China EVE Standards

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China Automotive Industry Development Plan

China EVE Standards
Energy-saving & New Energy Vehicle Industry Development Plan

- Based on the features and requirements of automotive industry development, new energy vehicle has been included into China strategic emerging industries. To encourage the industry development, China has published "the Energy-saving & New Energy Vehicle Industry Development Plan" in June of 2012.

- The Development Plan has defined the thoughts, target, major tasks and industrial layout of the energy-saving and new energy vehicles. It also includes a package of supporting policies to promote energy-saving and new energy vehicle industry in various aspects such as industrial policies, fiscal and tax policies, investment and financing policies, etc.
Targets for New Energy Vehicles

By 2015:

• The accumulated production / sales volume of BEV and PHEV will reach 0.5 million

By 2020:

• The production capacity of BEV and PHEV will reach 2 million/year, and the accumulated production / sales volume will reach 5 million.
New Energy Vehicle Pilot Project

- From 2009, China has carried out the promotion of energy saving and new energy vehicles in public service field in 25 cities, and individual purchase of new energy vehicle subsidy pilot projects in 6 cities.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Subsidy (RMB/Car)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Service</td>
<td>Hybrid Vehicle</td>
<td>Max. 420,000</td>
</tr>
<tr>
<td>(Commercial Vehicle)</td>
<td>EV</td>
<td>Max. 500,000</td>
</tr>
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<td></td>
<td>FCV</td>
<td>Max. 600,000</td>
</tr>
<tr>
<td>Individual Purchasing</td>
<td>Plug-in HEV</td>
<td>Max. 50,000</td>
</tr>
<tr>
<td>(Passenger Vehicle)</td>
<td>EV</td>
<td>Max. 60,000</td>
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</tbody>
</table>

- By now, China has had more than 19,000 energy-saving and new energy vehicles demonstrated in the pilot project.
China Automotive Industry Development Plan

China EVE Standards
Organization for China Standardization on EV and Infrastructure

Other Countries and Regions
- ISO/TC22/SC21
- IEC/TC69
- UN/WP29

National Standards
- MIIT
- SAC
- NEA

Electric Vehicle
- NTCAS (SAC/TC114/SC27)
  Secretariat: CATARC

Charging Infrastructure
- CEC (NEA/TC3)
  Secretariat: CEC

Industry Standards
- MIIT
- NEA

Governmental Dialog
New Energy Vehicle Standard System in China

- New energy vehicle standard system of China has been built and will be further improved.

- Till now, more than 60 new energy vehicle and infrastructure standards has been developed and released by MIIT and SAC. National standards and industrial standards are included.
New Energy Vehicle Standard System in China

Focus on:
• The Whole Vehicle:
  -- Battery electric passenger cars – specifications
  -- Electric Vehicles Safety Requirements
  -- Test methods for energy consumption of light-duty hybrid electric vehicles
• Key Components:
  -- Lithium-ion Batter for Electrical Vehicles
  -- The Electrical machines and controller for electrical vehicles
• Infrastructure:
  -- On-board Charger for Electric Vehicles
  -- Specification for Electric Vehicle Off-board Conductive Charger
  -- Communication protocols between off-board conductive charger and battery management system for electric vehicle
• General:
  -- Terminology of Electric Vehicles
# China EVE Standards

<table>
<thead>
<tr>
<th>No.</th>
<th>Standard Code</th>
<th>Standard Title</th>
<th>Status</th>
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<tbody>
<tr>
<td>1</td>
<td>GB/T 28382-2012</td>
<td>Battery electric passenger cars - Specifications</td>
<td>Valid</td>
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<tr>
<td>2</td>
<td>GB/T 18386-2005</td>
<td>Electric vehicles-Energy consumption and range-Test procedures</td>
<td>Valid</td>
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<tr>
<td>3</td>
<td>GB/T 19753-2005</td>
<td>Test methods for energy consumption of light-duty hybrid electric vehicles</td>
<td>in Revision</td>
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<tr>
<td>4</td>
<td>GB/T 19754-2005</td>
<td>Test methods for energy consumption of heavy-duty hybrid electric vehicles</td>
<td>in Revision</td>
</tr>
<tr>
<td>5</td>
<td>GB/T 19755-2005</td>
<td>Measurement methods for emissions from light-duty hybrid electric vehicles</td>
<td>in Revision</td>
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<tr>
<td>6</td>
<td>GB/T XXX-XXX</td>
<td>Measurement methods for emissions from heavy-duty hybrid electric vehicles</td>
<td>in Development</td>
</tr>
<tr>
<td>7</td>
<td>QC/T 894-2011</td>
<td>On-board measurement methods for emissions from light-duty hybrid electric vehicles</td>
<td>in Revision</td>
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</table>
China EVE Standards in Research

- Plug-in hybrid electric passenger cars - Specifications
- Test methods for energy consumption of plug-in hybrid electric vehicles
- Measurement of energy consumption from fuel-cell hybrid vehicles
- Energy consumption limit for Battery electric vehicles / range-extension electric vehicles / plug-in hybrid electric vehicles
谢谢！

Thanks!