Coulomb Utility Marketing Plan

"I'm only a few miles from home. Could I borrow a socket?"

(The New Yorker, Koren, 2010)

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1. Executive Summary

The world is rapidly running out of cheap oil, which will cause gas prices to rise, and supplies to become scarcer. Since half of our oil goes towards transportation, moving to electric vehicles (EVs) will be critical to overcome this challenge. Luckily, many EVs, such as the Nissan Leaf and the Chevy Volt will be available by end of 2010.

EVs need to be recharged daily by plugging in to a charging station. Initially, these charging stations will be located in home garages. Over time charging stations will be installed in public locations to serve people that do not have their own garage or want to extend their travel range.

The overall market for charging stations is small but is expected to grow rapidly to a $500 million market in North America by 2015 (Gartner & Wheelock, 2009).

A major driver of EV sales growth will be the rising cost of gasoline, which is expected to rise 65% between 2009 and 2015 (Gartner & Wheelock, 2009). In addition, regulatory issues such as California's AB32 greenhouse gas (GHG) reduction program along with federal stimulus money will encourage the adoption of EVs.

Standards are set or underway for interoperability of the EV charging plug and authorization cards, so that any charging stations will be able to charge any EV. Some charging stations will incorporate smart meters and connect directly to the utilities' billing networks. While there are patents on various other aspects of vehicle charging, it doesn't appear that any company will be able to erect significant intellectual property (IP) barriers to entry.

Our client Coulomb is a leading manufacturer of public EV charging stations. Coulomb markets its charging stations to municipalities, fleets, retailers and corporations. To strengthen its brand, value and irresistibly Coulomb wants to expand its market to include electric utilities. The focus of this report is on developing a marketing strategy that targets utilities.

Primary competitors include:

1. **Better Place** raised $700M dollars but does not yet have a strong presence in North America.
2. **ECOtality** received a grant of $100 million to install 11,000 charging stations
3. **AeroVironment** was selected by Nissan to install home charging stations for the upcoming Leaf EV, which is projected to have 25,000 orders this year
4. **ClipperCreek** provided charging stations for the 500 vehicle Mini-E program

While Coulomb's expected sales of 600 units (by end 2010) is less than its competitors, Coulomb does have good visibility in this market. Coulomb also has other competitive advantages. Its ChargePoint charging stations are technically superior to most competitors as they include an ANSI certified smart-meter as well as wireless networking for authorization, billing and connection to utilities' Advanced Metering Infrastructure (AMI) network.

There are approximately 3,270 utilities across the US and they can be categorized as large or small, traditional or de-coupled (which means they do not make more money by selling more electricity).

Personal interviews conducted with senior employees working with electric vehicle infrastructure at utility companies, revealed several major themes:

- Utilities are conservative and slow to adopt new programs/technology
- They are attentive to costs
- Few utilities are planning to complete EV charging station pilot programs

To market effectively to utilities we recommend pursuing three strategic objectives:

1. Consistent Branding. Create consistent branding between Coulomb's company image and products.
2. Constant Presence. Maintain a constant presence of Coulomb in front of utilities to promote the image of Coulomb as being a stable, long-term player in the electric vehicle infrastructure industry.
3. Charge-Meter Program. Develop the Charge-Meter utility marketing program to:
4. Educate utilities about Coulomb's products
5. Position the ChargePoint stations to utilities as being similar to a smart-meter
6. Sell them charging stations as infrastructure projects

These programs will be started in the first quarter and rolled out in the second. The goal is to have them running well by the end of the first year and to result in $1.3 million in sales. The goal for the second year is $3.9 million in sales and $13 million in the third year.

Coulomb does not have much consistency between its corporate image, its products and how it uses the names "Coulomb" and "ChargePoint". These represent a significant missed opportunity, as many utility personnel are familiar with the Coulomb name, but do not know that Coulomb makes the ChargePoint station.

To overcome the brand consistency challenges, we recommend the following:

- Use the green logo color as a major design element in all products and marketing collateral
- Redesign the current logo for simplicity and professionalism
- Add "Coulomb" to the front of all products (i.e. Coulomb ChargePoint) and always refer to them that way
- Start moving the company color, logo and new names across all communication elements and products

As utilities are conservative and slow to adopt new technology it is important for Coulomb to promote an image of stability, technical excellence and market leadership to the utilities by having constant visibility to utilities. To do this, they should focus on tradeshows, industry journals and a bit of online advertising.

The Charge-Meter utility marketing program is to educate utilities about Coulomb's products, position the ChargePoint stations to utilities as being similar to a smart-meter with an EV charging outlet, and to sell them charging stations. The main sales message is it is cheaper and easier to install a ChargePoint charging station on an unmetered line. Also, this infrastructure project will also produce more revenue for the utilities.

The Charge-Meter program will normally be paid for by two entities: the utility will buy and own the ChargePoint charging station itself while the city (or other street light owner) will pay for the installation in exchange for a percentage of the charging revenues.

There will be three program levels with priced as follows:

1. Pilot level: 4 ChargePoint Stations at $2,000
2. Starter level: 100 ChargePoint Stations at $1,500
3. Full level: 1,000 ChargePoint Stations at $1,300

The percentage of sales method was used to set the marketing budget at $130,000 for the first year, and the recommended marketing mix came in below $100,000.

Selling charging stations to utilities will not be easy. However, by implementing this utility marketing program that includes developing a consistent brand, projecting a stable, long-term image and implementing the Charge-Meter program to reposition ChargePoint stations to appeal to utilities and educating them about EV charging stations, the utility market could be a significant revenue opportunity for Coulomb.

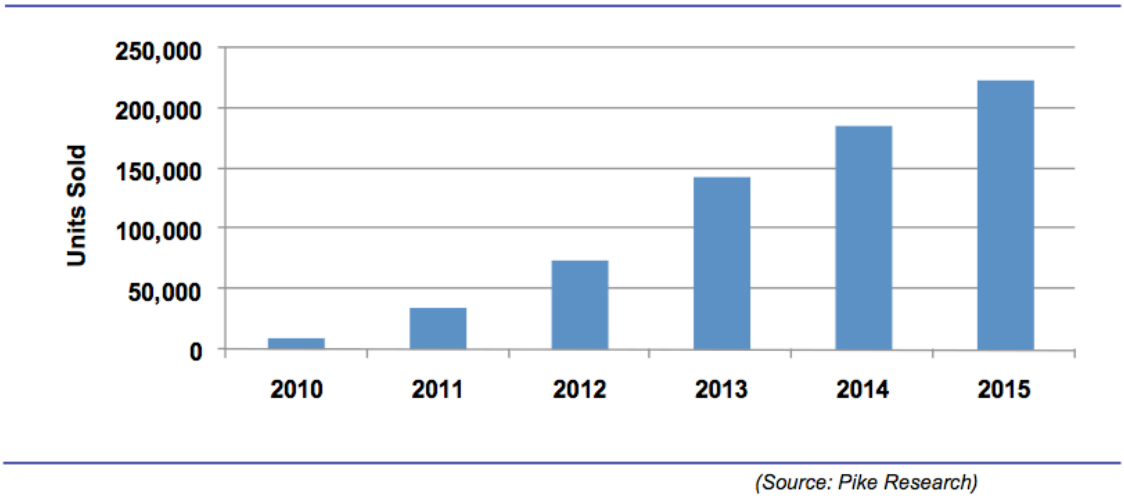
2. Situational Analysis

2.0 Market Background

It is likely that the biggest sustainability challenge that the world will soon face is peak oil. Peak oil will not only cause gas prices to increase but it will also cause widespread shortages of oil and gas. Since 50% of the oil consumed in the United States is used to power vehicles, converting our fleet to electric vehicles (EVs) will have the greatest impact on reducing our demand for oil while also causing less green-house gases (GHGs) and other pollutants to be emitted.

EVs will soon be available in large numbers. The high-end Tesla Sportster is already available and the Nissan Leaf and Chevy Volt will be available before the end of 2010. By 2015, it is estimated that there will be 610,000 EVs on the roads in the US (Gartner & Wheelock, 2009).

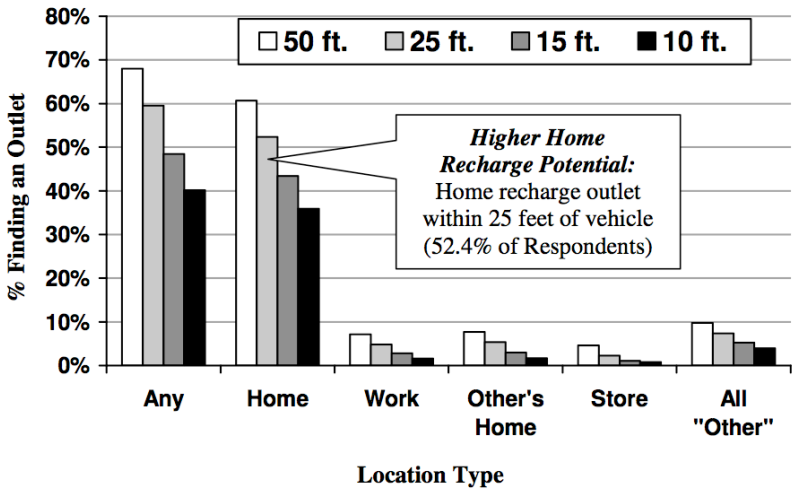
Chart 2.1 Electric Vehicle Sales, United States: 2010-2015



(Gartner & Wheelock, 2009)

While EVs never need to visit a gas station, they need to be charged daily. Although half the US population can recharge at home, the other half will need public charging stations since they park on the street or in apartment complexes (Axsen & Kurani, 2008). Public chargers in parking garages and at shopping areas will also allow for longer trips.

Fig. E-2: Access to recharge spot by location and outlet distance (all respondents, n = 2,373)

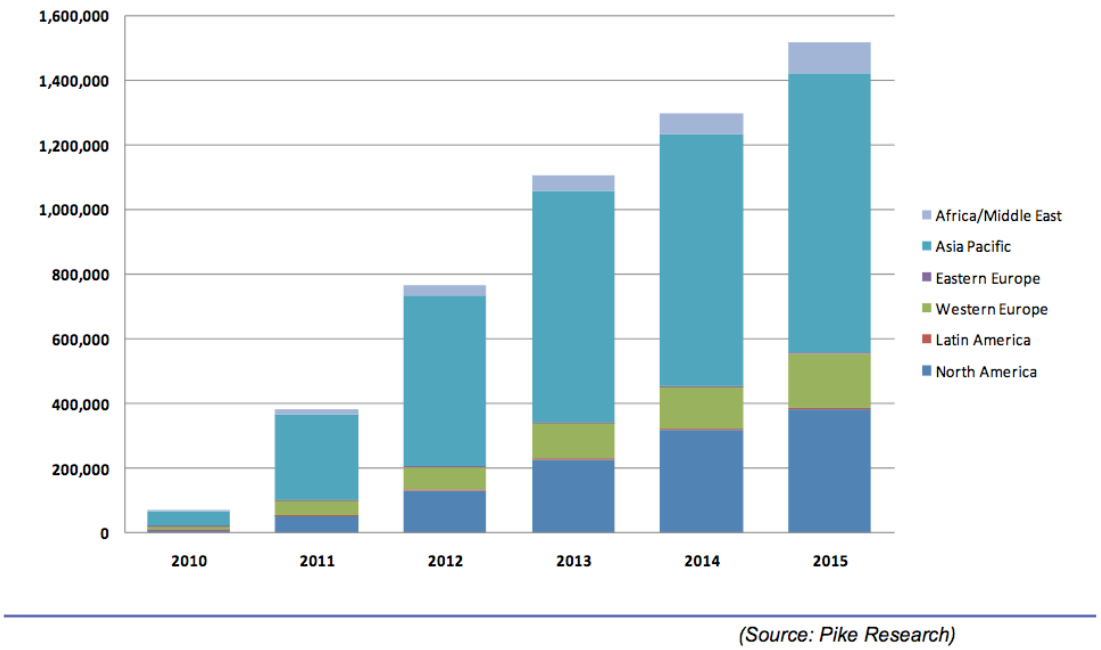


(Axsen & Kurani, 2008)

2.1 Market Size and Growth Trends

A 2009 study from Pike Research estimates that the EV charging station will start to slowly grow in 2010, doubling each year for the next few years, and then reaching a 32% growth rate in 2013. In 2015, annual sales are estimated to reach $1.9 billion worldwide (1.5 million unit sales) and $500 million in North American (Gartner & Wheelock, 2009). This represents a substantial and fast growing market.

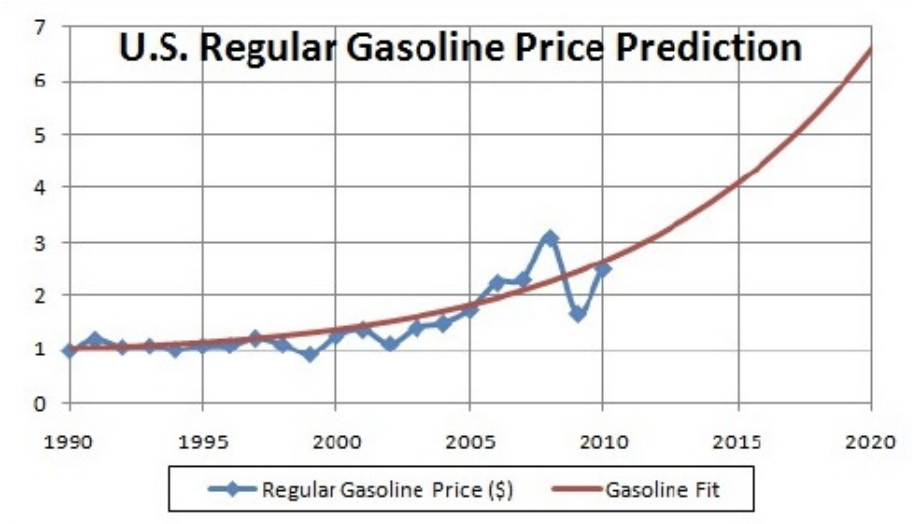
Chart 1.1 Total EV Charging Station Unit Sales by Region, World Markets: 2010-2015



(Gartner & Wheelock, 2009)

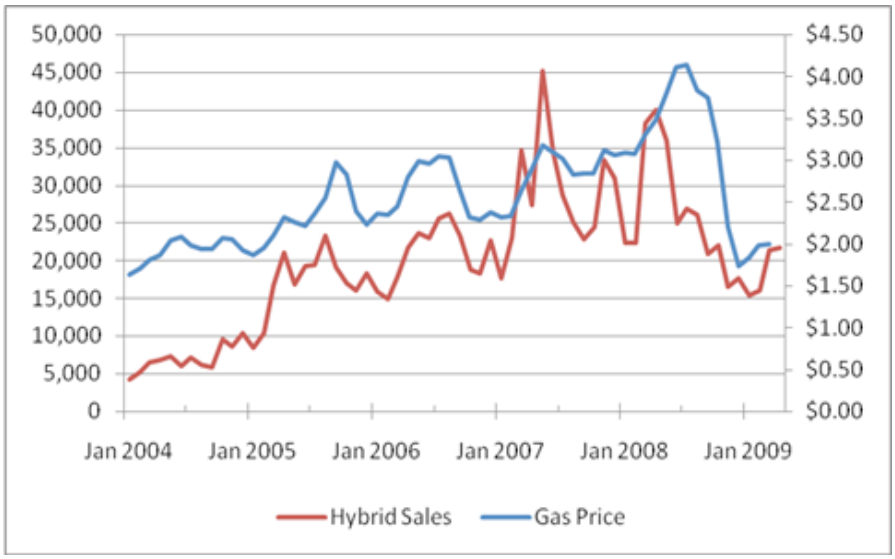
2.2 Economic Factors

The rising cost of gasoline will be a major economic factor in the adoption of EVs. Gasoline prices are expected to rise 65% between 2009 and 2015. In addition, if gasoline prices exceed $4.00 per gallon for an extended period of time, then demand for EVs could increase greatly (Gartner & Wheelock, 2009).



(Roper, 2009)

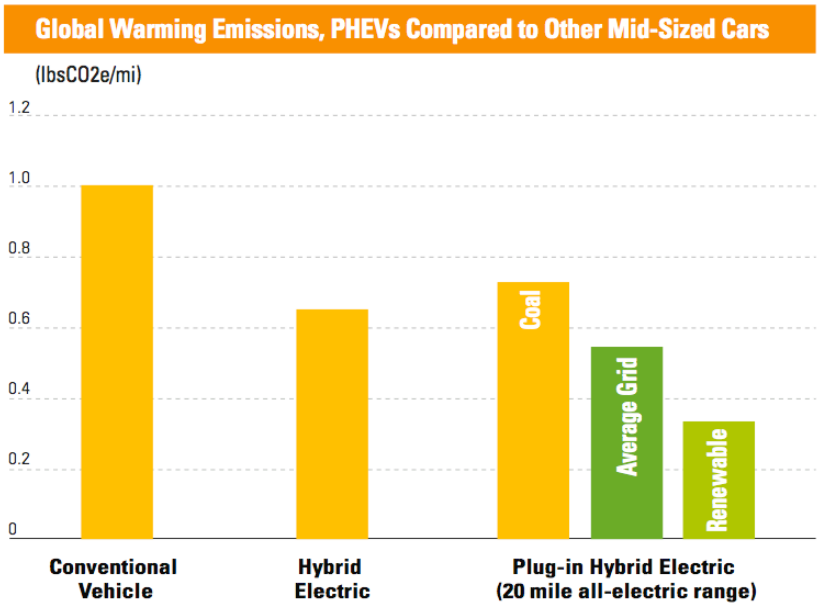
An example of this relations can bee seen in hybrid sales which increased almost linearly with the price of gasoline when it rose to a high in 2008 (Comment by Robert Bienenfeld, Senior Manger Environment & Energy Strategy, American Honda, April 7, 2010).



(Gupta, 2009)

2.3 Regulatory Issues

Many cities and states have implemented programs to reduce greenhouse gas (GHG) emissions. Since transportation is a large contributor to GHGs and EVs can reduce GHG emissions by 34% to 60% (NRDC, 2007), cities and states are supporting the arrival of EVs by installing public charging stations.



(NRDC, 2007)

A good example of this is California's AB32 (ARB, 2010) which requires GHG reductions, along with California's Regulation 740.2 which requires the California Public Utilities Commission (CPUC) to evaluate policies and develop sufficient infrastructure to overcome barriers for widespread adoption of EVs.

However, it is possible that some of these regulations will be overturned. Dian Grueneich, Commissioner of the CPUC stated that if AB32 is overturned, all of the EV incentive programs in California would be in jeopardy (Grueneich, 2010).

Federal stimulus money is also being used to promote EVs. The American Recovery and Reinvestment Act of 2009 (ARRA) provides $400 million in federal grants for transportation electrification projects, including money for installing charging stations. For instance, ECOtality was awarded a $100 million dollar grant by the US Department of Energy through the stimulus package.

2.4 Technological Factors

In January 2010, a standard charging plug known as J1772 was adopted for EVs. This allows any charging station to charge any vehicle.

While the radio frequency identification device (RFID) used to authorize a user at a ChargePoint station cannot currently be used with other company's charging stations, it is widely accepted that these authorization cards will be standardized for use with any company's charging station.

In some public places, like garages or company parking lots, the charging stations will be installed behind a standard electric meter which will measure the electricity and bill the garage owner or company for the electricity us. In other locations, like on city streets, the electric lines do not have meters installed. Therefore, if a charging station is installed, it is necessary for the electric utility to first install an electric meter.

Some charging stations will have American National Standards Institute (ANSI) certified electric smart-meters inside. This allows the charging station to accurately keep track of the electricity used and send the information back to the utility.

For the utility to use the information from the internal smart-meter, it needs to be in a format that is compatible with the utilities advanced metering infrastructure (AMI) network.

2.5 Barriers to Entry

Since charging station plugs and authorization cards will be interoperable among competitors, these will not provide a competitive edge or serve as barriers to entry.

There are some patents around the surrounding technology though. For example AeroVironment has a patent that facilitates the optimal charging, management, control and maintenance of battery packs, chargers and electric EVs, ECOtality has over 52 national and international patents, and Coulomb Technologies has several patents pending.

However, none of these technologies are critical to the basics of charging station operations so it does not appear that any company will be able to erect intellectual property (IP) barriers to entry.

2.6 Competitors

Primary competitors represent a higher share of market size, mind and heart over secondary competitors.

Primary Competitors:

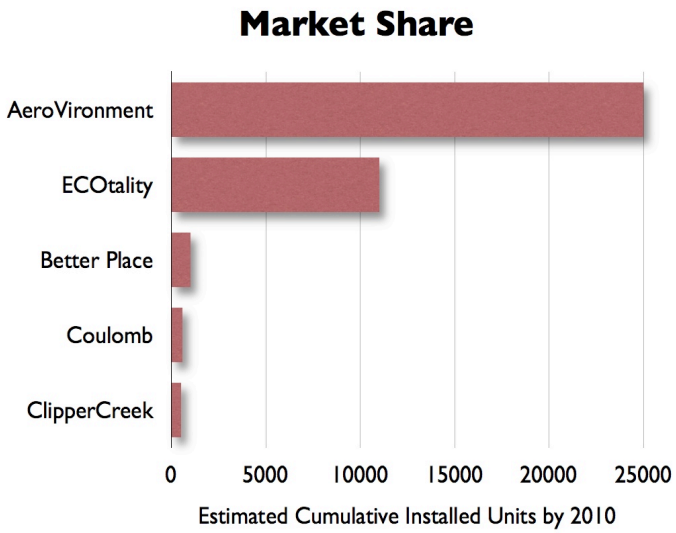
- **BetterPlace** - Offering battery swapping service as well as charging stations. Their current focus is in Israel and Denmark, but given their deep pockets could compete head on with the Coulomb in the near future.
- **AeroVironment** - Has deal with Nissan to provide charging stations for the Nissan Leaf, and will be available in the Bay Area in December of 2010. This gives them a strong foothold in the market and adds to their long experience in charging stations that begins with the EV1 and RAV4 EV. They do not offer the same networked functionality as Coulomb, but have the resources to quickly bring that functionality to market.
- **ECOtality** - Developing a network of charging stations. They also have a large federal grant towards their deployment of charging stations and are positioned to compete directly with Coulomb.
- **ClipperCreek**: has provided charging stations for the Mini-E pilot projects and has solid press. They could become more significant competitors.

Secondary Competitors (important to track)

- **Juice Technologies Plugsmart**: Will offer ANSI certified, networked chargers for both home and public applications and they have partnered with GE. While they don't yet have a product for sale, they are well positioned to ramp up quickly and the association with the GE brand stands to open more doors than any other offering can.
- **SemaConnect**: SemaConnect's ChargePro range of charging stations have capabilities like Smart Card authentication, energy metering, near range wireless communication and cellular communication (King, 2010) While these features compete directly with Coulomb's offering and could become a serious threat, they are currently underfunded, and not well known. Their funding comes solely from their founder's deep pockets.
- **OpConnect**: Offers a charger product that has both SAE J1772 (Level 2) and NMEA 5-20 (Level 1) connectors and networking/smart grid ready options with data logging.

2.7 Market Share Distribution

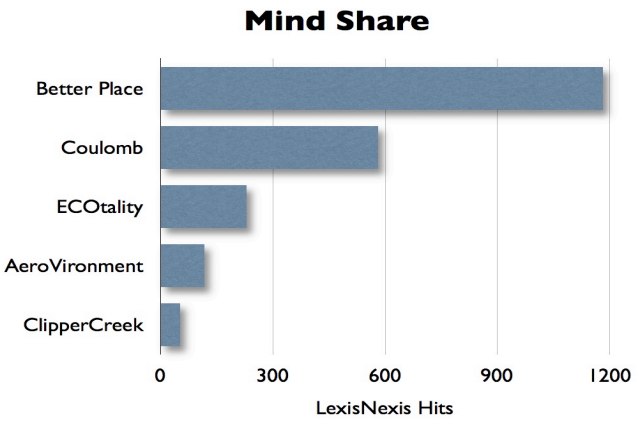
In this is an emerging market, market share distribution is difficult to determine and may not be the most important factor for eventual success. However, we can calculate a rough estimate by comparing Coulomb's 600 sales (Motavalli, 2010) with ECOtality that is installing 11,000 charging stations this year (The EV Project, 2010) and AeroVironment that is installing charging stations for the Nissan Leaf which is projected to sell 25,000 units the first year (Gupta, 2010).



By this sales estimate, Coulomb holds less than a 10% market share.

2.8 Mind Share Distribution

Mind share might be a better measuring stick in this rapidly developing market. By this indicator, Coulomb has a higher brand awareness than all competitors except Better Place.



Company	Search Terms
Coulomb	Coulomb “electric vehicle” ChargePoint
Better Place	“Better Place” “electric vehicle”
ECOTality	ECOtality “electric vehicle” charger
AeroVironment	AeroVironment “electric vehicle” charger
ClipperCreek	ClipperCreek “electric vehicle”

(Note: Natural language search, all news sources, all dates, as of May 13, 2010)

2.8.1 Early to Market and in the News

Coulomb has good representation in the press and is widely held as being one of the top four players in its market (Gartner, 2009). Greentech Media recently published an article rating the

top 50 venture capital funded green start-ups. Coulomb Technologies and Better Place were the only EV infrastructure firms in the lineup.

2.8.2 Social Media

Here is a comparison of how Coulomb compares to its competitors in using social media. Clearly Better Place has a huge social media advantage, but Coulomb has more social media exposure than the rest of the field.

Company	FaceBook Fans	Twitter Followers	YouTube Views
Better Place	31,598	4,274	196,036
Coulomb	114	365	5,795
AeroVironment	6	204	100
ECOtality	110	18	0
ClipperCreek	0	0	0

(As of May 9, 2010. Note: YouTube views are based on videos posted by specific company. Other videos (e.g. independent news pieces) may have been viewed which promote the company's products.)

2.9 Competitive Advantages

Here are the competitive advantages that provide a point of differentiation for Coulomb's products:

2.9.1 Wireless Data Access

One of Coulomb's biggest competitive advantages is that each ChargePoint station can communicate wirelessly to Coulomb's computers. This allows each ChargePoint station to read a radio frequency identification device (RFID) authorization card to authorize the user as well as send back usage data to Coulomb's computers for billing and data display purposes.

ChargePoint stations use the same data transfer technology that cell phones use, either GSM or CDMA. However the GSM/CDMA transmitters are fairly expensive and it would be costly to put one in each ChargePoint station. In order to reduce costs, most ChargePoint stations will be outfitted with a cheaper mesh network transmitter that allows them to communicate only with their neighboring ChargePoint stations. These stations will pass information along to each other until a station with a GSM/CDMA transmitter is reached at which point the information will be sent to Coulomb's computers.

2.9.2 Networked Charging Solutions

Coulomb ChargePoint stations are for use in public locations so they need to be able to control who can access them and bill them appropriately. EV owners use the authorization card to authorize access, and the network attached station tracks their energy usage and bills them

appropriately. Coulomb provides a web portal that shows the location of charging stations and current availability. It also provides access to the user's charging history and other account information.

The open networked architecture offers:

- Users of other charging solutions to use their smart cards at a Charge Point station and Coulomb will handle all billing issues.
- Users can find charging stations via web enabled (and iPhone) applications and determine which are available for use.
- Notification to drivers when charge is complete through SMS texting.
- Integration with the smart grid to allow for utility load management when V2G (vehicle to grid) functionality becomes available.

2.9.3 ANSI Certified Smart Meter

Coulomb offers a bi-directional integrated utility grade electricity meter in its charging products that is American National Standards Institute (ANSI) certified and keeps track of each user's electricity usage.

2.9.3 Connection to Utilities Billing Infrastructure

Coulomb has software application services that allow the ChargePoint Network to tie into the smart grid so utilities can view the ChargePoint station as a standard smart-meter.

2.10 Supply and Distribution

In addition to a direct sales force, Coulomb charging stations are distributed through resellers in markets worldwide.

Coulomb Technologies Regional Distributors Names and Map for the United States (2010).

2.11 SWOT Analysis

The key strengths, weaknesses, opportunities and threats (SWOT) for the utility vertical is as follows. (For the detailed SWOT analysis, see Appendix C.)

- **Strengths**
    - Focus on the advantages of the ANSI certified bi-directional smart-meter that can communicate with the utilities AMI billing infrastructure
- **Weaknesses**
    - Improve the brand connection between Coulomb as a company and Coulomb's products
    - Maintain a strong presence at utility tradeshows and industry publications to project an image of a stable and long-term company
- **Opportunities**
    - Utilities will be looking for ways to reduce greenhouse gases and promote EVs
    - The Charge-Meter program will provide additional revenue opportunities for utilities
    - Fill need for new knowledge and support in emerging EV charging industry
    - Position themselves as experts in the field with high quality through their educational and back end support in an emerging industry where people are still thirsty for knowledge and support
- **Threats**
    - Some competitors are better funded or have contracts with EV companies
    - Coulomb's charging station technology is not proprietary and competitors will likely duplicate it
    - Anti-AB32 proposition on California's November ballot and potential cap and trade limitations being negotiated in Climate Bill-Washington DC may threaten some funding streams

3. Marketing and Brand Strategy

3.0 Strategy Overview

Coulomb is currently focused on marketing to municipalities, fleets, retailers and corporations because all these groups are interested buying electric vehicle (EV) charging stations. However to strengthen its brand value and irresistibility, Coulomb wants to broaden its market to include electric utilities. The focus of this report is on developing a marketing strategy that targets utilities. See Appendix F for the Estimated Brand Asset Valuator analysis (Kotler, 2009).

3.1 Utility Market

The approximately 3,270 utilities across the US can be broken down into the following categories based on size:

- **Large:** Investor-owned utilities (IOUs)
- **Small:** Municipal utilities (Munis) and cooperative utilities (**Co-ops**)

Utilities can also be categorized by how they make money:

- **Decoupled**: Utilities that aren't allowed to make a profit on the sale of electricity, but only the electricity delivery infrastructure
- **Traditional**: Utilities money on infrastructure as well as electricity sales

While many utilities, especially the smaller ones, aren't even looking into EV charging infrastructure yet, certain locations have utilities that are already deep into this process:

- **California**: Southern California Edison, SDG&E, PG&E
- **Nevada**: NV Energy
- **Oregon**: Portland Energy
- **Oregon, Washington and California**: Pacific Power
- **Utah, Wyoming and Idaho**: Rocky Mountain Power
- **Illinois**: ComEd
- **Hawaii**: Hawaiian Electric Co

Each of these categories of utility company will require a slightly different marketing approach. IOUs are larger and have sizable budgets for infrastructure projects while the muni and co-ops will likely need to get approval from their members and apply for grants or sell bonds to raise money.

3.2 Marketing Research

In addition to online and literature research, this report is based on personal interviews conducted with senior employees working directly with electric vehicle infrastructure at utility companies. While there were a wide range of programs, plans and opinions that were uncovered, several major themes emerged from these interviews. Utility companies are the following:

- Conservative and slow to adopt new programs/technology. They need to first observe and test things out before actually committing to a project or program.
- Are attentive to costs
- Not all on aboard for EV pilot programs. Few have started them or embraced the notion
- In need of charging stations with the capability of a smart meter

(For further details of these interviews or need analysis, see Appendix D & E, respectively.)

3.3 Strategy Objectives

We recommending concentrating on three strategic objectives:

1. **Consistent Branding**. Create consistent branding between Coulomb's company image and products.
2. **Constant Presence**. Maintain a constant presence of Coulomb in front of utilities to promote the image of Coulomb being a stable, long-term company.
3. **Charge-Meter Program**. Develop the Charge-Meter utility marketing program to:
    - Educate utilities about Coulomb's products
    - Position the ChargePoint stations to utilities as being similar to a smart-meter
    - Sell them charging stations as infrastructure projects educate utilities about Coulomb's products, position the ChargePoint stations to utilities as being similar to a smart-meter with an EV charging outlet and to sell them charging stations as infrastructure projects.

3.4 Timeline

First-quarter Objectives: Develop a consistent branding image for Coulomb's website, literature and charging stations. Finalize the details of the Charge-Meter message and design the literature, web pages and advertising.

Second-quarter Objectives: Start rolling out the consistent branding. Start developing a constant presence in front of utilities. Begin promotion of the Charge-Meter utility marketing program.

First-year Objectives: Complete roll-out of consistent branding. Achieve a constant utility presence. Produce $1.3M in sales from utilities.

Second-year Objectives: Maintain constant utility presence. Reach $3.9 million in sales.

Third-year Objectives: Maintain constant utility presence. Reach $13 million in sales.

3.5 Consistent Branding

Coulomb Technologies needs to build a stronger brand with utilities and with its broader user base (current and future electric vehicle owners) and develop a closer brand image connection between the company and products.

3.5.1 Name Challenges

Although the name "Coulomb" is the most highly recognizable brand element of Coulomb, it is not an ideal company name due to its obscure scientific reference, awkward spelling and difficulty in pronouncing correctly. Consequently, it is a name that is hard for consumers to retain in their memory, which is key for a brand in an emerging market as they simultaneously try to build their market share and brand. In addition, there is a lack of consistency in where "Coulomb" is used and when "ChargePoint" is used.

Brand Name Confusion

Location	Primary Branding	Comments
Coulomb Charging Station	ChargePoint	Small Coulomb logo appears on station
Coulomb Website	Coulomb Technology	ChargePoint is mentioned on website
Facebook	Coulomb Technology	N/A
Twitter	Coulomb Technology	N/A
iPhone App	ChargePoint	N/A
Mass Media	Coulomb Technology	ChargePoint (not written about directly, but occasionally mentioned in articles about Coulomb)

Additionally, as Coulomb does not own the chargepoint.com domain name, making its use of the ChargePoint brand on its charging station a potential point of confusion.

3.5.2 Image Consistency Challenge

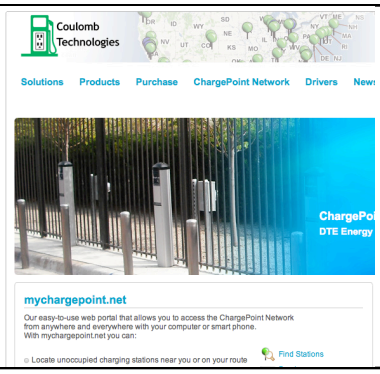
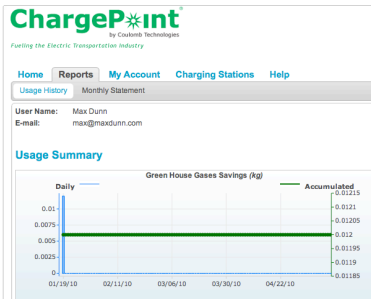
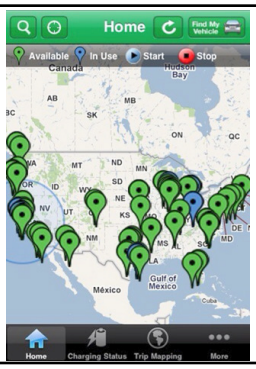
The informational interviews uncovered that while quite a few of the utility personnel knew the "Coulomb" brand, they did not know that Coulomb's charging station is called "ChargePoint".

Coulomb is doing a great job of getting small pilots installed in locations across the US and getting press exposure for them; however unfortunately, Coulomb has been less successful in tying their brand Coulomb to their very visible ChargePoint stations. This means that when a utility employee sees a ChargePoint station, they are likely not recognizing that it is a Coulomb product.

On Coulomb's website, its logo appears most prominently as its image of an outlet embedded within a gas pump, while its charging stations are branded as ChargePoint and show a triangular logo, with the Coulomb logo de-emphasized, appearing as all but irrelevant. Coulomb is missing a significant opportunity to further establish its brand and to get free advertising by emphasizing the Coulomb logo on its charging stations.

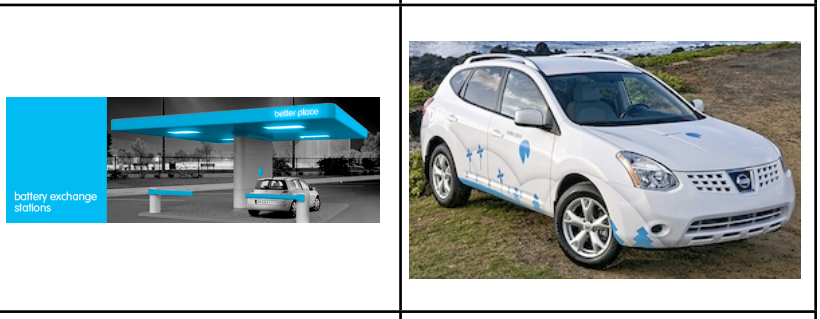
3.5.3 Coulomb Branding Image Samples

Here are samples of Coulomb's logo, websites and products:

Coulomb Technologies		
Logo	Website	Users portal
		
Charging stations	Authorization card	iPhone App

3.5.4 Competitors Branding Image Comparison

A competitor that does a good job of consistent branding is Better Place.

Logo and color	Web site	Blog
		
Charging station	Battery exchange station	Electric car

3.5.6 Brand Image Consistency Recommendations

Since utilities are conservative and want to work with only stable industry leaders, it is very important to have consistent branding between products and the company when marketing to utilities.

In order to overcome the brand consistency challenges, we recommend the following:

1. Use the green logo color as a major design element in everything: website, portals, iPhone apps, literature, tradeshow booths, products, etc.
2. Redesign the current logo to be simpler and more profession
3. Make sure “by Coulomb” is present on all ChargePoint products

3.5.7 Other Branding Recommendations

We also suggest that Coulomb focus on building its brand value based on its key points of differentiation (POD) (Kotler, 2009):

- Integrated, Utility Grade Smart-Meter

- Wireless networking functionality
- Software technology that support integration with utility and other billing systems

3.6 Constant Presence

Coulomb needs to position itself as a stable, long-term company that has a charging station with the necessary ANSI certified smart meter that can be tied into the utilities billing infrastructure.

Currently Coulomb markets through direct sales, press releases, social media, conferences and speaking engagements. They do not purchase advertising in traditional or online media and do not focus on brand advertising.

From our informational interviews, it was discovered that most utilities do not have full-time personnel responsible for EV impacts and charging stations and when this position exists, there is no standard title. This makes it difficult to reach them with direct mail or telemarketing campaigns. In addition, our interviews found out that while some of these people read blogs, they do not use Twitter or Facebook often.

In addition, utilities are very conservative and have a long-term view and they prefer to work to work with only stable, long-term companies. Therefore, it is important to promote an image of stability, technical excellence and market leadership to the utilities.

Based on these factors, the Charge-Meter marketing campaign will focus mainly on tradeshows and industry journals with a bit of online advertising. This will allow Coulomb to maintain a constant presence with utilities.

3.7 Charge-Meter Program

The Charge-Meter utility marketing program is to

1. Educate utilities about Coulomb's products
2. Position the ChargePoint stations to utilities as being similar to a smart-meter
3. Sell them charging stations as infrastructure projects

Educating utilities about general EV charging station infrastructure topics will mainly be done through the website and in presentations at trade shows. The information presented needs to cover the basics about EVs, charging, impacts on the electric grid and need for public charging stations. Then it can get more specific about the need to place charging stations on city streets and public parking spaces that currently have unmetered electric lines and why Coulomb's ChargePoint stations that combine both the smart-meter and the charging station is the best solution.

Some presentation themes could be:

- Growth of EVs and electric capacity needed to support them
- Impact of EV charging on the electric grid
- The need for public charging stations
- Challenges with installing charging stations on unmetered electric lines
- How Coulomb ChargePoint stations tie into utilities AMI grid
- Utilities profit potential for installing charging stations

While not technical or product name changes are suggested for the Smart-Charger program, an important part is to position the ChargePoint stations as a smart-meter combined with a EV charging station. In this way, utilities will more readily accept ChargePoint stations as a product that they should buy, just like they are buying smart meters.

In addition, the main sales message will be that installing a charging station on an unmetered electric line means that the utility would first need to install a smart meter to bill for the electricity and then the charging station would be installed. Instead it is cheaper to just install a ChargePoint with the integrated smart meter. This also would allow the utility to make more money since it would be an infrastructure project.

3.8 Pricing

The Charge-Meter program will normally be paid for by two entities: the utility will buy and own the ChargePoint charging station itself while the city (or other street light owner) will pay for the installation in exchange for a percentage of the charging revenues.

Pricing per meter for the different program levels is as follows:

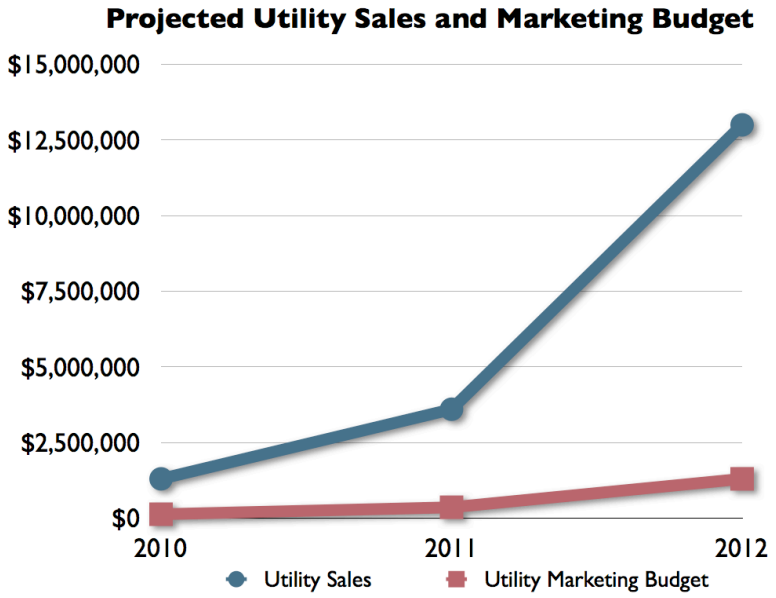
1. Pilot level: 4 ChargePoint stations, $2,000 each
1. Starter level: 100 ChargePoint stations, $1,500 each
2. Full level: 1,000 ChargePoint stations, $1,300 each

The ChargePoint charging stations will be installed by the cities at an estimated cost of $500 per meter. However, if this is done in conjunction with a street light upgrade program, the cost is estimated to be $200. The cities will also receive a royalty of 10% of the fee for using the Coulomb ChargePoint network (Installation costs and royalties based on authors' estimates).

3.9 Marketing Budget

The Charge-Meter program will initially concentrate on large utilities that can install 1,000 meters at a time. The goal is to have one large installation this year at an average sales price of $1,300 per Charge-Meter for a total of $1.3M in revenues and 10 large installations in year three for $13 million in revenue.

The percentage-of-sales method was used to determine the marketing budget (Kotler, 2009, pp. 553). While 15% to 20% of estimated sales is usually used for new product introductions, the minimum of 10% is used here (Colwell, M., personal communication, May 10, 2010). Therefore, for the first year the marketing budget will be $130,000.



3.10 Marketing Mix

The total estimated cost for the recommended additional marketing mix is less then $100,000, which comes in well under the marketing budget of $130,000. The suggestions below are the minimum cost elements needed to achieve the marketing strategy goals, however, there is ample opportunity to have a larger presence for additional cost. For the specifics about each of these marketing recommendations, see Appendix A.

Tradeshow	Date	Where	Booth size	Booth Cost	Travel Cost	Total Cost
Estimated booth cost						$15,000
RMEL Spring Conference	5/16/2010	Santa Fe, NM	5x10	$735	$2,000	$2,735
Networked Grid	5/18/2010	Palm Springs, CA	Table	$3,000	$2,000	$5,000
SmartGridTech	6/2/2010	San Diego, CA	(Estimate)	$2,000	$2,000	$4,000
PlugIn 2010	7/26/2010	San Jose, CA	10x10	$2,000	$0	$2,000
RMEL Fall Convention	9/12/2010	Tucson, AZ	(Speaking only)	$0	$2,000	$2,000
Autovation	9/12/2010	Austin, TX	10x10	$3,300	$2,000	$5,300
GridWeek 2010	9/21/2010	Washington, DC	Table, Silver	$10,000	$3,000	$13,000
IEEE Conference	9/27/2010	Waltham, MA	Table	$2,000	$3,000	$5,000
Midwest Energy Solutions	1/11/2011	Chicago, IL	Bronze sponsor	$3,000	$3,000	$6,000
DistribuTECH	2/1/2011	San Diego, CA	10x10	$3,100	$2,000	$5,100
Gridcom Forum	2/2/2011	Santa Clara, CA	8x8	$2,500	$0	$2,500
Tech Advantage	3/8/2011	Orlando, FL	10x10	$2,400	$3,000	$5,400
TOTAL						**$60,035**
Print Magazine	**Frequency per Year**		**Size**	**Insertion Cost**		**Annual Cost**
Estimated ad design cost						$5,000
RMEL Electric Energy Magazine	2		1/4 page color	$1,165		$2,330
RMEL Buyer's Guide	1		1/4 page	$500		$500
Ultimetrics Quarterly	4		1/4 page color	$600		$2,400
TOTAL						**$10,230**
Online Advertising			**Size**	**CPM**	**Daily Hit Limit**	**Annual Cost**
Estimated banner design cost						$1,000
EVWorld			Masthead 486x60	$9	3,000	$9,855
TOTAL						**$10,855**
MARKETING MIX TOTAL						**$81,120**

Assumptions in the numbers above include:

- One person will be traveling to each show
- For local shows, there will be no travel costs
- Near location cost $2,000 for airfare, hotel and meals
- Far locations cost $3,000 for travel

Another marketing mix opportunity is for Coulomb to join and participate in the organizations listed in Appendix B.

4. Conclusion

To penetrate the Utilities vertical market and increase its brand value and irresistibility, Coulomb needs to develop a consistent brand that connects the company image to its products and create a constant, visible presence at the tradeshows and in the industry publications that utility people attend and read.

In addition, the Charge-Meter program will be used to educate utilities about charging stations and reposition ChargePoint stations in a way to make them more appealing and accessible to utilities - by emphasizing their smart-meter capabilities.

Through this program, utility purchases could become a significant market for Coulomb.

Finally, by building out the public EV charging stations, it will help ensure the acceptance of EVs, which will be an important solution to reducing the usage of oil and emissions of greenhouse gases.

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Appendix A - Marketing Mix Specifics

Trade Shows

Note: Some of these trade shows are coming up too soon to attend. However, they are still included in order to be considered for next year.

Smart Grid Technology Conference and Expo 2010

Focus: Accelerating smart grid, interoperability, winning utility accounts
San Diego, CA
June 2-3, 2010
Why Coulomb should attend: This show is hosted by SDGE; they are giving away free passes to utility personal and expect over 50 high-level utility executives to attend. Also, there is a panel discussion on "Practical Solutions for a Plug-In Electric Vehicle Network" which includes the competitor Better Place.
Cost: TBD
Website: http://www.smartgridupdate.com/smartgridtechnology/

Plugin 2010

Focus: Current and future plug-in hybrid and electric transportation technologies
San Jose, CA
July 26-29, 2010
Why Coulomb should attend: This is the premier show on electric vehicles. It is sponsored by SDGE and attended by many utility people that are involved with EVs. Competitors attending include Better Place, Evatran, Gridpoint, OpConnect, PlugSmart.
Cost: $2000 for 10x10
Website: http://www.plugin2010.com/

Grid ComForum

Focus: Integration of information and communication technologies into the smart grid
Santa Clara, CA
February 1-2, 2011
Why Coulomb should attend: Hosted by PG&E. Last show had a talk on Plug-in Electric Vehicles and the Dynamic Smart Grid
Cost: $2,500 for 8x8
Website: http://www.gridcomforum.com/2011/

Networked Grid

Focus: Next-generation smart grid infrastructure and applications
Palm Springs, CA
May 18-19, 2010
Why Coulomb should attend: Many utilities will be in attendance, Better Place and AeroVironment are speaking

Cost: Table $3,000
Rates: http://www.greentechmedia.com/content/pdfs/sponsor_promos/NG10Promo_Final.pdf
Website: http://www.greentechmedia.com/events/live/the-networked-grid-2010/

Tech Advantage

Focus: The utility industry's only trade show exclusively for electric cooperatives.
Orlando, FL
March 8-11, 2011
Why Coulomb should attend: Last year, there was almost no mention of electric vehicles and charging infrastructure. So it is important to start educating this market and developing a presence.
Cost: $2,400 for 10x10
Website: http://www.techadvantage.org/

RMEL Fall Convention

Focus: A relaxed forum for senior management of electric energy companies to gather, network and share information.
Tucson, AZ
September 12-14, 2010
Why Coulomb should present: The RMEL Fall Convention attracts over 300 senior-level utility managers and executive in an informal educational and networking setting.
Cost: None, speaking opportunity
Website: http://www.rmel.org/content.aspx?id=2810

RMEL Spring Conference

Focus: An education and networking event for engineering, operations and management personnel in the electric energy industry.
Santa Fe, NM
May 16-18, 2010
Why Coulomb should attend: Attended by over 300 management as well as engineering and operations personnel from the many electric utilities of all types. Includes a general session on electric vehicle preparation.
Cost: $735 for 5x10 (table)
Website: http://www.rmel.org/content.aspx?id=3530

GridWeek 2010

Focus: GridWeek is the only annual gathering that brings together the complete diversity of smart grid stakeholders.
Washington, DC
October 18-21, 2010

Why Coulomb should attend: Billed as the most important event for smart grid and brings together thought leaders from all disciplines involved with Smart Grid including Congress, Federal and State regulators and Utility Executives.
Cost: $10,000 for Silver sponsorship and table
Website: http://www.gridweek.com/2010/

Autovation

Focus: Educational forum for utility executives presenting new ways to optimize operations through automation technology.
Austin, TX
September 12-15, 2010
Why Coulomb should attend: While this show covers all utility issues (not just electric), last year it attracted over 1,400 attendees and had three talks that covered EVs.
Cost: $3,300 for 10x10
Website: http://www.utilimetrics.org/autovation.aspx

Midwest Energy Solutions Conference

Focus: To raise awareness and reinforce the importance of energy efficiency in the Midwest.
Chicago, IL
January 11-13, 2011
Why Coulomb should attend: More than 300 of the Midwest's leaders on energy issues and climate solutions will attend. While this show is focused mainly on energy efficiency, the agenda has not been set yet and so Coulomb may be able to present on EV charging infrastructure.
Cost: $3,000 for Bronze Sponsorship
Website: http://www.meeaconference.org/

IEEE Conference on Innovative Technologies for an Efficient and Reliable Electricity Supply

Focus: A forum to discuss new technologies and innovative applications of current technologies for generation, transmission, storage, monitoring and demand management to ensure our ability to reliably meet our growing demand for electricity.
Waltham, MA
September 27-28, 2010
Why Coulomb should attend: This conference was mentioned in our interview with Northwestern Energy as one of the two big conferences they attended, has a track on Electricity and Vehicles and expects 300 attendees.
Cost: $2,000 for table
Website: http://www.ieee-energy.org/

DistribuTECH 2011

Focus: Utility industry's leading smart grid conference
San Diego, CA

February 1-3, 2011
Why Coulomb should attend: This is the other conference that Northwestern Energy said attended. It is a big conference and last year had over 6,600 attendees and 340 exhibitors. 42% of the attendees were from the electric utilities industry, 35% were engineering or engineering management and 11% were executive or general management. While their call for abstracts doesn't specifically request anything about electric vehicles, it might be worthwhile to submit one.
Cost: $3,100 for 10x10
Website: http://www.distributech.com/

Other Events Considered

Smart Grid Summit, Los Angeles, CA, October 4-6, 2010. Not clear who is attending.
Electric Power Expo, Baltimore, MD, May 18-20, 2010. Focuses on coal power issues.
Smart Metering Implementation Summit, Vienna, VA, April 26-28, 2010. No competitors appear to be attending and it is not clear if many utility influencers will be in attendance or if the program material is conducive with EV charging infrastructure.
Utility Products Conference & Exposition, San Diego, CA, February 1-3, 2011. While this show has a lot of electric utility management in attendance, it has too broad a focus.
EUCI Conference on Demand Response, San Francisco, CA, May 5-6, 2010. Not clear how big this show is or if they have exhibits, but should keep in mind for next year for a presentation on EV demand response
GridWise Expo 2010, Santa Clara, CA, May 24-27, 2010. This is a big conference but is aimed towards consumers and has only a small focus on smart grid and EVs, so doesn't justify a booth. However, Dave Packard of ClipperCreek is presenting and Coulomb should also try to get on one of the EV panels.

Print Magazines

RMEL Magazine and Buyers Guide

Each issue is distributed to more than 4,000 electric energy decision makers in the area from the Canadian border to the Mexican border, primarily west of the Mississippi river, excluding the West Coast.
Magazine Cost: $1,165 for 1/4 page color, 2 times per year
Buyers Guide Cost: $500 for 1/4 page, 1 time per year
Rate card: http://rmel.org/assets/0/72/80/165bb710-4fcc-4ef7-9f94-0182e82e5e1b.pdf

Ultimetrics Quarterly

Utilimetrics Quarterly addresses how utilities are using smart meter technology and social media to respond to natural disasters, what a utility might expect once smart metering has been deployed and how smart metering impacts different departments and the roles they play. The September 2010 issue will have an article on Electric Vehicles and Smart Metering.
Cost: $600 for 1/4 page color, 4 times per year
Rate card: http://www.utilimetrics.org/UserFiles/Quarterly Media Plan 2010.pdf

Other Magazines Considered

EnergyBiz Magazine: No editorial content planned on EVs or charging
Energy Today Magazine: No content about smart grid or EVs.
Renewable Energy World: Focused mainly on renewable energy itself, but no tie in to smart grid or EVs.

Online Advertising

EVWorld

While EVWorld is geared towards general EV readership and not utilities in particular, we did have one utility interviewee mention that he reads EVWorld. In addition, they have approximately 20,000 viewers per day, so they have wide reach.
Cost: $9 CPM for standard horizontal masthead 486x90
Rate card: http://evworld.com/admanager/mediakit2008.pdf

Appendix B - Organizations

Organizations

- Electric Power Research Institute (EPRI)
- Edison Electric Institute, "The Association of Shareholder-Owned Electric Companies."
- Electric Drive Transportation Association: started NVPI (National Plug-in Vehicle Initiative), founding members include Southern California Edison
- Plug-In-America
- Electrification Coalition: See member list at: http://www.electrificationcoalition.org/coalition-members.php
- National Rural Electric Cooperative Association: Represents Electric Co-ops and Consumers (member list is available on website at: http://www.nreca.org/AboutUs/OurMembers.htm)
- Project Getready: non-profit founded and led by Rocky Mountain Institute to help cities get prepared for EV adoption.
- National Plug in Vehicle Initiative An initiative comprised of automakers, utilities, battery and component manufacturers, associations and government entities committed to promoting the EV industry.

Appendix C - SWOT Analysis

Strength Opportunity Strategies

Leadership: Use leadership position as the first open networked charging station company to strengthen target market segment awareness for increasing existing utility fixed asset ROI and increasing new infrastructure capital investment ROI cash flow.
Penetration: Use direct sales force and distribution to penetrate utilities and other hosts face to face.

Available: Use Coulomb's product availability for immediate shipment and installation to strengthen first mover advantage.

Dematerialization and Reduced Installation costs: Coulomb's integrated bi-directional ANSI certified smart meter can reduce new smart meter purchases and installations during new charging station installation projects.

Energy Load Management: Load shedding functionality provides utilities and other hosts with additional revenue model traits.

Integration: Integrates with other smart grid systems allowing easier implementation with varied utility distribution management systems.

Conformance: Helps to meet mandated emission requirements since EV charging promotes reduced green house gas emissions for utilities if utility power mix is more skewed toward renewables.

Safety: Promotes safe electricity use for utility end customers.

Billing: Utilize existing utility and Coulomb billing process to enhance battery electric vehicle (BEV) and plug-in hybrid electric vehicle (PHEV) product awareness and charging station brand salience.

Strength Threat Strategies

Reduce solvency and Venture Capital reliance anxiety: Promote Coulomb's self sustained business model, by selling charging stations and collecting host billing service fees.

Reduce host-billing anxiety: Implemented "Flexpoint" system for open-host based electrical billing schedules rather than Coulomb's contracted rate billing. Coulomb only charges a fee for the billing process itself, and not for electricity used, through its network.

Weakness Opportunity Strategies

Coulomb's small brand equity can be enhanced by continuing to align with and leverage other larger brands to gain brand awareness and equity transference opportunity (e.g. build from new and existing partnerships with SAP AG, McDonald's, Dell, etc).

Coulomb's brand logo can be enlarged and enhanced for increased brand imagery with every customer touch point.

Coulomb's back-end integration can be enhanced to further brand resonance and knowledge. Expand use of social media tools like Twitter, Face book and Green blogs to aggressively build brand awareness, strengthen BEV and PHEV product awareness and inspire potential evangelists to expand brand salience.

Weakness Threat Strategies

Monitor and respond to other brands like the Juice and GE partnership, so that Coulomb's message reaches the utilities before competitors do, pursuing both consumer and competitor marketing strategies.

Potential downward pricing pressure may exist once comparable products exist in the marketplace.

Appendix D - Information Interviews

This appendix contains the details of the information interviews that were conducted.

1. What are the biggest concerns utilities have regarding electric vehicles (EVs)?

"The affect on the system load factor. A disproportional increase of load during peak demand periods would increase overall system costs and fuel requirements." ***(Edward Jenkins, VP-Power Delivery, Chugach Electric Association)***

"We are not connected to a grid and we are a fishing town. We don't have a lot of roads. EV's make sense for us. We are excited that EV's are coming on board to replace fuel efficiency cars. Kodiac's vision is to be an energy solutions utility cooperative and by being able to power our community with renewable energy we can displace the amount of gasoline or any fossil fuel. Most of our power comes from wind and water. We are 90% renewable energy and it is our goal to become 95% renewable. There aren't many roads here. We do not have the limitations of roads and ranges like other municipalities. We have some electric vehicles. People charge them in their homes.

Utility companies feel shifting peak loads that occur during the day to loading at night is positive. Heard some ideas of using an interconnection of plug in cars to be a battery source for cars. If you have all of these cars plug into the grid then utility companies could use the collective battery storage of the plugged in vehicles to back up renewable energies such as solar and wind. However, on the other hand there are concerns nationwide especially down south. Coal plants are getting older. The idea of adding new loads to our current infrastructure concerns individuals because it might not be able to handle the load demand. Where is the energy going to come from? Electric demand is succeeding energy supply. If we are shutting down coal plants something needs to replace them."
(Jennifer Richcreek, Environment Coordinator, Kodiak Electric Association-Alaska (A rural not-profit association)

"The biggest concern will be the impact of a large number of vehicles on a utility's grid. Each utility will have to figure out how to deal with the coming increase of new the EV's for electricity." ***(Peter Rosegg, Corporate Communications specialist*, Hawaiian Electric Company)**

"Don't see the idea of EV's powering the grid. EV to grid seems like there will be too much electrical loss in transmission. In a peak situation I could power my laundry machine, refrigerator, household appliances through EV's but now having EV's power the grid. It would be nice but reality is there is line loss. Just my view."
(Dan Kings, Southern Company)

"We don't have a lot EV's ourselves. We are running a pilot program and we want to have it in one part of service area. Smart grids will recharge their EV's over night and they can use it during the day. We have a few token cars to promote it. It is a large expense upfront and still needs to be proven. It needs to be cost effective enough to invest in. We have some of the best programs for commercial or residential customers who want to upgrade consumers to gas or whatever they have that electricity. We have funding that helps make up the difference between mediocre and state of the art. We recommend ideas during upgrades rather than products. I don't know of any EV's but do know of hybrids" ***(Bill Isaksen, Energy Efficient Consultant, National Grid)***

"An EV recharging can be liken to the load of a house so most residential/distribution centers that were designed to serve residential homes in the residential district not twice as much loads as to what the homes are. If there are too many EV's loading onto the grid then it will overload with the transformer and equipment that serve these houses in the neighborhood. Because the vehicle charging will be about as much load as the house itself."
***(George Horvath, Manager - Distribution Engineering, NorthWestern Energy*)**

"We want to make sure that consumers adopt EV's have good experience and that we are maintaining the reliability of the eclectic grid."
(Dan Gabel, Fleet Service manager, COmed)

2. If an EV charger had a certified smart-meter and was approved by their PUC, would the utility be interested in investing in them for placement on streetlights?

"The challenge is that streetlights are very low powered consumption devices and so the infrastructure to serve streetlights is minimal. It is capable of serving the streetlights but hardly anything more. It's the voltage as well as the size of the transformer as well as the size of the conductor for street light transformers are small, conductor size is small also because the load size small. So if every one of those streetlights had an EV trying to charge, the infrastructure could not support it. The transformer would be burned up. It could not be done without totally rebuilding the infrastructure.

It would take more than a PUC approval because the utility would need to have a lot of infrastructure in place to communicate to the smart meter as well as work with it. There would be a lot of money for the Utility to speak with the meter therefore it would have to be done in conjugation with the utilities own smart meter program. In other words you could not just buy any old smart meter and expect the utility to be able communicate with it."
***(George Horvath, Manager - Distribution Engineering, NorthWestern Energy*)**

"Could potentially do it. Street lamps- Electric service going to street lamps are not big enough to handle load of an EV. You would have to put in new wires and distribution equipment. You would have to put in big wires and transformers. Probably not cost effective because the cost of all the infrastructure would not be able to be recuperated with the revenue generated from EV's charging. It doesn't make sense to redo electric street lamps for this purpose."

(Dan Gabel, Fleet Service manager, COmed)

Company	Would EVs be a potential revenue source for utilities?	Will utilities get involved with regulating, recommending or licensing home charging stations?	Will utilities be involved with setting up public charging stations?	Would utilities be interested in doing a pilot of public charging stations to gain more data about their impacts?	How do utilities feel about working with new technologies?
Chugach Electric Association	yes	no	Only as required for planning and providing for the power requirement	Not as a financial partner	Welcome new technologies that increase efficiencies and reduce costs to our members
Kodiak Electric Association	Yes	will have input with regulating-grid stability, load regulation, safety. Should have input on these things	yes see interest but will be regional,and expensive.	Yes, if they have money and interest.	It is essential to sustainability. New tech must be reliable and commercially viable.
Hawaiian Electric Company	Yes	yes	It will vary from utility to utility. Some will want to own and some no. Some utility gains revenue through your infrastructure.	probably	In general utilities are pretty cautious about new technology. When we tested new technology with pilot programs and have embraced it then we really go for it. But first have to do a lot of testing.
Southern Company	yes	yes	yes	yes	We embrace and spend millions of dollars to work with this technology.

National Grid	yes on the condition that we go to EV's and EV's prove to be efficient and cost saving. But that is not happening here now.	Yes	no	No but could potentially hire someone to do a study	Very good. Our company has a goal of reducing its' carbon footprint by 80% by 2050. Off the coast of RI, there is a wind turnbine company that will be putting turnbines to power the island.
NorthWestern	yes	yes	yes	yes but funding would have to come from outside of the utility company	Fairly conservative but always interest working with new technology- like to start with pilot before implementing something on a grand scale
Comed	Maybe depending on regulatory environment	don't know- our primary concern is to assure that equipment is safe	yes	yes- currently doing one with Chicago	very excited about it- use smart grid technology to manage load through system automatization
Golden Valley Electric Association	n/a	n/a	n/a	Perhaps Fairbanks and Ankorage	Most utilities that don't have tons of money will probably sit and watch rather than being proactive. Utilities tend to be conservative

3. What are common titles for people at utilities dealing with electric vehicle infrastructure?

Planning Engineers
Environmental coordinator
New market analyst
Emerging technology supervisor

4. What are some good ways to reach these people?

Industry organizations:
ETDA (Electric Drive transportation Association)
Plug in America.org
The Edison Electric Institute
National Rural Electric Cooperative Association
EPRI electric transportation program

Magazines and publishing houses:
Transmission and Distribution World
Energy Central
Electric Power and Light

Trade shows and events:
Tech Advantage
Distributech
The IEEE exposition

Social Media:
Blogs
Facebook
Twitter

Trade Lists sign:
Department of Energy lists
Energy magazine lists
Conference lists

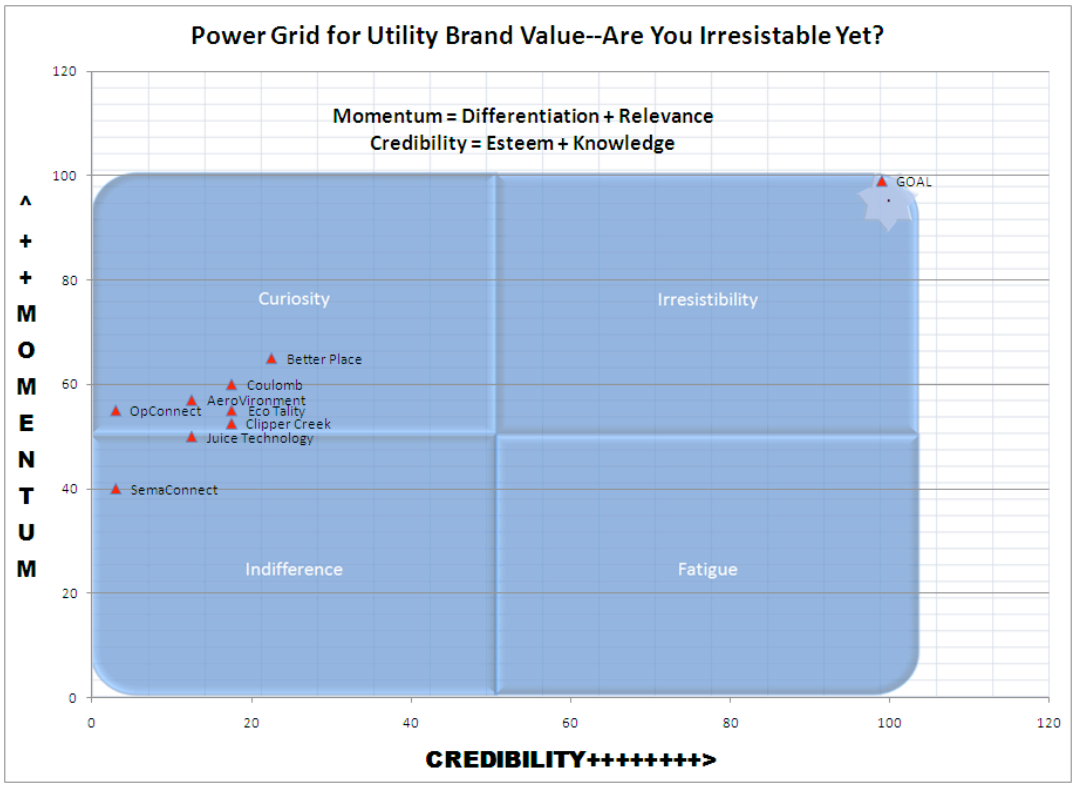
5. What other utilities are leaders in your industry?

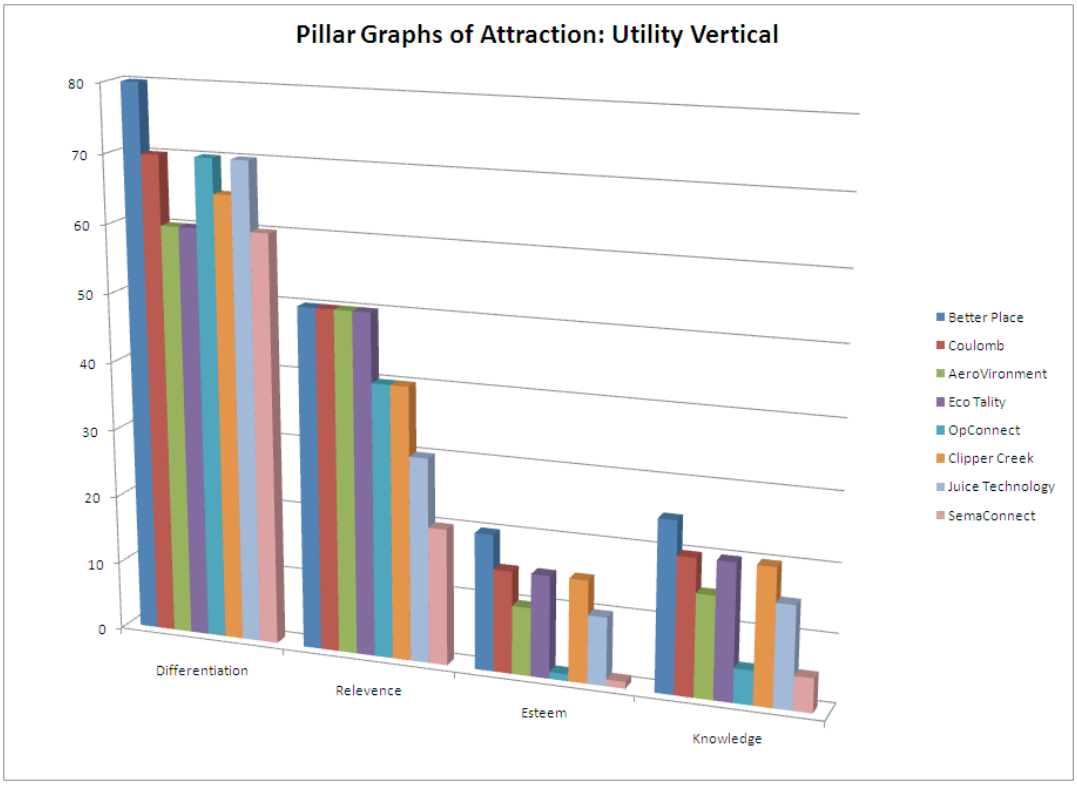
Sacramento Municipal Utility District
PGE
Austin Electric Texas
Southern California
San Diego Gas Electric
Portland General Electric

Appendix E - Five Needs Chart

For Utility Vertical:	
Stated Needs:	Utilities want inexpensive charger stations for PEV infrastructure
Real Needs:	Utilities want visibility to electricity loads for load shedding
Unstated Needs:	Utilities expect chargers with networking capability
Delight Needs:	Utilities would like networked chargers with utility grade meters (or Chargers with Smart Meters)
Secret Needs:	Utilities want to be seen as frugal and conservative, so increased cost savings from a two in one product (charger plus smart meter) can contribute to this need

Appendix F - Brand Asset Valuator Analysis





Key Take-Aways from Brand Asset Valuator Analysis

- You need to measure brand equity in order to manage it
- The utility vertical is in a immature and introduction stage for charger product life cycle
- The majority of players in the charger market for utilities are in the curiosity phase of brand value/power and need to strive to move into the irresistibility phase
- Better Place holds the strongest position at this time
- Momentum leadership is driven by strong differentiation and relevance
- Relevance and resonance are strongly influenced by Global Climate Change, Peak Oil and Sustainability acceptance, government regulation and funding from country to country
- Using pyramid of influence can accelerate relevance and resonance impact
- Utilize customer centered strategy to constantly define, meet and exceed all five types of needs better than competition
- Credibility leadership is driven by strong esteem and knowledge
- Continuous track record of high quality products and service experiences build strong esteem, product knowledge and company reputation