Electric Cars sold as Cell Phones


For the first time in history, all the conditions necessary for electric vehicles to be successfully mass-marketed will be brought together in a partnership between the Renault-Nissan Alliance and Project Better Place in Israel. The Israeli government would provide tax incentives to customers, Renault would supply the electric vehicles, and Project Better Place would construct and operate an Electric Recharge Grid across the entire country. Electric vehicles will be available for customers in 2011.

- **100% electric vehicles**: Renault’s vehicles will run on pure electricity for all functions. The objective of zero emissions will be achieved, while at the same time offering driving performances similar to a 1.6 liter gasoline engine. Renault’s electric vehicles will be equipped with lithium-ion batteries, ensuring greater driving range and longevity.

- **Innovative business model**: For the first time in the electric vehicle business, ownership of the car is separated from the requirement to own a battery. Consumers will buy and own their car and subscribe to energy, including the use of the battery, on a basis of kilometers driven. This model is similar to the way mobile phones are sold, with an initial purchase and a monthly subscription for the mobility service.

- **Competitive cost of ownership**: The Israeli government recently extended a tax incentive on the purchase of any zero-emissions vehicle until 2019, making them more affordable. Combined with the lower cost of electricity as opposed to fuel-based energy, and the vehicle’s lifetime guarantee, the total cost of ownership for the customer will be significantly lower than that of a fuel-based car over the life cycle of the vehicle.

- **Electric Recharge Grid infrastructure**: California-based Project Better Place plans to deploy a massive network of battery charging spots. Driving range will no longer be an obstacle, because customers will be able to plug their cars into charging units in any of the 500,000 charging spots in Israel. An on-board computer system will indicate to the driver the remaining power supply and the nearest charging spot. Nissan, through its joint venture with NEC, has created a battery pack that meets the requirements of the electric vehicle and will mass-produce it. Renault is working on development of exchangeable batteries for continuous mobility. The entire framework will go through a series of tests starting this year.

- **Perfect first mass market**: In Israel, where 90% of car owners drive less than 70 kilometers per day, and all major urban centers are less than 150 kilometers apart, electric vehicles would be the ideal means of transportation and could therefore cover most of the population’s transportation needs.
The following excerpt by McKinsey and a Denmark utility exemplify the mainstream consideration the BP model is being given:

Several national and regional governments have already started to incentivize xEV usage. For instance, Israel and Denmark (Exhibit 20) are strongly reducing or even waiving their comparatively high car registration taxes for EVs. The company Better Place is to build an infrastructure of up to 500,000 charge points and 100 battery swap stations in Israel by 2011. In Portugal, the government has taken responsibility for developing the charging stations infrastructure. Spain has a target of 1 million EVs by 2014 as part of a government plan to save energy. Denmark, Portugal, Australia, Canada and California have also made ambitious xEV plans. Other countries, such as Germany and Italy, are introducing small-scale pilots.

Delevoping an electric vehicles solution
Example from Denmark

**Better Place concept**

- System software
- Smartness for billing etc.
- Battery OEM
- Car OEM
- Electric utility
- Integrator (Better Place)
- Customer

**Denmark case study: Roles and incentive structure**

**Better Place Denmark**
- Set up by Better Place Plc., DONG (electric utility) and financial investors
- DONG to invest "8 digit" € amount
- Target: have 20% of car park electrified by 2020
- Exemption from new car registration tax (normally 105-180% of car value) for EVs crucial incentive

**Electric utility**
- Surplus electricity from unused wind power capacity exported at low prices
- EVs ideal users of surplus electricity and good for storage / load-balancing
- Even with 25% of car park electrified, 70% of EV demand coverable with this surplus

**Car OEM**
- Renault-Nissan first automaker to join, others invited
- Will offer mid-segment cars with performance and maximum speed like ICE cars from 2011

**Integrator**
- Integrates all components
- Maintains customer relationship
- Owns/finances batteries, charge points, and swap stations
- Provides services (timing of charging, swap management, and battery monitoring)
- Is paid a per km subscription fee
- Gets potentially full surplus value of lower TCO (or shares with customer)

SOURCE: DONG Energy; McKinsey analysis
Better Place’s Mainstream Auto Market Grab 2010

(Excerpts...)

Agassi says the electric-car market will take off when cars sell for $3,000 to $5,000 less than gasoline cars. This can include government incentives, such as the 5,000-euro subsidy that is in place in France.

What if a $5,000 Chinese-made electric car sold in the United States? “All hell will break loose,” he said. Better Place struck a deal in April to collaborate on electric vehicles with Chinese auto maker Chery. Agassi says he anticipates Chery will sell a battery-swappable vehicle in the Better Place markets of Israel and Denmark, but not for several years.

In Israel, Better Place is presently building battery swapping stations and preparing for a 50-car trial to start before the end of the year. Employees will operate the cars. The country will have five swapping stations by then and eventually 70 stations, spaced 25 miles apart, to provide adequate service across the country.

The investment in Israel: $70 million for infrastructure and $150 million total when adding in costs for sales staff, office space, etc. Agassi rationalizes the cost as equivalent to what Israeli drivers spend in one week on gasoline.

In Israel, Better Place says it is seeing interest in its service from 700 to 800 drivers a month. That many people are signing up at the Better Place visitor’s center saying their next auto will be electric.

In Japan, Better Place says its trial with four Tokyo taxis has lasted for 75 days so far. Each vehicle has logged more than 10,000 miles, a healthy amount for an electric car. Battery swaps take an average of 59.1 seconds. The company calls the trial a success and has earned its first revenues, though it did not release figures.

In Denmark, Better Place’s second target market, trials will start at the end of 2011. Some charge spots are available to electric car drivers already. The electricity for the market will come from 600 windmills.

Australia is still on track for a trial at the end of 2011, followed by Hawaii and California in 2012.

China joins Better Place on the battery-swapping bandwagon 2011

EV’s are great for getting around in a green-conscious way, but plug-in people must practice patience while waiting hours to juice up their ride. Better Place’s battery swapping stations offer much faster EV refueling, which is why China Southern Power Grid Co. (CSG) is betting big on the technology. The Chinese utility giant has teamed up with Guangzhou’s municipal government and Better Place to build a power pack exchange depot and an EV education center. With exhibits, meeting rooms, and EVs to test drive, the education center aims to help persuade administrative officials, captains of industry, and the general populace to jump on the electric car bandwagon. In addition, Ghuangzhou’s government will “encourage local car manufacturers” to create autos with
switchable batteries and "promote" EV adoption in taxis and state vehicles -- all of which seems likely to happen post-haste, 'cause what the Chinese government wants, the Chinese government gets.

Better Place launches free electric car charging in Hawaii 2012
Posted March 2, 2012, by CBS Interactive
http://reviews.cnet.com/8301-13746_7-57389452-48/better-place-launches-free-electric-car-charging-in-hawaii/

Hawaii residents will be able to charge their electric vehicles for free at Better Place's 130 charge spots on four islands for the remainder of the year...

Through 2012, electric vehicle owners can sign up for a free membership with Better Place to gain access to the company's 130 charge spots on the state's chain of islands. Better Place operates 130 charge spots on four islands, including the Big Island, Oahu, Kauai, and Maui. Each Charge Spot has two charge points, enabling two cars to charge at the same time. But the best part is that it won't cost the EV owners a dime.

At an average of $4.36 per gallon of regular gasoline, Hawaii has the highest gas prices in the nation due to the added cost to ship gasoline to the island state. High fuel prices and the allure of a robust network of free charging stations may tempt drivers away from the pump.

"The Better Place network of Charge Spots on four islands offers more public charge points per capita in Hawaii than any other state," said Brian Goldstein, director of Better Place in Hawaii. "Our multi-island network is another step toward making sustainable transportation a reality in Hawaii and moves us toward achieving the state's goal to reduce dependence on imported fossil fuels by at least 70 percent by 2030."

CEO of Electric-Car Network Better Place Steps Down Oct 2012
By Joshua Mitnick, October 2, 2012, The following excerpts are posted by the Wall Street Journal.
http://online.wsj.com/article/SB10000872396390444004704578032793162512254.html

TEL AVIV—Shai Agassi, the charismatic founder of U.S. electric-car charging station start-up Better Place LLC, stepped aside as chief executive amid concern about mounting losses as cars tailored to the company’s network enter pilot markets. In a surprise announcement Tuesday, nearly five years after the company’s founding, Better Place Chairman Idan Ofer said the CEO of the firm’s Australian unit, Evan Thornley, will replace Mr. Agassi so the company can “realign for its second chapter.”

...[Mr. Agassi] joined forces with France’s Renault SA, which currently is the only auto maker to manufacture a car model—the Fluence ZE—that runs on the switchable batteries provided by Better Place. Better Place provides the charge spots, network of battery switch stations, and customer service. The Fluence ZE began arriving in test markets in Israel and Denmark during the second quarter. Renault sells the electric car in Denmark, and Better Place sells the car in Israel.

Mr. Agassi’s departure as chief executive would follow a pattern among other start-ups in which founders are replaced at the helm by managers in order to oversee growth.

"It’s part of the business school literature: a transition from an entrepreneur manager to a business manager," said John O'Dell, an editor at Edmunds.com, a provider of research on the automotive
industry. "The vision is established, and now they need a hard-nosed manager to manage the thing, to make the business ties, and do the selling," he said.

In a June 30 financial report released by its Israeli parent, Israel Corp., Better Place said its first half loss nearly doubled to $131 million and it expected to post continued losses in the coming quarters. Since its founding in 2007, the company has lost $490 million.

Investors are unsure about whether the company will survive and expect that the start-up will need an infusion of more cash to keep operating, said analysts and people close to the company. That has ratcheted up pressure on the company to start generating income.

The company says it has 750 customers using cars on its networks so far in Israel and Denmark, though the CEO of its Israel unit, Moshe Kaplinsky, said in an interview last month that 4,000 vehicles will be on the road by mid-2013.

---

**Cash crunch may lead to layoffs at Better Place**


Following Shai Agassi's unexpected resignation last week as CEO of Better Place, officials of the electric car infrastructure company said Wednesday the firm could soon face layoffs of as many as half its workforce, thought to number 400 to 450 in Israel.

At a Tel Aviv news conference, the company's new CEO, Evan Thornley, and CEO of Better Place's Israeli operations, Moshe Kaplinsky, expressed confidence that shareholders would come through with additional funds.

Better Place's staff views the future of their company, which is building electric car infrastructure in Israel, Denmark and Australia, with deep concern in light of the major financial problems it has been facing, which are so severe as to call the continued existence of the company into question.

...  

Most of the company's workforce is based in Israel, although it also has employees in Australia, Denmark and the Netherlands. The firm's Israeli-based development division of 100 to 150 employees is expected to bear the brunt of the layoffs, as the technology that Better Place has adopted for its station network, through which motorists can quickly swap their car battery, has been completed, although the method has been the subject of some controversy.

After anticipated development team layoffs, dismissals are expected among the staff in charge of the network of battery changing stations. The plans for the Israeli network call for 45 stations, 38 of which have already been built.

The company is thought to have burned through cash at a stepped-up pace in the third quarter of this year. It lost $132 million in the first half of the year alone and has had a $104 million negative cash flow since January 1.
Additional info posted on Wikipedia, 2012:

**Israel:** According to the Financial Times around 400 corporations in Israel have signed letters of intent to begin switching their fleets to Better Place electric car network as soon as the service becomes available. This represents a potential of 80,000 electric cars. Also out of the 100,000 Renault Fluence Z.E. that Better Place has agreed to buy from Renault, Agassi said the company has already signed up around 70,000 orders, most of them from commercial fleet customers.

**Denmark:** Better Place has partnered with Denmark's leading energy company; Dong Energy, in a €103 million Euro (770 million Danish Kroner) investment to introduce electric cars and infrastructure to Denmark. The country currently generates 20 percent of its electric power from wind energy, but much of it is exported because there is currently no way for utilities to store the excess power. With the Better Place model, Dong hopes to leverage the existing electric grid and electric vehicle batteries to harness and store the abundance of wind-generated power and distribute appropriately for transportation consumption.

**Australia:** In Australia a roll out of the network will begin in the major eastern coast cities before being rolled out nationally. It is estimated that 500 charge stations would give comparable coverage to the existing 13,000 petrol stations presently in operation. The total cost of this roll out would be between $1 to $1.25 Billion AUD. Currently Australia spends $20 to $30 Billion AUD on fuel. The roll out of the Australian network is estimated to be 6 months to a year after the roll out of the network in Denmark.

**France:** A total of 540 units [Renault Fluence Z.E.] have been registered in France through August 2012, and the battery swapping service is provided by Renault.