

UQM OVERVIEW

UQM Technologies is a developer and manufacturer of power-dense, high-efficiency electric motors, generators, power electronic controllers and fuel cell compressors for the commercial truck, bus, automotive, marine, military and industrial markets.

A major emphasis for UQM is developing propulsion systems for electric, hybrid electric, plug-in hybrid electric and fuel cell electric vehicles. UQM is TS 16949 and ISO 14001 certified and located in Longmont, Colorado.



UQM TECHNOLOGIES HIGHLIGHT

Recently, ITL Efficiency Corporation and Eastlake New Energy's mgmt team visited UQM's HQ, followed by a joint visit to Proterra by the respective mgmt teams.



**Powered by UQM Technologies, manufactured by Proterra and in use by the San Joaquin Regional Transit District (read more about the visit on page 5).*

UQM TECHNOLOGIES LATEST NEWS

- ❖ **April 13, 2016** – UQM Technologies Receives Follow-On Production Order From Kalmar Motor AB – For Towbarless Electric Airplane Tugs To Major Airlines.
- ❖ **March 18, 2016** – UQM Technologies CEO Interviewed by EnergyTech Investor on the Emerging Opportunities in China.
- ❖ **March 10, 2016** - UQM Technologies Receives New Follow-On Order From Proterra to Support Increased Demand.

UQM PRODUCTS: POWERPHASE GENERATORS

UQM engineered the PowerPhase® systems to perform as both motor and generator in applications ranging from heavy-duty diesel engines to low-power gasoline engines. With appropriate energy storage, the systems can also operate as engine starters. Utilizing software developed to operate in all four quadrants, UQM's engineering team work together with the clients through the mechanical and electrical integration.

POWERPHASE® GENERATOR FEATURES:



- ⇒ User selectable torque and speed control,
- ⇒ Liquid cooled (50/50 water/glycol liquid cooling),
- ⇒ Built-in safety features,
- ⇒ Application-friendly graphical user interface,
- ⇒ Diagnostic software with real time data logging.

AUTOMOTIVE RECHARGABLE BATTERY MARKET IN CHINA ON DEMAND OF BOOMING GLOBAL ECO-FRIENDLY VEHICLE MARKET

<http://reports.pr-inside.com/automotive-rechargeable-battery-market-in-china-on-r4414155.htm>

The report provides detailed market analysis of electric vehicle rechargeable battery market in China. Chinese electric vehicle rechargeable battery market is analyzed on the basis of the electric vehicle market. The electric vehicle market is analyzed by electric vehicle and electric buses sales volume. The market grew tremendously in the year 2014 as compared to the previous year 2013 due to the government policies implemented to foster the industry, increased consumer demand and corporate innovations. The rise in electric vehicles market signifies the expansion in the automotive rechargeable batteries...

REPORT EXPLORES THE WORLDWIDE ELECTRIC VEHICLE INDUSTRY ANALYSIS AND FUTURE TRENDS TO 2020

<https://www.whatech.com/market-research/energy/149135-worldwide-electric-vehicle-industry-analysis-and-future-trends-to-2020>

Global and Chinese electric vehicle markets were still in the accelerated growth phase; wherein, the global electric vehicle (EV & PHEV) sales volume reached 549,000, increasing by 72.83% year on year; China sold 331,100 electric vehicles, with a year-on-year surge of 343%. From January to February of 2016, the sales volume in China totaled 35,700, going up 1.7 times year on year and marking the sustainable growth...

BY 2022, HYBRID AND ELECTRIC POWERTRAIN WILL PROLIFERATE 39% OF TOTAL TRANSIT BUS SALES - RESEARCH AND MARKETS

<http://www.kltv.com/story/31689552/by-2022-hybrid-and-electric-powertrain-will-proliferate-39-of-total-transit-bus-sales-research-and-markets>

Chinese and European markets, which look for cost-effective means to reduce emission, will opt for fleet replacement with hybrid and electric buses. China, especially, has taken extensive measures to reduce emissions, by proposing that provincial administrations aim to convert more than 50 percent of its fleets to new energy buses. Driven by strong Government incentive programs in building and commissioning of plug-in/electric buses (e-buses), a large scale adoption is taking place in China...



INDIAN STUDY SAYS ELECTRIC BUSES EARN 82% MORE PROFIT THAN DIESEL BUSES

<http://www.motorindiaonline.in/buses/indian-study-says-electric-buses-earn-82-more-profit-than-diesel-buses/>

Cities around the world are investigating the potential of electric transit buses to reduce costs and improve air quality. The latest is Bangalore, India's high-tech hub, which recently tested what it says are the country's first electric buses. Electric buses' greater energy efficiency compared to legacy diesel vehicles (and even CNG buses) has already been well documented. Now a study from the Indian Institute of Science (IISc) has found another reason that e-buses are superior, it is more profitable. "Electric buses generate 27% more revenue and 82% more profit than diesel buses per day. Furthermore, 25 tons of CO2 emission can be cut every year for every diesel bus replaced by an electric bus" said study co-author Ms. Sheela Ramasesha. The IISc researchers tested a Chinese-built electric bus for three months on an existing route in Bangalore, and compared its economic and environmental impact with a diesel bus on the same route...



GLOBAL ELECTRIC BUS MARKET: CHINA PRESENTING SIGNIFICANT GROWTH OPPORTUNITIES

<http://chollywood.info/global-electric-bus-market-china-presenting-significant-growth-opportunities/>

The featured report from Persistence Market Research (PMR), titled "Global Market Study on Electric Bus: Asia Pacific to Witness Highest Growth by 2020", delivers a 360-degree view of the market. According to the report, the global electric bus market will expand at a remarkable CAGR of 28.0% during the forecasting horizon from 2014 to 2020. By 2020, the global electric bus market is expected to record a volume of 33,854 units...

ELECTRIC BUSES TO HIT MINSK STREETS BY YEAR-END 2016

<http://forsecurity.org/electric-buses-hit-minsk-streets-year-end-2016>

Belkommunmash Company will make two pilot electric buses for the Belarusian capital by year-end 2016, BelTA learned from First Deputy Chairperson of the Economy Committee of Minsk City Hall, Tatyana Kravchenko. She said that the pilot vehicles will be tested in Minsk by the end of the year. Electric buses are considered "a green means of transport of the 21st century" thanks to the total absence of harmful emissions, low noise pollution, and usage of clean energy. No power lines will be needed to recharge the electric buses. It will be enough to install charging points at bus stops for the buses to get the necessary energy amounts. Belkommunmash Company noted that it is currently working to introduce the buses into the city's key transport routes...

ETI CLEAN TRANSPORTATION INDEX- COMP TABLE

Company	Ticker	Price	Market Cap (\$M)	Enterprise Value (\$M)	TTM EBITDA (\$M)	EV/EBITDA	Dividend Yield (%)	FY14 Revenue	FY15 Revenue	FY16 Revenue	EV / Rev FY14	EV / Rev FY15	EV / Rev FY16	FY14 EPS	FY15 EPS	FY16 EPS	P/E FY14	P/E FY15	P/E FY16
Sector: Clean Transportation																			
Advanced Battery	ABAT	\$0.04	3.1	-\$71	\$47	-1.5x	N/A	N/A	N/A	N/A	N.A.	N.A.	N.A.	N/A	N/A	N/A	N.A.	N.A.	N.A.
Afc Energy	AFC-LN	\$15.13	46.6	\$45	-\$2	-24.7x	N/A	\$3.6	\$1.7	\$3.6	12.4x	26.3x	12.4x	(\$1.80)	(\$0.90)	(\$1.80)	N.M.	N.M.	N.M.
Altair Nano	ALTI	\$0.33	3.8	\$12	-\$13	-0.9x	N/A	N/A	N/A	N/A	N.A.	N.A.	N.A.	N/A	N/A	N/A	N.A.	N.A.	N.A.
Bak	CBAK	\$2.74	44.7	\$59	-\$5	N/A	N/A	N/A	N/A	N/A	N.A.	N.A.	N.A.	N/A	N/A	N/A	N.A.	N.A.	N.A.
Clean Diesel	CDTI	\$0.64	12.9	\$20	-\$8	-2.5x	N/A	\$43.8	\$40.3	\$40.7	0.5x	0.5x	0.5x	(\$0.70)	(\$0.70)	(\$0.22)	N.M.	N.M.	N.M.
Clean Energy Fuel	CLNE	\$3.01	309.3	\$754	\$12	61.9x	N/A	\$406.5	\$372.4	\$393.3	1.9x	2.0x	1.9x	(\$1.07)	(\$1.02)	(\$0.55)	N.M.	N.M.	N.M.
Electrovaya	EFL-T	\$1.44	122.4	\$94	\$3	30.9x	N/A	\$15.0	\$42.9	\$44.4	6.3x	2.2x	2.1x	\$0.01	\$1.20	\$0.08	N.M.	1.2x	18.0x
Energys	ENS	\$55.79	2421.9	\$2,737	\$319	8.6x	1.0%	\$2,466.9	\$2,509.9	\$2,300.9	1.1x	1.1x	1.2x	\$3.89	\$4.31	\$3.89	14.3x	12.9x	14.3x
Fuel Systems	FSYS	\$5.45	98.3	\$37	-\$13	-2.9x	N/A	\$328.7	\$262.1	\$286.8	0.1x	0.1x	0.1x	(\$0.52)	(\$2.29)	(\$0.18)	N.M.	N.M.	N.M.
Highpower	HPJ	\$2.35	35.3	\$77	\$6	13.6x	N/A	\$152.0	\$160.4	\$181.3	0.5x	0.5x	0.4x	\$0.24	\$0.32	\$0.52	9.8x	7.3x	4.5x
Ibm Power	ITM-LN	\$11.87	25.8	\$23	-\$5	-5.0x	N/A	\$7.0	\$6.2	\$2.1	3.3x	3.7x	11.0x	(\$1.65)	(\$2.43)	(\$2.01)	N.M.	N.M.	N.M.
Maxwell Tech	MXWL	\$6.45	204.5	\$181	-\$3	-63.3x	N/A	\$184.2	\$166.4	\$153.5	1.0x	1.1x	1.2x	(\$0.15)	(\$0.65)	(\$0.42)	N.M.	N.M.	N.M.
Quantum Fuel Sys	QTWW	\$0.06	1.5	\$14	-\$13	-1.0x	N/A	\$31.4	\$39.0	\$45.7	0.4x	0.4x	0.3x	(\$0.58)	(\$0.54)	(\$0.26)	N.M.	N.M.	N.M.
Saft Groupe	SAFT-F	\$27.00	688.1	\$745	\$110	6.8x	3.4%	\$676.7	\$752.3	\$781.0	1.1x	1.0x	1.0x	\$1.79	\$1.86	\$2.16	15.1x	14.6x	12.5x
Tesla	TSLA	\$254.51	33259.7	\$35,128	-\$294	-119.5x	N/A	\$3,696.6	\$5,357.5	\$8,628.8	9.5x	6.6x	4.1x	\$0.57	(\$1.26)	\$1.28	N.M.	N.M.	N.M.
T3 Motion	TTM	\$0.04	0.8	\$6	-\$4	-1.4x	N/A	N/A	N/A	N/A	N.A.	N.A.	N.A.	N/A	N/A	N/A	N.A.	N.A.	N.A.
Ultralife	ULBI	\$5.22	78.6	\$65	\$6	10.8x	N/A	N/A	N/A	N/A	N.A.	N.A.	N.A.	\$0.06	\$0.20	N/A	87.0x	26.1x	N.A.
Uqm Tech	UQM	\$0.65	32.5	\$23	-\$7	-3.2x	N/A	\$12.5	\$4.6	\$6.0	1.8x	4.9x	3.8x	(\$0.14)	(\$0.14)	(\$0.17)	N.M.	N.M.	N.M.
Westport	WPRT	\$2.55	209.4	\$200	-\$85	-2.3x	N/A	\$133.2	\$110.5	\$127.4	1.5x	1.8x	1.6x	(\$1.76)	(\$1.44)	(\$0.99)	N.M.	N.M.	N.M.
Average											3.0x	3.7x	3.0x				31.6x	12.4x	12.3x

Source: Thomson Reuters, The EnergyTech Investor

ETI CLEAN TRANSPORTATION INDEX- P/E BASED ON NTM CONSENSUS ESTIMATES



Source: Thomson Reuters, The EnergyTech Investor



ITL EFFICIENCY CORPORATION AND EASTLAKE NEW ENERGY'S MANAGEMENT TEAM VISITED UQM'S HEADQUARTERS, FOLLOWED BY A JOINT VISIT TO PROTERRA BY THE RESPECTIVE MANAGEMENT TEAMS.

On April 4th through April 6th, a team from ITL Efficiency Corporation and a team from Eastlake New Energy, visited UQM Technologies and Proterra Inc. The attendees included the CEO of Eastlake New Energy, Mr. Tian Cai WU, and the President of ITL Efficiency Corporation, Mr. Frank Lee. Many additional company representatives from both Eastlake New Energy and ITL Efficiency Corporation attended the meetings as well. The purpose of the visit was for the ITL and Eastlake teams to review and examine UQM Technologies drive system technology and receive updates on the launch status of the ITL program in China.

While at UQM, the teams were able to view the capabilities of UQM Technologies and were given the opportunity to experience the technological advantages by driving a Zenith EV powered by UQM featuring the PP135 Powertrain. The PP135 Powertrain will be used in the first application with ITL on the 6-8 meter bus in China. Mr. Wu, CEO of Eastlake New Energy, was able to personally drive the Zenith EV and he was very impressed with the overall performance. The joint team also completed detailed program and design reviews regarding the launch of the first program which is scheduled for later this year.

In addition, the teams had the opportunity to visit UQM's customer, Proterra, a leader in design and manufacture of zero-emission vehicles. During the visit to Proterra, the teams had the chance to ride and operate a Proterra electric bus powered by UQM's technology. Proterra and the San Joaquin Regional Transit District in Stockton, California, hosted the contingent along with UQM management for a ride and drive of the full size Proterra bus. The demonstration proved the overall performance and the fast charge capability of the Proterra bus, equipped with UQM Technology's electric drive system.

Overall, the ITL and Eastlake teams were very impressed with both products and their outstanding performance and efficiency that the teams experienced hands-on. ITL and Eastlake returned with an even higher degree of confidence in UQM Technologies as the right partner.



**The CEO's of ITL and Eastlake are looking at the electric bus, powered by UQM Technologies, manufactured by Proterra and in use by the San Joaquin Regional Transit District.*

SHAWN SEVERSON

CEO AND EDITOR-IN-CHIEF

Mr. Severson founded EnergyTech Investor in 2015 after seeing a significant communication and information gap developing between small and micro-cap companies and the financial community. Mr. Severson has over 20 years of experience as a senior research analyst covering the technology and cleantech industries and is currently a Managing Director at the Blueshirt Group where he is the head of the Energy, Environmental and Industrial Technologies practice. The Blueshirt Group is a leading Investor Relations consulting firm focused on growth companies. Previously, Mr. Severson was at JMP Securities where he was a Senior Equity Research Analyst and Managing Director of the firm's Energy, Environmental & Industrial Technologies research team. Prior to JMP, he held senior positions at ThinkEquity, Robert W. Baird (London) and Raymond James. He began his career as an Equity Research Associate at Kemper Securities. He was frequently ranked as a top research analyst including one of the Wall Street Journal's "Best on the Street" stock pickers and multiple awards as Starmine's top three stock pickers.



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