

# Electric Bikes

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## Key Business Issues

Following are the key business issues driving electric bikes

### Factors Driving Market Up

#### Supply Side Issues

**Government Encouragement for Sale:-** US federal government and state governments are offering tax incentives for promoting sale of electric bikes. Also separate laws for electric bicycles separating them from conventional fuel motorbikes also acts as an encouragement as rules and regulations are comparatively easier form electric bikes segment

**Availability of better battery and motors:** Continuous research in power storage has led to tremendous improvement in power storage capacities. Although electric bikes concept is bit old, it was considered to be infeasible a decade back but now with advanced batteries available electric bikes are offering better value.

#### Demand Side Issues

**Increasing Gasoline Costs:** Gasoline costs have substantially increased in last few years forcing US consumers to look for other options.

### Factors Slowing Market

#### Supply Side Factors

**Quality Issues:** Most of the electric bikes in US are imported from China have quality problems which although is keeping cost low but critical failures is damping spirit amongst potential consumers

#### Demand Side Factors

**High cost compared to value:** Electric bikes are perceived to have high costs compared to value offered by them. Costs are high because 750 watts (Average power) requires an expensive motor and a large battery raising cost.

**Car-centric US population:** US consumers would always prefer a car to travel to even nearby destination, making it difficult for electric bike companies to market their product

**Difficult Maintenance:** Maintenance is difficult due to service on electric bikes is hard to obtain.

**Reluctant Insurance companies:** Insurance companies are reluctant to insure electric bike companies due to large number of lawsuits faced by them.

Source: i) [Circuit breakers](#)

ii) [Electric Bikes: Legal Issues](#)

iii) [Electric Bike faces long road](#)

### Investing Activities

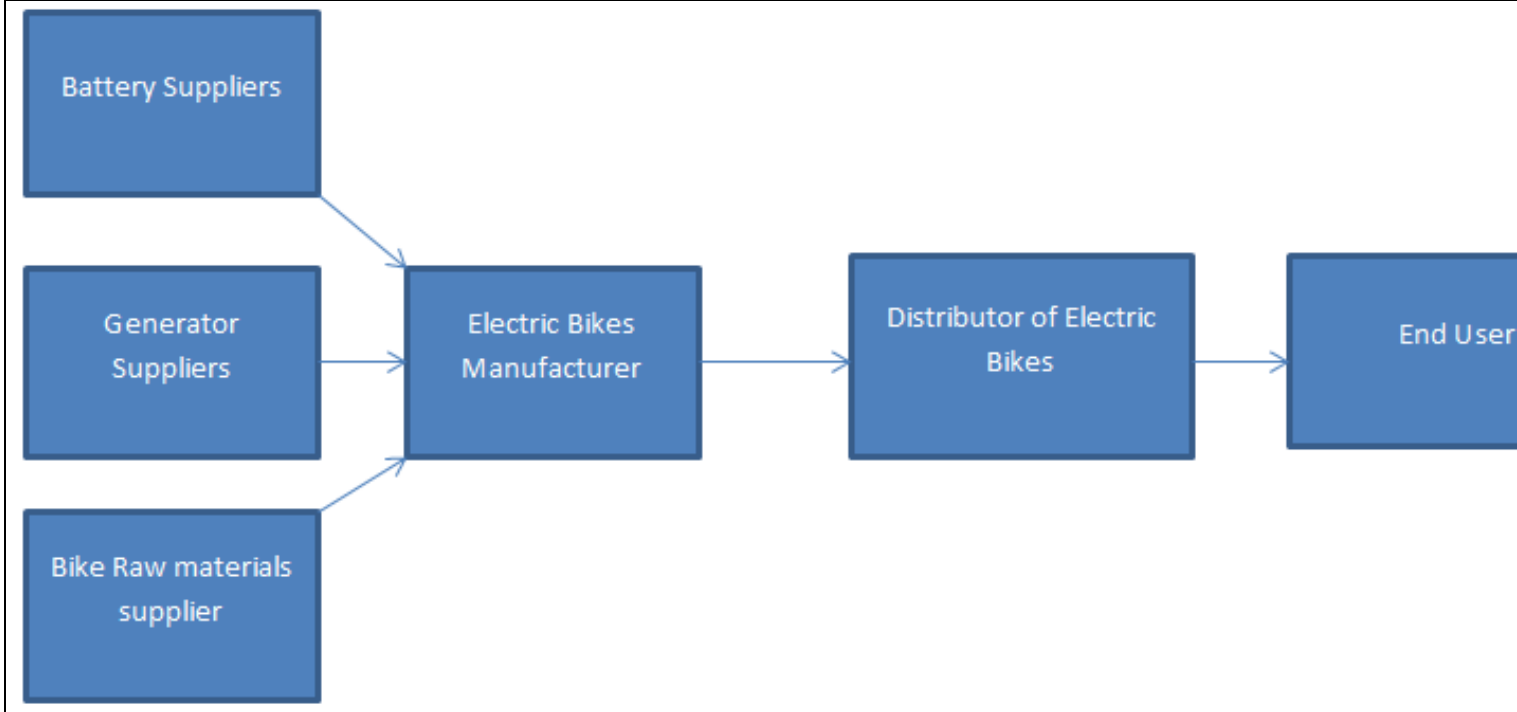
Sr. No	Company	Capital Raised	Date	Investors	Type of Investors	Details
2	<a href="#">Brammo</a>	\$28 m	26th Oct 2011	Polaris	Strategic Investor	Move established Polaris, a powersports manufacturer as business partner of Brammo. Deals allows Polaris numerous exciting opportunities to pair Brammo?s proven electric drive train technology with Polaris?s proven powersports products
3	<a href="#">Zero Motorcycles</a>	\$17 m	17th March 2011	Invus LP	Venture Capitalist	Capital is expected to go towards expanding the Zero?s U.S. operations, primarily, and towards expanding the company?s global sales efforts, research and development
1	<a href="#">Zap Power Systems</a>	\$2.5 m	-	General Public	General Public	Investors are loyal customers who invested in this socially responsible company. A company newsletter and web site was used to pitch the deal, which took a year to complete.

### Partnership Activities

Sr. No	Entity 1	Entity 2	Date	Details
1	<a href="#">Cosworth</a>	Storck		

			17th January 2011	Cosworth Group will be focusing on a number of aspects of the electric bike, including making the bike's electric engine lighter, more powerful and more efficient. This process will draw on technologies that have been developed by Cosworth Group for a range of industries including Formula One motorsport.
2	<a href="#">Brammo</a>	Polaris	26th October 2011	Brammo has signed a strategic partnership with Polaris, allowing brands to strengthen their presence in the market of electric recreational vehicles (powersports) and combine their technological expertise on batteries and drivetrain.

### Value Chain of Electric Bike



### Key Customers for Universal Display

Key Customers for Universal Display
AU Optronics
Chimei Innolux
DuPont Displays
Konica Minolta
LG Display
Samsung SMD
Seiko Epson
Sony
Showa Denko
Tohoku Pioneer