov 1, 2019

FINANCIAL STRENGTH

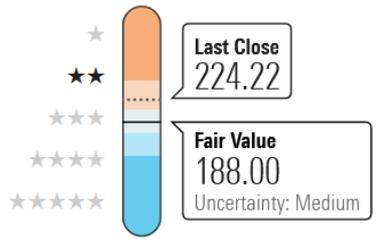
A+

Upgraded on May 11, 2013



Valuation Oct 28, 2020 Currency in USD

CMI is Overvalued at a 19% Premium.



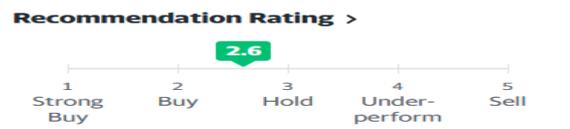
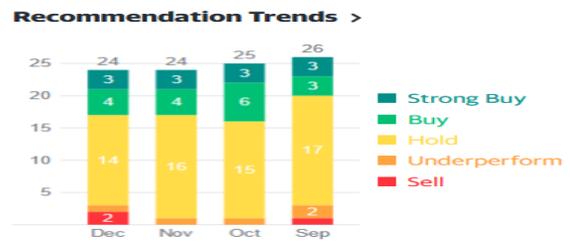
1-Star Price > 253.80

5-Star Price < 131.60

Economic Moat: Narrow

Stewardship Standard

Trend: Stable



2012	2013	2014	2015	2016	2017	2018	2019	Growth(%)	Forecast (%)	5 yr Est
17,334	17,301	19,221	19,110	17,509	20,428	23,771	23,571	5.0%	-5	15,134
8.67	7.91	9.02	7.84	8.23	5.97	13.15	14.48	5.9%	6.9	14.80

SSG Results Summary

Zone: **HOLD**

Upside Downside Ratio: **0.7 To 1**

Total Return (High P/E): **9.3%**

Projected Return (Avg P/E): **4.9%**

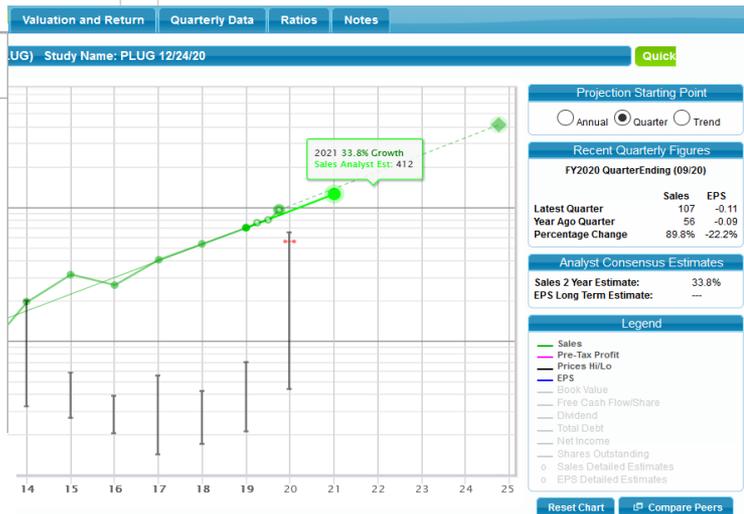
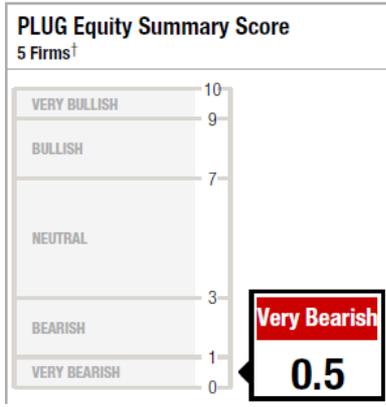
Buy price to satisfy US/DS of 3 to 1 and 15% total return: **154.2**

Buy Below price based on zoning selection: **154.2**

Closing Price (12/29/20): **222.69**



BUSINESS: Plug Power, Inc. is a provider of alternative energy technology focused on the design, development, commercialization, and manufacture of fuel cell systems for the industrial off-road (forklift or material handling) market. The company focuses on proton exchange membrane (PEM) fuel cell and fuel processing technologies, and fuel cell/battery hybrid technologies. Its product line includes GenKey, a turn-key solution for transitioning material handling vehicles to fuel cell power; GenDrive, which is a hydrogen fueled PEM fuel cell system that provides power to material handling vehicles; GenFuel, a hydrogen fueling delivery system; GenCare, which is an ongoing maintenance program for GenDrive fuel cells and GenFuel products; and ReliOn, a stationary fuel cell solution that provides scalable and modular PEM fuel cell power to support the backup and grid-support power requirements of the telecommunications, transportation, and utility sectors. Has 835 employees. C.E.O. & President: Andrew J. Marsh Address: 968 Albany Shaker Road, Latham, NY 12110. Tel.: (518) 782-7700. Internet: www.plugpower.com.



Valuation ^Q Dec 23, 2020 Currency in USD

PLUG is Overvalued at a 44% Premium.

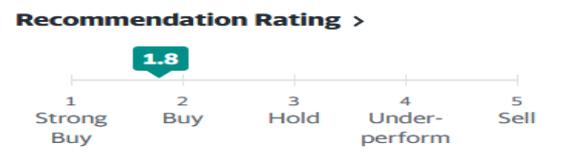
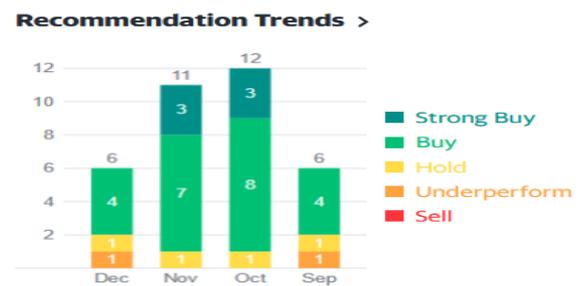
Last Close: 36.14

Fair Value^Q: 25.10
Uncertainty: Very High

1-Star Price ^Q: > 42.37

5-Star Price ^Q: < 14.87

Economic Moat ^Q: None



10	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth(%)	Forecast (%)	5 yr Est
19	28	26	27	64	103	86	133	175	230	33.2%	34	1,357
3.60	-1.46	-0.93	-0.82	-0.56	-0.32	-0.32	-0.60	-0.36	-0.36	0.0%	298.1	1.00

SSG Results Summary

Zone: **BUY**

Upside Downside Ratio: **94.3 To 1**

Total Return (High P/E): **147.3%**

Projected Return (Avg P/E): **NMF**

Buy price to satisfy US/DS of 3 to 1 and 15% total return: **750.7**

Buy Below price based on zoning selection: **750.7**

Closing Price (12/29/20): **32.46**

Company	Ticker	Sector Industry	Quality	PAR
First Solar, Inc.	FSLR	Technology Solar	45	1.8%

BUSINESS: First Solar, Inc. designs and manufactures solar modules for use in the conversion of solar energy for everyday use. The modules are produced using a proprietary thin-film semiconductor technology that allows for a lower manufacturing cost per watt than traditional crystalline silicon solar modules. Amount of megawatts (MW) of modules sold: '08, 498 MW; '09, 568 MW; '10,

727 MW; '11, 880 MW; '12 1.9 GW; '13, 2.6 GW; '14, 2.9 GW; '15, 2.5 GW; '16, 3.1 GW; '17, 2.3 GW; '18, 2.7 GW; '19, 5.7 GW. Has 6,600 employees. Foreign sales: 13% of '19 total. Lukas Walton owns 21.2% of common; off./dir., less than 1% (4/20 Proxy). CEO: Mark Widmar. Inc.: DE. Address: 350 West Washington St., Tempe, AZ 85281. Tel.: 602-414-9300. Int.: www.firstsolar.com.



Upgraded on Mar 27, 2009



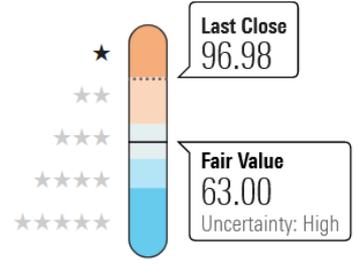
Upgraded on Jun 26, 2020



Upgraded on Feb 14, 2009

Valuation Oct 28, 2020 Currency in USD

FSLR is Significantly Overvalued at a 54% Premium.

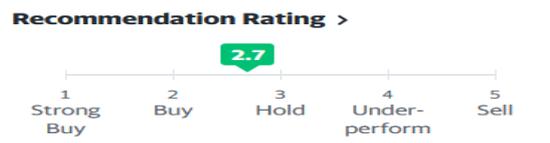
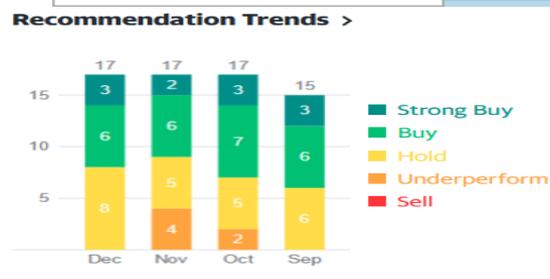
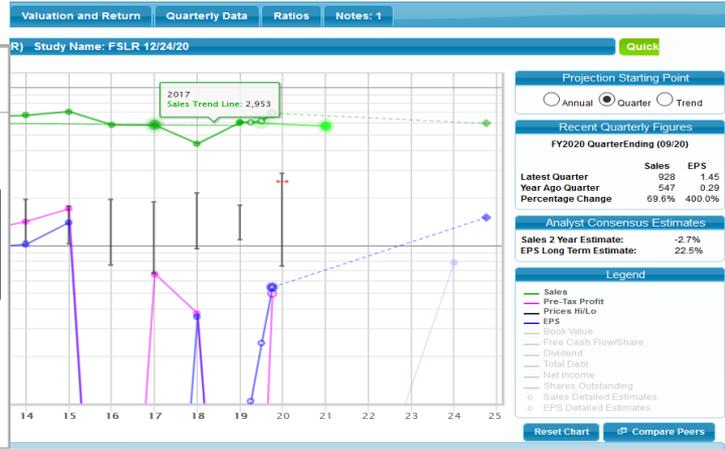
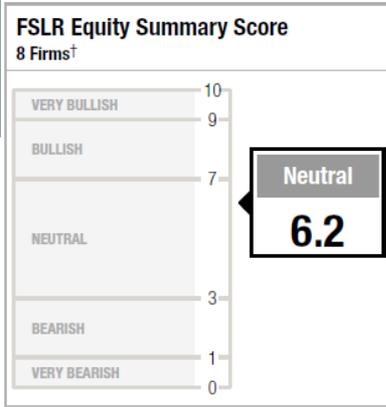


1-Star Price > 97.65
5-Star Price < 37.80

Economic Moat None
Stewardship Standard

Trend: Stable

1/15/2021



2012	2013	2014	2015	2016	2017	2018	2019	Growth(%)	Forecast (%)	5yr Est
369	3,309	3,302	3,579	2,951	2,941	2,244	3,063	-0.5%	-3	3,007
1.11	3.70	3.91	5.37	-3.48	-1.59	1.36	-1.09	-28.1%	22.5	5.77

SSG Results Summary

Zone: **HOLD**

Upside Downside Ratio: **2.8 To 1**

Total Return (High P/E): **24.3%**

Projected Return (Avg P/E): **14.8%**

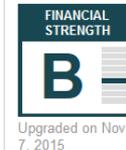
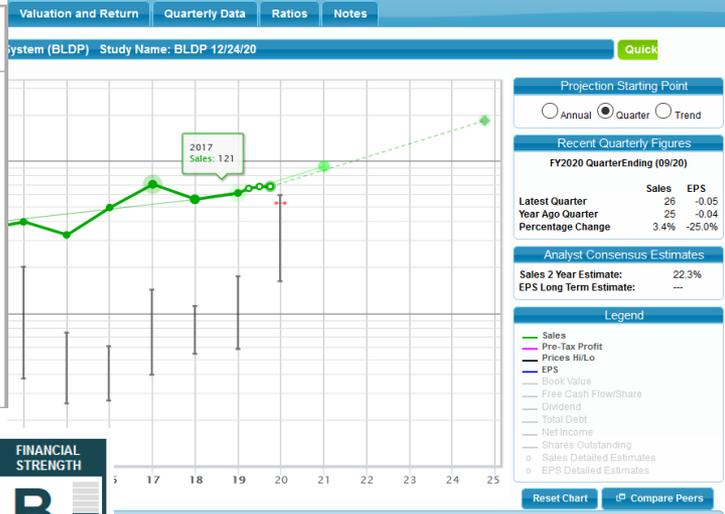
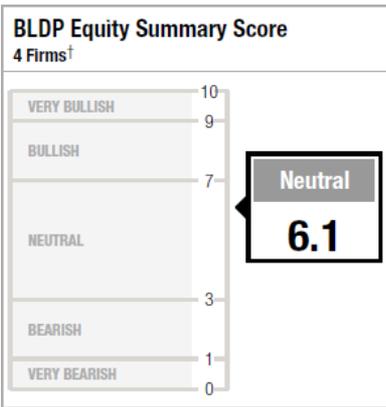
Buy price to satisfy US/DS of 3 to 1 and 15% total return: **93.4**

Buy Below price based on zoning selection: **93.4**

Closing Price (12/29/20): **96.98**

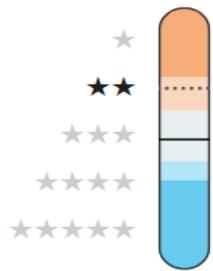
Company	Ticker	Sector Industry	Quality	PAR
Ballard Power*	BLDP	Industrials Specialty Industrial Machinery	18	-49.5%

BUSINESS: Ballard Power Systems, Inc. manufactures, sells, and services fuel cell products for a variety of applications, focusing on power product markets of heavy-duty motive (consisting of bus, truck, rail, and marine applications), portable power/UAV, material handling and backup power, as well as the delivery of technology Solutions, including engineering services, technology transfer, and the license and sale of its intellectual property portfolio. Ballard has a non-controlling, 49% interest in Weichai Ballard Hy-Energy Technologies Co., Ltd. with intention to manufacture Ballard's next-generation LCS fuel cell stack and LCS-based power modules. In addition, it has a 10% interest in Guangdong Synergy Ballard Hydrogen Power Co., Ltd. to manufacture fuel cell stacks utilizing its existing FCvelocity(R)-9SSL fuel cell stack technology for use in fuel cell engines assembled in China to provide propulsion power for zero-emission fuel cell electric bus and commercial vehicles. Has 610 employees. C.E.O. ...



Valuation ^Q Dec 29, 2020 Currency in USD

BLDP is Overvalued at a 39% Premium.



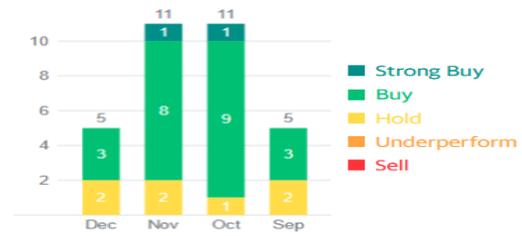
1-Star Price ^Q
> 23.29

5-Star Price ^Q
< 10.84

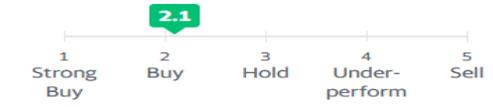
Economic Moat ^Q
 None

Stewardship
—

Recommendation Trends >



Recommendation Rating >



Analyst Price Targets (10) >



SSG Results Summary

Zone:	BUY
Upside Downside Ratio:	41.3 To 1
Total Return (High P/E):	107.1%
Projected Return (Avg P/E):	NMF
Buy price to satisfy US/DS of 3 to 1 and 15% total return:	211.7
Buy Below price based on zoning selection:	211.7
Closing Price (12/29/20):	22.07

Company	Ticker	Sector Industry	Quality	PAR
Sunpower	SPWR	Technology Solar	5	-10.4%

BUSINESS: SunPower Corporation is a solar energy company that delivers complete solar solutions (including hardware, software, and financing options) to customers in the U.S. and Canada. In 8/20, spun off most of manufacturing facilities into a new entity called Maxeon Solar Technologies; in 6/18 divested minority interest in the Yieldco, 8point3 Energy Partners. Geographical sales break-

down in 2019: United States, 57%; Japan, 5%; rest of world 38%. Acquired Solar Solutions, 1/08; SunRay, 2/10. Has 8,400 employees. Total S.A. owned approximately 47% of common shares as of 12/29/19. Bought about 1.8% more by 2/3/20 (source 2019 10-K). Chrmn., Pres., & CEO: T. Werner. Addr.: 77 Rio Robles, San Jose, CA 95134. Tel.:408-240-5500 Internet: www.sunpower.com

SAFETY

5

Downgraded on Dec 15, 2017

TIMELINESS

3

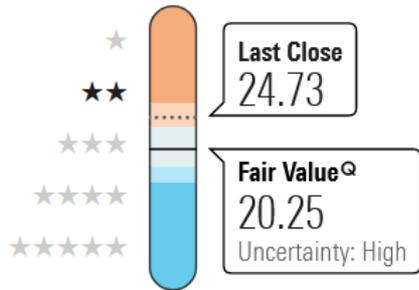
FINANCIAL STRENGTH

C++

Downgraded on Aug 5, 2017

Valuation ^Q Dec 29, 2020 Currency in USD

SPWR is Overvalued at a 22% Premium.



1-Star Price ^Q
> 26.65

5-Star Price ^Q
< 15.39

Economic Moat ^Q
None

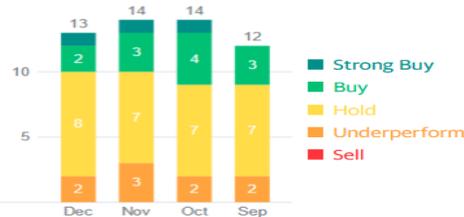
Stewardship
—

1/15/2021

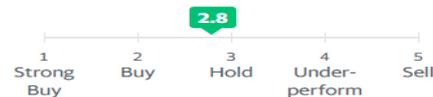
SPWR Equity Summary Score



Recommendation Trends



Recommendation Rating



Analyst Price Targets (13)



Hydrogen Powered Vehicle Stocks

Valuation and Return Quarterly Data Ratios Notes

VR) Study Name: SPWR 12/24/20 Quick

Projection Starting Point
 Annual Quarterly Trend

Recent Quarterly Figures
 FY2020 Quarter Ending (09/20)

	Sales	EPS
Latest Quarter	275	0.57
Year Ago Quarter	476	-0.11
Percentage Change	-42.3%	618.2%

Analyst Consensus Estimates
 Sales 2 Year Estimate: -12.2%
 EPS Long Term Estimate: —

	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth(%)	Forecast (%)	5 yr Est
19	2,312	2,418	2,507	3,027	1,576	2,560	1,872	1,726	1,864	-3.3%	-10	992
64	-6.18	-3.01	0.70	1.55	-1.39	-3.41	-6.11	-5.76	0.15	-25.5%	-20	0.23

SSG Results Summary

Zone: **INVALID**

Upside Downside Ratio: **Invalid**

Total Return (High P/E): **-18.0%**

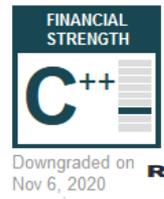
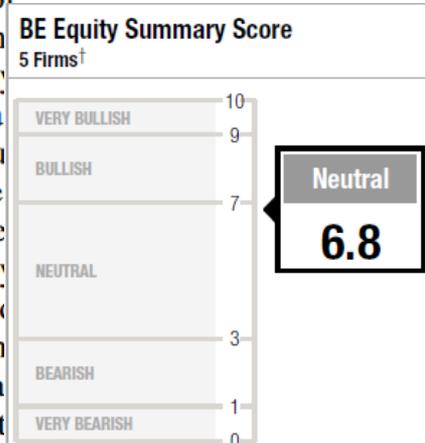
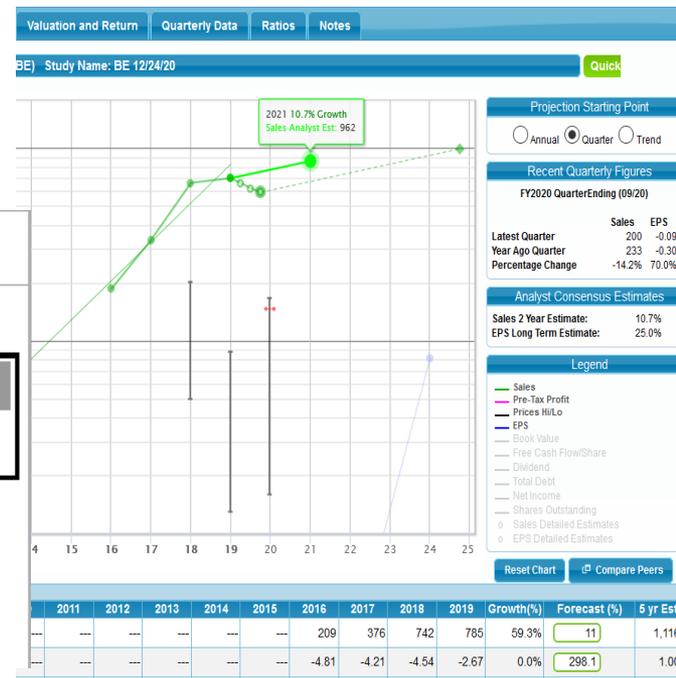
Projected Return (Avg P/E): **-22.3%**

Buy price to satisfy US/DS of 3 to 1 and 15% total return: **4.3**

Buy Below price based on zoning selection: **4.3**

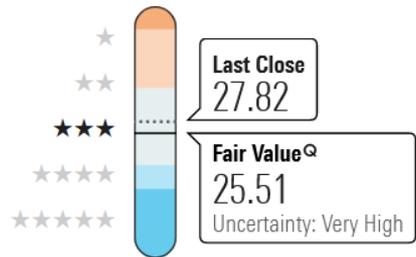
Closing Price (12/29/20): **24.73**

BUSINESS: Bloom Energy Corporation designs, manufactures, and sells solid-oxide fuel cell systems, or Energy Servers, for on-site power generation. Its power generators or Energy Servers utilize an innovative fuel cell technology. Its solution, the Bloom Energy Server, is a stationary power generation platform built for the digital age and capable of delivering highly reliable, uninterrupted, 24x7 constant power that is also clean and sustainable. The Bloom Energy Server converts standard low-pressure natural gas or biogas into electricity through an electrochemical process without combustion, resulting in very high conversion efficiency and lower harmful emissions than conventional fossil fuel generation. Some of the industries the company currently serves consist of banking and financial services, cloud



care. Bloom Energy is a member of the S&P 500 company. CEO & President of the company is located at San Jose, CA.

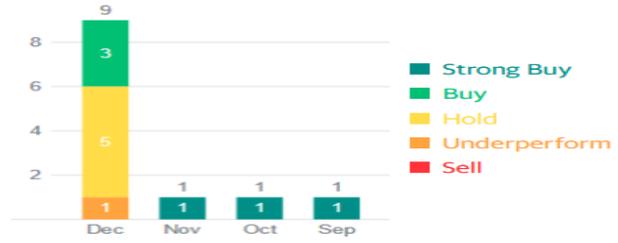
Valuation ^Q Dec 29, 2020 Currency in USD
BE is Overvalued at a 9% Premium.



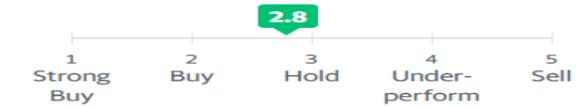
1-Star Price ^Q > 46.31
5-Star Price ^Q < 14.05

Economic Moat ^Q
Narrow

Recommendation Trends >



Recommendation Rating >



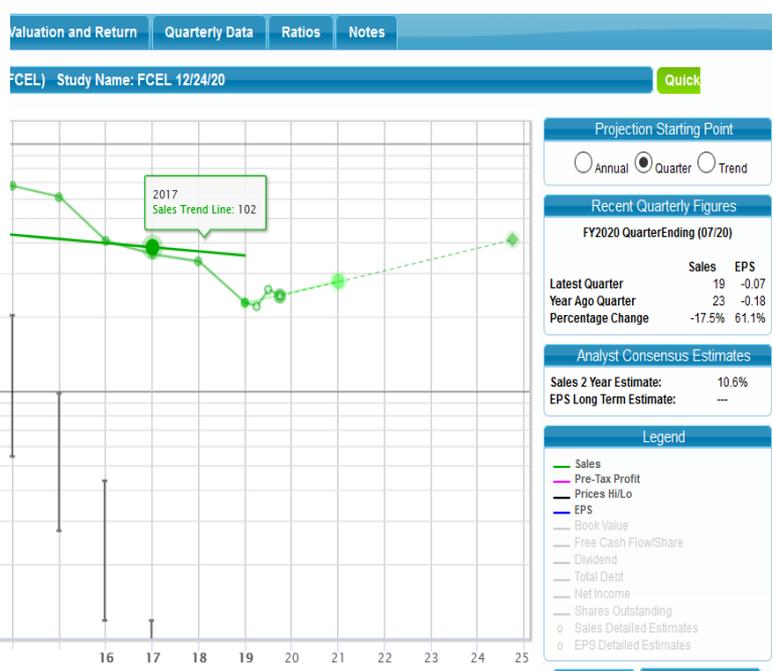
Analyst Price Targets (8) >



SSG Results Summary

Zone: **BUY**
834.1 To 1,116
Upside Downside Ratio: 1
Total Return (High P/E): 277.0%
Projected Return (Avg P/E): NMF
Buy price to satisfy US/DS of 3 to 1 and 15% total return: 5,301.4
Buy Below price based on zoning selection: 5,301.4
Closing Price (12/29/20): 27.82

FuelCell Energy Inc is a fuel-cell power company. FuelCell designs manufactures, sells, installs, operates, and services fuel-cell products, which efficiently convert chemical energy in fuels into electricity through a series of chemical reactions. It serves various industries such as Industrial, Wastewater treatment, Commercial and Hospitality, Data centers and Communications, Education and Healthcare, and others. Geographically, the company generates a majority of its revenue from the United States followed by South Korea.

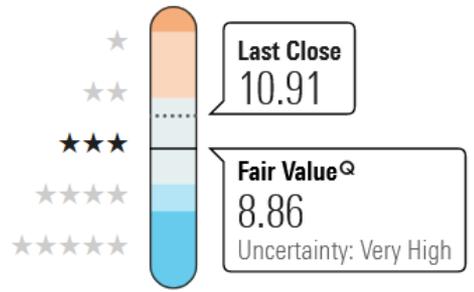


Performance **Safety** **Financial Strength**

2

Valuation ^Q Dec 29, 2020 Currency in USD

FCEL is Overvalued at a 23% Premium.

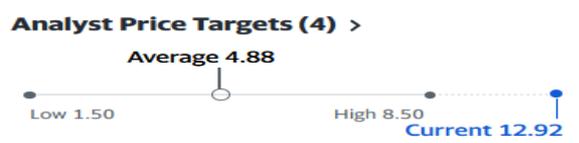
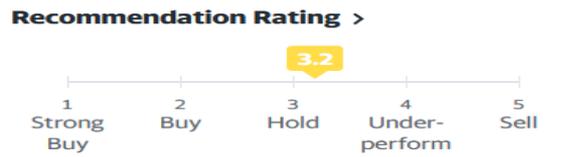
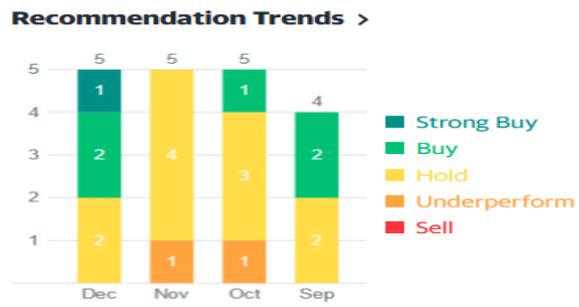


1-Star Price ^Q > 16.09

5-Star Price ^Q < 4.88

Economic Moat ^Q Narrow

Stewardship —



2012	2013	2014	2015	2016	2017	2018	2019	Growth(%)	Forecast (%)	5 yr Est
121	188	180	163	108	96	89	61	-3.8%	11	109
-33.12	-28.80	-24.48	-15.95	-21.84	-13.68	-9.00	-1.82	0.0%	298.1	1.00

SSG Results Summary

Zone: **BUY**

Upside Downside Ratio: **528.1 To 1**

Total Return (High P/E): **249.7%**

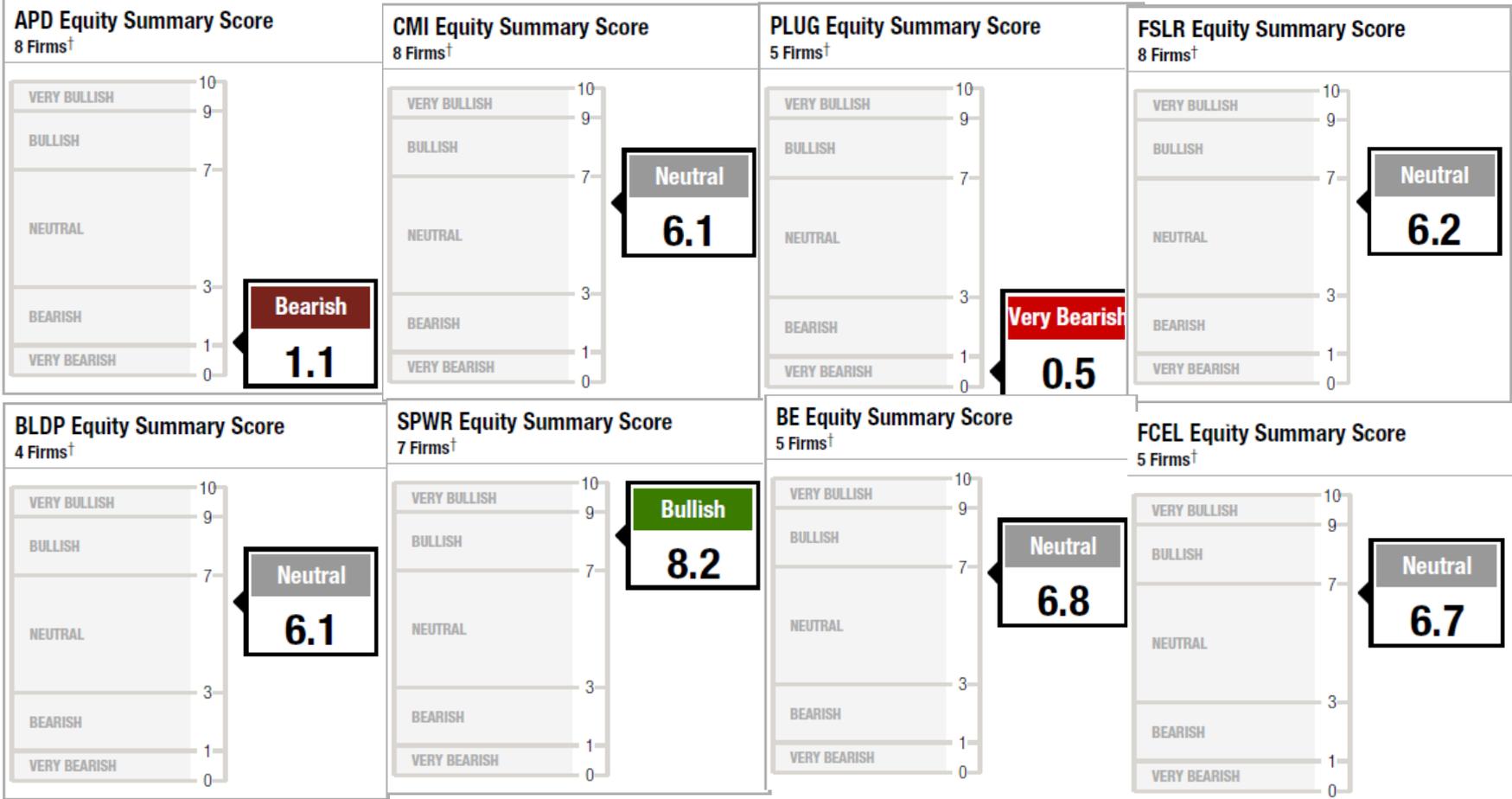
Projected Return (Avg P/E): **NMF**

Buy price to satisfy US/DS of 3 to 1 and 15% total return: **1,425.0**

Buy Below price based on zoning selection: **1,425.0**

Closing Price (12/29/20): **10.90**

Research Ratings



Yahoo Finance Analysts

APD Equity Summary Score 8 Firms†

Recommendation Trends >



Recommendation Rating >



Analyst Price Targets (20) >



CMI Equity Summary Score 8 Firms†

Recommendation Trends >



Recommendation Rating >



Analyst Price Targets (17) >



PLUG Equity Summary Score Recommendation Trends >



Recommendation Rating >



Analyst Price Targets (12) >



FSLR Equity Summary Score Recommendation Trends >



Recommendation Rating >

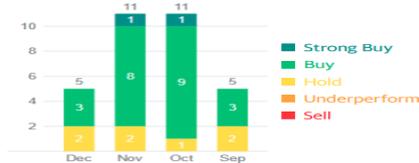


Analyst Price Targets (16) >



BLDP Equity Summary Score 4 Firms†

Recommendation Trends >



Recommendation Rating >



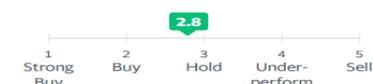
Analyst Price Targets (10) >



SPWR Equity Summary Score Recommendation Trends >



Recommendation Rating >



Analyst Price Targets (13) >



BE Equity Summary Score Recommendation Trends >



Recommendation Rating >



Analyst Price Targets (8) >



FCEL Equity Summary Score Recommendation Trends >



Recommendation Rating >



Analyst Price Targets (4) >



Better Investing Mock Portfolio

H2 POWERED VEH STKSF :: Summary Report :: 12/30/2020

Portfolio Total Value \$7,063.90 Portfolio dollar-weighted average US/DS: Invalid %Total Return: 37.5

Ticker	Company	Price Date	Price	Shares	Total Value	% of Portfolio	Current PE	Buy Below	Sell Above	US/DS	% Tot Ret	Rec
APD	Air Products & Chem	12/29/2020	268.73	10.0	2,687.30	38.0	31.4	254.80	467.40	2.5	18.3	Hold
BLDP	Ballard Power System	12/29/2020	22.07	10.0	220.70	3.1	NMF	211.70	630.50	41.3	107.1	Buy
BE	Bloom Energy	12/29/2020	27.82	10.0	278.20	3.9	NMF	5301.40	15899.20	834.1	277.0	Buy
CMI	Cummins	12/29/2020	222.69	10.0	2,226.90	31.5	21.0	154.20	260.50	0.7	9.3	Hold
FSLR	First Solar	12/29/2020	96.98	10.0	969.80	13.7	46.4	93.40	223.30	2.8	24.3	Hold
FCEL	FuelCell Energy	12/29/2020	10.91	10.0	109.10	1.5	NMF	1425.00	4274.60	527.9	249.6	Buy
PLUG	Plug Power	12/29/2020	32.46	10.0	324.60	4.6	NMF	750.70	2250.00	94.3	147.3	Buy
SPWR	SunPower	12/29/2020	24.73	10.0	247.30	3.5	35.3	4.30	7.50	Invalid	-18.0	Invalid

My Recommendation

- It will take massive funding from Governments to make this technology profitable
- Biden administration has committed to eliminate fossil fuels so this sector will grow
- Hydrogen supply or fuel cell infrastructure does not now exist
- To invest broadly in the sector consider ICLN GLOBAL CLEAN ENERGY ETF

iShares Global Clean Energy ETF (ICLN)

NasdaqGM - NasdaqGM Real Time Price. Currency in USD

☆ Add to watchlist

27.66 **-0.27 (-0.97%)** **28.00** **+0.34 (1.23%)**

At close: December 29 4:00PM EST

Before hours: 5:42AM EST

[Summary](#) [Chart](#) [Conversations](#) [Historical Data](#) [Profile](#) [Options](#) **[Holdings](#)** [Performance](#) [Risk](#)

Overall Portfolio Composition (%)

Stocks	99.60%
Bonds	0.00%

Equity Holdings

Average	ICLN
Price/Earnings	32.29
Price/Book	3.75

Top 10 Holdings (48.42% of Total Assets)

[Get Quotes for Top Holdings](#)

Name	Symbol	% Assets
Plug Power Inc	PLUG	5.73%
Meridian Energy Ltd	MEL.NZ	5.18%
Enphase Energy Inc	ENPH	5.08%
Siemens Gamesa Renewable Energy SA	SGRE.BC	4.85%
Verbund AG	VER	4.74%
Vestas Wind Systems A/S	VWS	4.71%
First Solar Inc	FSLR	4.69%
Orsted A/S	ORSTED	4.62%
Contact Energy Ltd	CEN.NZ	4.56%
Xinyi Solar Holdings Ltd	00968	4.26%

References

1. <https://www.yahoo.com/now/6-hydrogen-stocks-buy-next-185147707.html>
2. <https://www.fool.com/investing/2016/11/28/should-you-invest-in-a-fuel-cell-stock.aspx>
3. <https://www.forbes.com/sites/greatspeculations/2020/12/14/bloom-cummins-first-solar-stocks-to-play-the-hydrogen-economy/?sh=4565759c2438>
4. <https://www.fool.com/investing/2020/12/22/why-fuel-cell-stocks-were-rising-today/>
5. <https://www.barrons.com/articles/hydrogen-stocks-have-hit-bubble-territory-51595623974>