Roadmap 12: The Road to 100% ZEV

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Policies have been applied to promote the NEV development

**Fiscal incentives**
- Purchasing subsidy (phasing out)
- Exemption of the vehicle purchase tax

**China ZEV mandate**
- Mandate NEV sales requirements for 2019 (10% of ICEV product or import) and 2020 (12% of ICEV production or import)
- Allowing NEV credits to be sold

**Non-fiscal incentives**
- Traffic restriction exemptions
- Green-colored special license plates for EVs

**Blue-Sky Protection Action Plan**
- To deploy the NEVs in public fleets (bus, sanitary, post, taxi, commute, delivery)
- To deploy 100% NEV buses in main cities in the key regions.
Local EV achievements and targets

Shenzhen
- Set up a target of 100% EV taxis by 2022

Beijing
- NEVs 234,000 (2018)
- 60% new license plates for EVs
- Highest EV/charging pile (1.27:1)
- PHEV account for >60%

Shanghai
- All the bus fleet as EVs
- All taxies as EVs by the end of 2018

Guangzhou
- Announce to ban the sales of ICEV by 2030
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Hainan
- All the taxi fleet as EVs

Taiyuan
- ""
**How to accelerate the EV deployment in China?**

- **Source:** CATARC, Research on the Development Trend 2050 of Conventional Vehicle and NEVs in China, 2018

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**Cost (10 thousand RMB)**

- **Gasoline**
- **Natural gas**

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<thead>
<tr>
<th>Year</th>
<th>Cost</th>
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<td>2017</td>
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**BEV vs. ICEV**

**BEV vs. HEV**

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**Source:** CATARC, Research on the Development Trend 2050 of Conventional Vehicle and NEVs in China, 2018
Challenges

• Lack of clear targets after 2020, especially the goals by 2030/2035 & 2050 targets and roadmaps to enable accelerated transition
• Maintaining momentum for EV penetration even as current incentive policies phase out after 2020
• Building and connecting adequate charging infrastructure to support massive EV deployment with reliable grid service.
• Long-term uncertainties on battery and fuel cell technology innovation.
• The integration between NEVs, grid, renewable energy, urban planning and economy development
• Product quality inspection

Opportunity

• Early political momentum to move towards all EVs
• Pioneers in city and province level
• Air quality improvement and GHG emission control as additional drivers.
• Positive macro-level trends on technology cost and potential and consumer acceptance.
• Market opening to enable fair competition