



EV Customer Preferences

December , 2010

F R O S T & S U L L I V A N

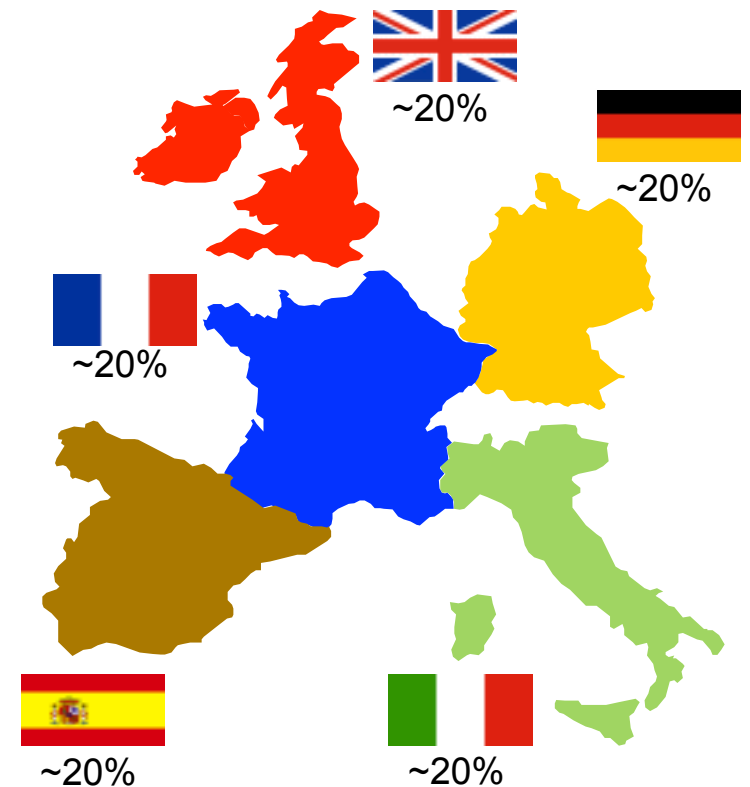
Method Details

Methodology: We utilized a web-based survey methodology. Specifically, our web-based survey methodology utilizes online panels to source only qualified respondents. Respondents must meet requirements set by a screening process, prior to full survey participation. Online panel members are created by individuals who volunteer to participate in web-based surveys, and typically receive compensation directly from their panel membership for participating in qualified survey research. In general, survey respondents do not receive direct compensation from Frost & Sullivan for participating in our research.

Sample: We surveyed 2,150 vehicle owners (purchased new vehicle in last 5 years) in France, Germany, Italy, Spain, and United Kingdom (quotas by country were established to ensure equal representation). **Specifically, survey respondents had to be 18 years or older, be a primary driver of at least one car in the household, was an influencer or decision maker when primary car was purchased, and own a 2004 car model or newer.** Additional demographic details of the sample are below and in the following slide.

Fieldwork: We conducted the survey during November – December 2010.

Reporting notes: Percents in charts, tables, etc. may not total to 100 percent due to rounding.








Source: Frost & Sullivan

Method Details (contd)

Sample Details								
	Vehicle Segment							
Countries	Basic	Subcompact	Compact	Midsize	Large	MPV	Compact SUV	Large SUV
France (N=419)	4%	20%	24%	22%	2%	13%	8%	6%
Germany (N=422)	5%	19%	23%	19%	5%	10%	10%	9%
Italy (N=440)	7%	18%	23%	18%	5%	11%	10%	10%
Spain (N=439)	2%	25%	27%	19%	3%	13%	7%	5%
United Kingdom (N=430)	8%	19%	24%	18%	5%	10%	7%	9%

Definitions

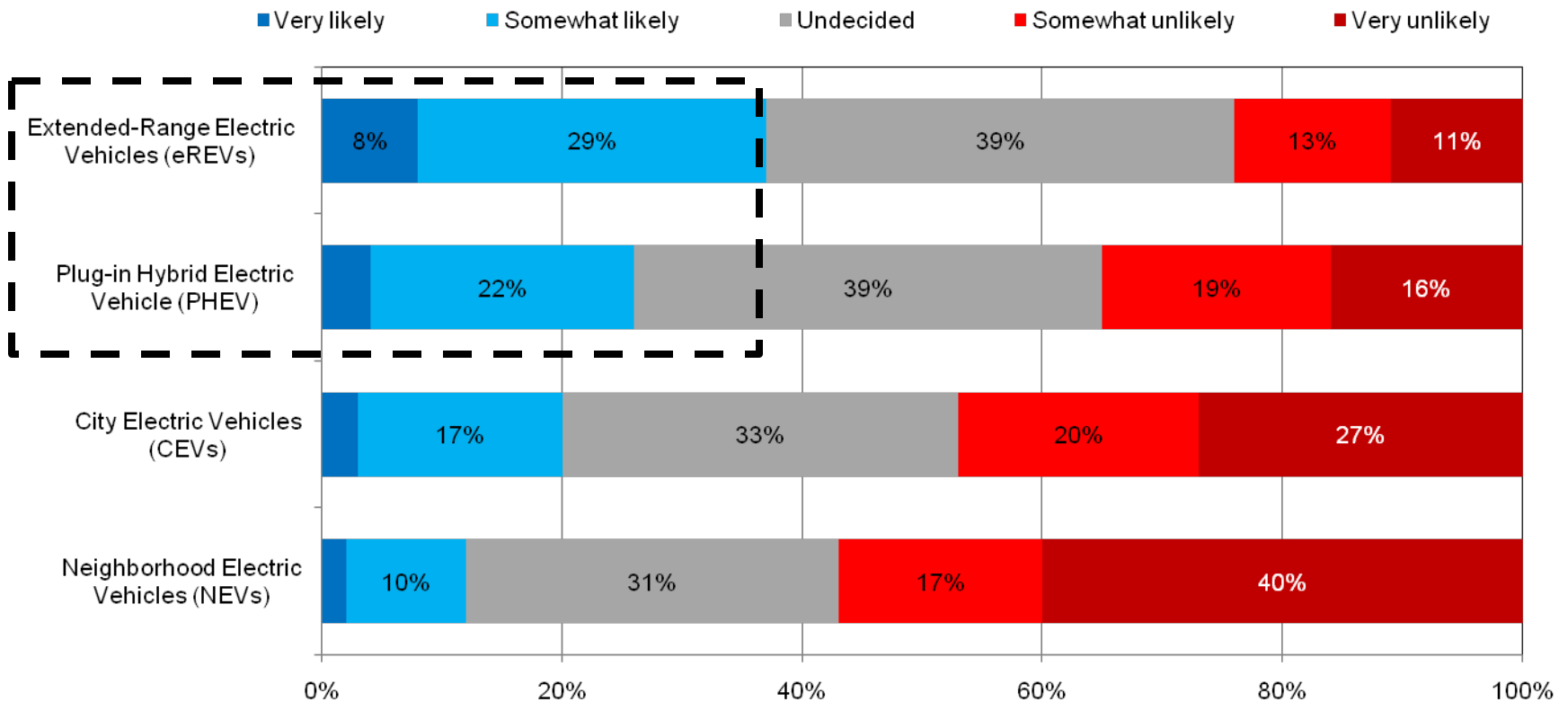
Battery Electric Vehicles: Electric vehicles (EVs) use electric motors instead of an internal combustion engine (ICE) to propel a vehicle. The electric power is derived from a battery of one of several chemistries including lead acid, nickel metal hydride (NiMH) and lithium-ion (Li-ion).

Neighbourhood Electric Vehicles (NEVs)	City Electric Vehicles (CEVs)	Extended-range EVs (E-REVs)	Plug-in Hybrid Electric Vehicle (PHEVs)	High-Performance Electric Vehicles (HPEVs)
<p>NEV is a US DOT classification for vehicles weighing less than 3,000 lbs (GVW) and having a top speed of 25 mph. NEVs are generally restricted to operate on streets with a speed limit of 35 mph or less.</p>	<p>A city car is a European classification for small and light vehicles intended for use in urban areas although capable of operating in mixed city-highway environment. In Japan, city cars are called kei cars.</p>	<p>These vehicles have an internal combustion engine (ICE) or other secondary source connected in a series configuration to a generator to supply the batteries. The drive range and speeds are comparable to IC engine vehicles.</p>	<p>A plug-in hybrid electric vehicle (PHEV) has an internal combustion engine (ICE) with a motor along with a battery connected in parallel to the ICE. They are generally regarded as full hybrids with bigger motor/battery and a plug to recharge.</p>	<p>These are sporty PHEVs or battery electric vehicles with top speeds exceeding 100 mph and driving range exceeding 100 miles. The price of these vehicles is expected to approach or exceed \$100,000.</p>
<p>GEM e2, e4, e6; REVA G-Wiz i; ZENN; ZAP and others</p> 	<p>Smart EV, Th!nk City, BMW Mini and others</p> 	<p>Chevy Volt, Opel Ampera and others</p> 	<p>Toyota Prius PHEV, Ford Fusion PHEV, etc</p> 	<p>Tesla, Venturi Fetish, Lightning GT, etc</p> 

Range extenders and Plug-in Hybrids most interested type of EV

Key Take Away: Extended range electric vehicles, followed by plug-in hybrid electric vehicles, are most likely to be purchased among the various types of EVs surveyed. This is no surprise, as concerns about being stranded tend to plague EVs.

Likelihood of Purchasing Type of EV
(N=2,150)



Note: Proportions less than five percent not shown numerically in chart

Source: Frost & Sullivan

Q48. There are different types of electric cars that are being developed. How likely would you be in purchasing the following types of electric cars?