

Battery Maker A123's Bankruptcy Should Help "Charge Up" Global Oil Markets

CHINA'S OIL & GAS SECTOR FROM WELLHEAD TO CONSUMER

What has happened

A123 Systems Inc. ("A123"), which makes lithium ion batteries for electric cars, filed for Chapter 11 bankruptcy protection on 16 October 2012. A123's downfall is somewhat reminiscent of [Solyndra LLC](#)'s September 2011 bankruptcy, which sparked an outcry among opponents of Federal renewable energy funding policies because solar panel manufacturer Solyndra received US\$535 million in Federal loan guarantees and still failed to become financially viable.

In the present case, A123 benefitted from Federal green energy largesse that was arguably more favorable than what Solyndra got, namely a US\$249 million grant to build factories in the U.S. Unlike Solyndra's loans, which were supposed to have been paid back, A123's [government grant](#) does not have to be repaid.

The Solyndra affair has gotten a lot of attention recently in the U.S. Presidential race as challenger Mitt Romney and President Barack Obama spar over energy policy and we expect the Republicans to make A123's bankruptcy a second key example of why the Obama Administration's renewable energy focus is misguided. Such criticisms will be particularly damaging in the A123 case because, unlike Solyndra, A123 was a market and technology leader in the lithium-ion battery space and its costs were still too high to create batteries cheap enough to help persuade consumers that electric cars are a good way to go.

What it means

- 1) **The ability to mass-produce electric vehicle batteries with a high energy density and at a competitive cost lies further in the future than previously thought, which will influence commodity investors' assessment of future global crude oil demand patterns.** Long-dated crude oil futures may get a bump as traders price in the reality that fewer electric vehicles than expected will enter the global car fleet over the next 4-5 years.

The average U.S. car currently uses around 675 gallons of gasoline per year, according to the [U.S. Bureau of Transportation](#). We think it reasonable to assume that the global average fuel use per car would be slightly over half this figure—350 gallons per year. As such, for every one million electric vehicles that don't enter the global vehicle fleet (1.25% of current annual

- global car sales), there will be an additional 50,000 barrels per day of crude oil demand. This is equivalent to roughly 6.3% of the 800,000 bpd that the [IEA](#) estimates global crude oil demand will grow by in 2012, a meaningful number considering that diesel fuel consumption driven by truck transport and other activities is also a major driver of oil demand.
- 2) **U.S. consumers are not yet ready to purchase large numbers of fully electric vehicles.** This means automaker and part suppliers' unit production costs will remain high due to a lack of economies of scale. If the relatively affluent U.S. consumer, who lives in a country where personal transportation and the associated infrastructure largely revolves around the automobile, is not ready for electric cars, the growing ranks of drivers in the higher-growth emerging markets probably are not either. The high cost of batteries also mean that partially electric vehicles such as plug-in hybrids and hybrids are also likely to not sell well in the emerging passenger car markets such as China and Indonesia.
 - 3) **A123's bankruptcy is likely to further sour American voters' perception of intensive government financial support for non-fossil fuel energy sources.** This increases the likelihood that U.S. domestic energy policies will move away from intensive Federal subsidies for alternatives to oil, especially if the Republicans win the Presidency.
 - 4) **The winners in the race to reduce passenger car fuel consumption will likely be the less sexy ideas, especially making the existing internal combustion engine technology work more efficiently and making vehicles lighter.** Front runners here include using turbochargers to reduce engine displacement, incorporating more advanced engine control systems that shut engines down at stops then restart them when the accelerator is pressed, and greater use of aluminum and lightweight alloys to reduce vehicle mass and fuel needs.

About Us

China Oil Trader™ strives to provide a holistic, globally-oriented analysis of Chinese oil and gas issues. In doing so, we often view multiple asset classes simultaneously and assess how they interact with each other. Our ultimate goal is to provide a focused source of fresh, creative, and anticipatory research for policymakers, investors, and others interested in China's development as an energy superpower.

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