

International Brands and Domestic Startups Lead as NEV-APEAL Continues to Improve, J.D. Power Finds

BYD Seagull, Geometry A Pro, Volkswagen ID.3, BYD Yuan Plus, NIO ET5/ET5T, Tesla Model 3, Volkswagen ID.4 Crozz, ZEEKR 001, NIO ES6, BYD Han PHEV, DEEPAL SL03 and AITO M5 Rank Highest in Respective Segments

SHANGHAI: 30 May 2024 – New energy vehicles (NEVs) have made consistent progress year over year, according to the J.D. Power 2024 China New Energy Vehicle–Automotive Performance, Execution and Layout (NEV-APEAL) Study,SM released today. The average NEV-APEAL score for Chinese NEVs is 789 (on a 1,000-point scale), an increase of 13 points from 2023.

The study examines NEV owners' assessment of their new vehicle within the first two to six months of ownership. The data is used extensively by NEV manufacturers to design and develop more appealing vehicles.

The study shows that among OEM types, international brands (800) score highest for a second consecutive year. Domestic startups (798) have made the greatest progress, with a significant increase of 17 points from 2023. Among 11 experience categories, fuel economy and driving range has the most significant increase, rising 16 points to 796. Additionally, the importance weighting for safety has increased by 1.5 percentage points to 8.4%, reflecting a growing concern about NEV safety.

"International brands have made rapid progress," said **Elvis Yang, general manager of auto product practice at J.D. Power China**. "Leveraging their brand and product advantages from the internal combustion engine era, they have shown outstanding product strength this year. As China NEV owners' range anxiety decreases, they are increasingly focusing on safety and driving experience. Although the NEV-APEAL score for this category has risen, the growth rate has slowed. OEMs should understand owner needs and avoid product homogenization to create standout products."

Following are some key findings of the 2024 study:

- **NEV exterior scores advance, custom colors gain popularity:** In 2024, overall satisfaction for exterior is 818, up 11 points year over year. Among exterior preferences, 26% of owners who have vehicles with non-traditional colors (other than black, white, grey, silver, red or blue) consider the color their favorite aspect, significantly higher than among owners whose vehicles have a traditional color. This reflects the growing popularity of custom colors among owners.
- **BEVs excel in performance and driving feel:** Battery electric vehicles (BEVs) outperform plug-in hybrid electric vehicles (PHEVs) in both performance and driving feel. Last year, PHEVs led in engine/motor sound, power and smoothness. This year, BEVs surpassed them in all three factors, with the largest gap in engine/motor sound. In terms of driving feel, PHEVs, which previously led in ride comfort, steering/handling, and braking performance, have fallen behind, especially in suburban and mid-low speed driving scenarios.
- **Charging experience improves, slow charging efficiency needs enhancement:** The charging experience has significantly improved, an increase of 14 points from a year ago. However, slow charging efficiency remains the lowest-scoring factor, with a notable gap compared to other factors. In 2024, the slow charging time averages 7.1 hours, down from 7.6 hours in 2023. Despite a

reduction of 0.5 hours, slow charging times still fall short of owner expectations, indicating a need for further enhancement.

Highest-Ranked Models

Models that rank highest in their respective segments are:

- Small BEV Car segment: **BYD Seagull**
- Compact BEV Car segment: **Geometry A Pro, Volkswagen ID.3, in a tie**
- Compact BEV SUV segment: **BYD Yuan Plus**
- Midsize BEV Car segment: **NIO ET5/ET5T, Tesla Model 3, in a tie**
- Midsize BEV SUV segment: **Volkswagen ID.4 Crozz**
- Large BEV segment: **ZEEKR 001**
- Premium BEV segment: **NIO ES6**
- Mass Market PHEV Car segment: **BYD Han PHEV, DEEPAL SL03, in a tie**
- Mass Market PHEV SUV segment: **AITO M5**

The Small BEV SUV, Premium PHEV, Mass Market PHEV MPV and Mass Market BEV MPV segment criteria for awards were not met, therefore no awards are given this year.

The China New Energy Vehicle–Automotive Performance, Execution and Layout (NEV-APEAL) Study measures NEV owners' emotional attachment to and level of excitement with their new vehicle across 45 attributes in 11 vehicle experience categories: exterior; setting up and starting; getting in and out; interior; performance; driving feel; keeping you safe; infotainment; driving comfort; fuel economy and driving range; and charging experience.

The 2024 study is based on responses from 9,937 new energy vehicle owners who purchased their vehicle between June 2023 and January 2024. The study includes 105 models from 48 different brands, among which 74 models have sufficient samples. The study was fielded from December 2023 through March 2024 in 81 cities across China.

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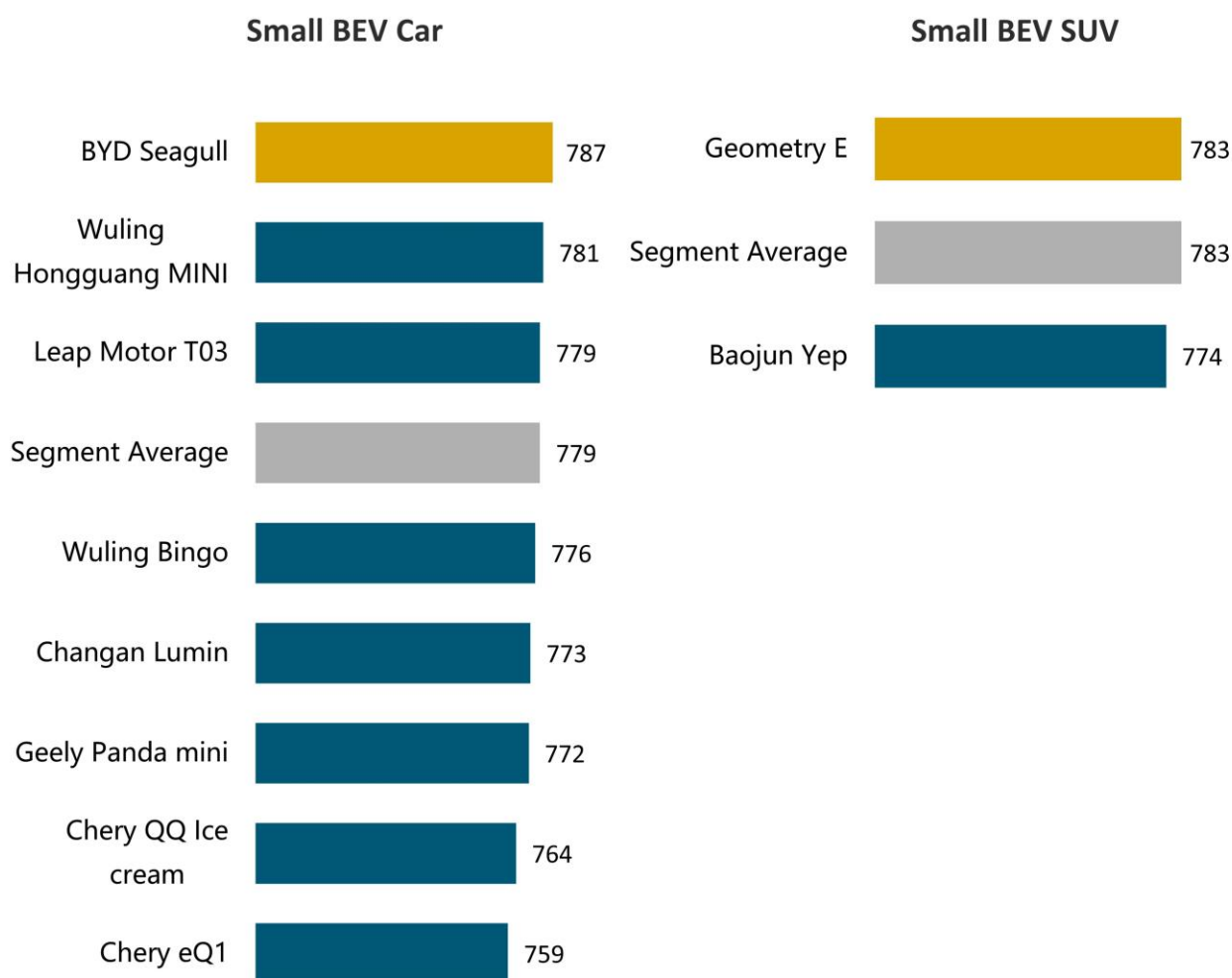
NOTE: Six charts follow.

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2024 China New Energy Vehicle Automotive Performance, Execution and Layout StudySM(NEV-APEAL)

Model Ranking per Segment

(on a 1,000-point scale)



Scores are not shown for small sample (n=30~99) models. (Small BEV SUV: NETA AYA, BYD Yuan Pro, Nammi EX1)
Criteria for segment awards: Four models must meet the required sample threshold (at least 100 samples) for inclusion in segment ranking. Or three models must meet the required sample threshold (at least 100 samples) to be included in segment ranking and the sales volume of these related three models must achieve at least 80% of total market share within that segment during the sampling period. At least one model located within a segment and getting a sufficient sample size must perform better than its segment average. Small BEV SUV segment above does not meet the foregoing criteria for segment awards, thus there is no award for this segment, only ranking and scores are released for reference.

Source: J.D. Power 2024 China New Energy Vehicle Automotive Performance, Execution and Layout StudySM (NEV-APEAL)

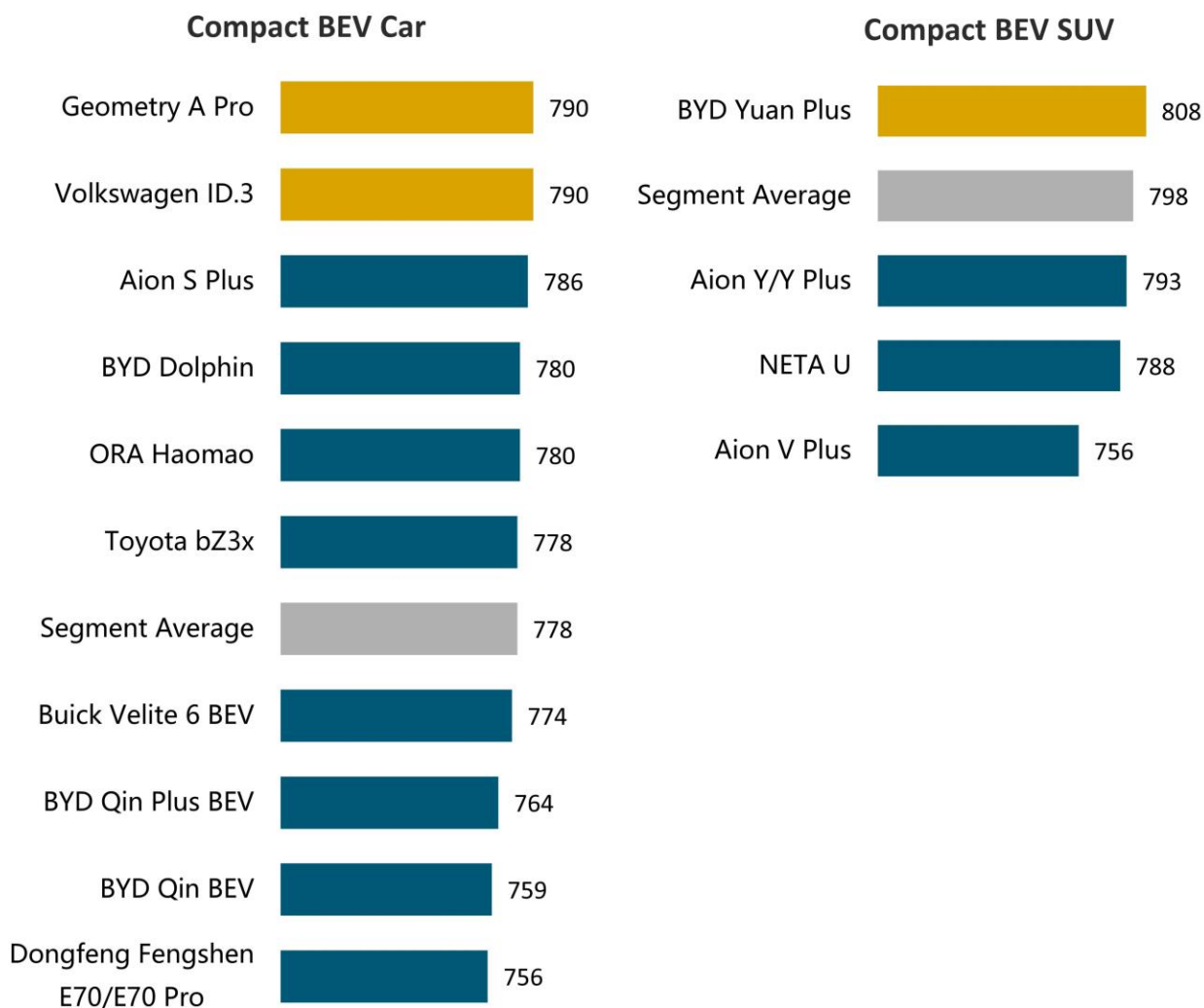
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Model Ranking per Segment

(on a 1,000-point scale)



Scores are not shown for small sample (n=30~99) models. (Compact BEV Car: BAIC BJEV EU5 Plus, Baojun Yunduo, BYD e2, DEEPAL SL03 BEV, Geely Emgrand BEV, MG 4 EV, Venucia D60/D60 Plus BEV, Xpeng P5)

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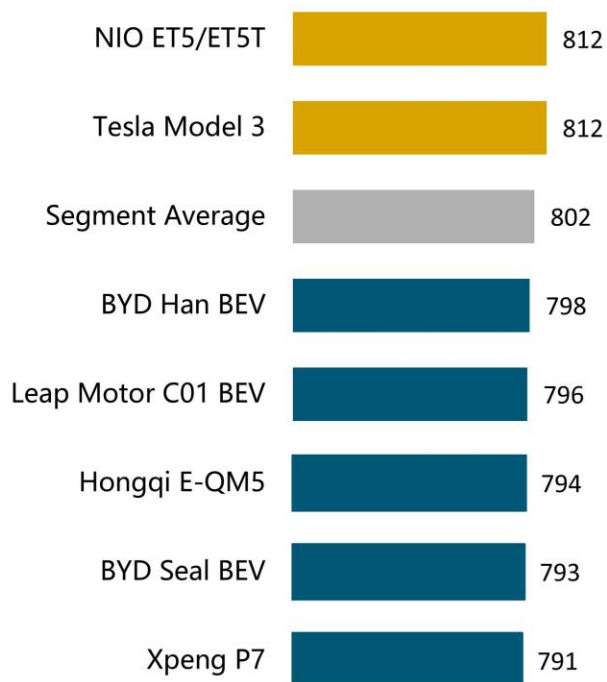
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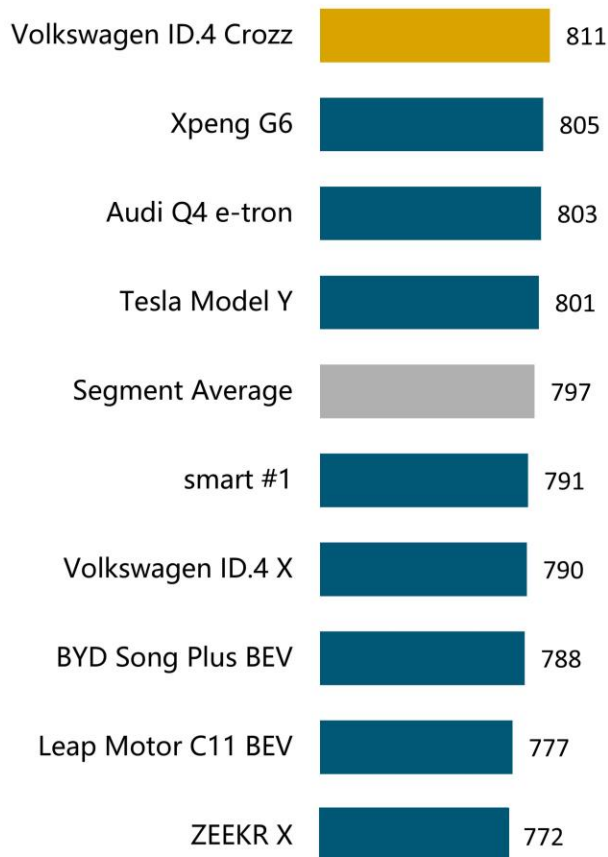
Model Ranking per Segment

(on a 1,000-point scale)

Midsize BEV Car



Midsize BEV SUV



Scores are not shown for small sample (n=30~99) models. (Midsize BEV Car: Roewe ei6 MAX BEV. Midsize BEV SUV: Buick E5, smart #3, Mercedes-Benz EQA, Mercedes-Benz EQB)

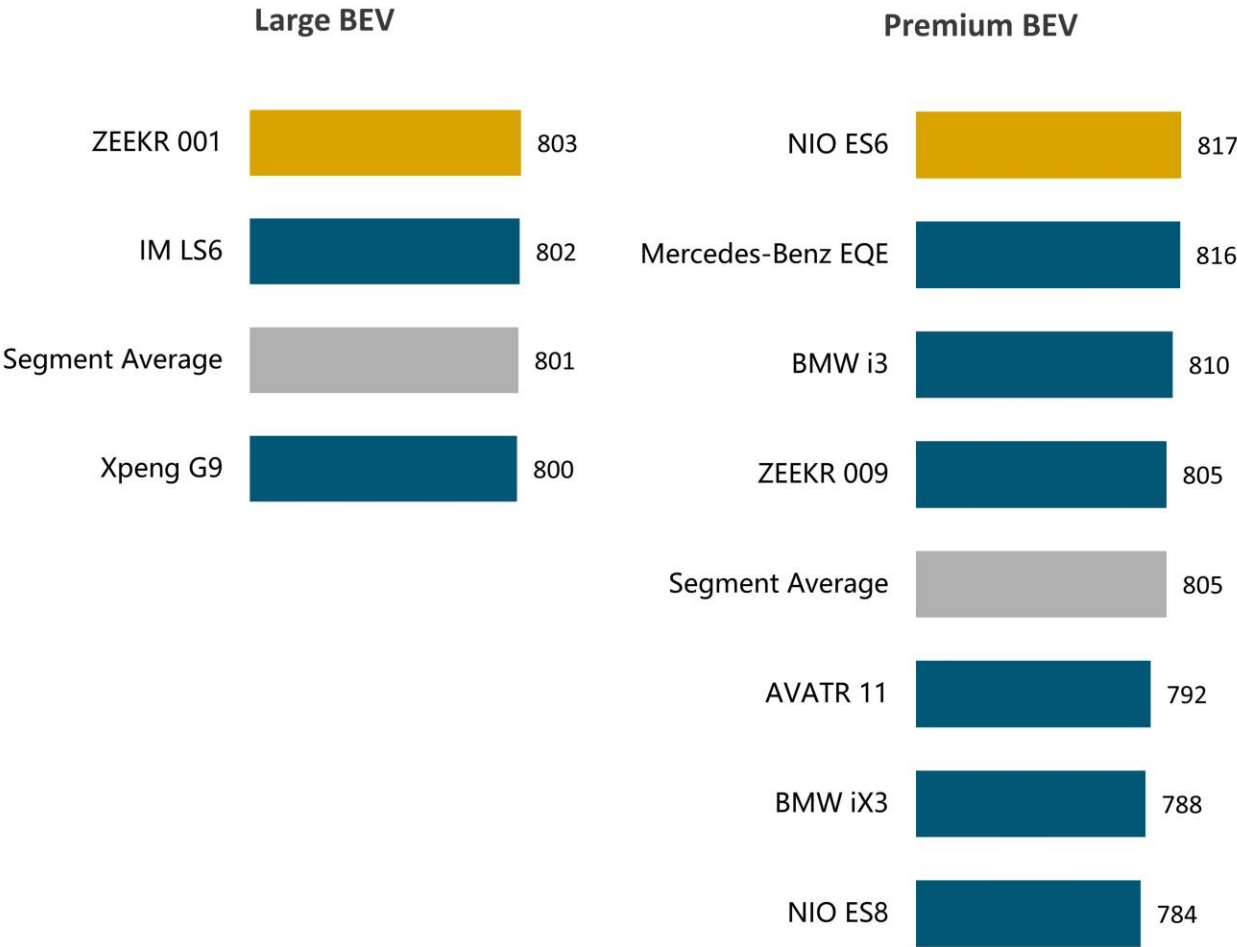
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Model Ranking per Segment
(on a 1,000-point scale)



Scores are not shown for small sample (n=30~99)models. (Large BEV: HiPhi Y, IM LS7. Premium BEV: Lexus RZ, NIO EC6)
J.D. Power defines a model as Premium if the average MSRP exceeds 400,000 RMB.

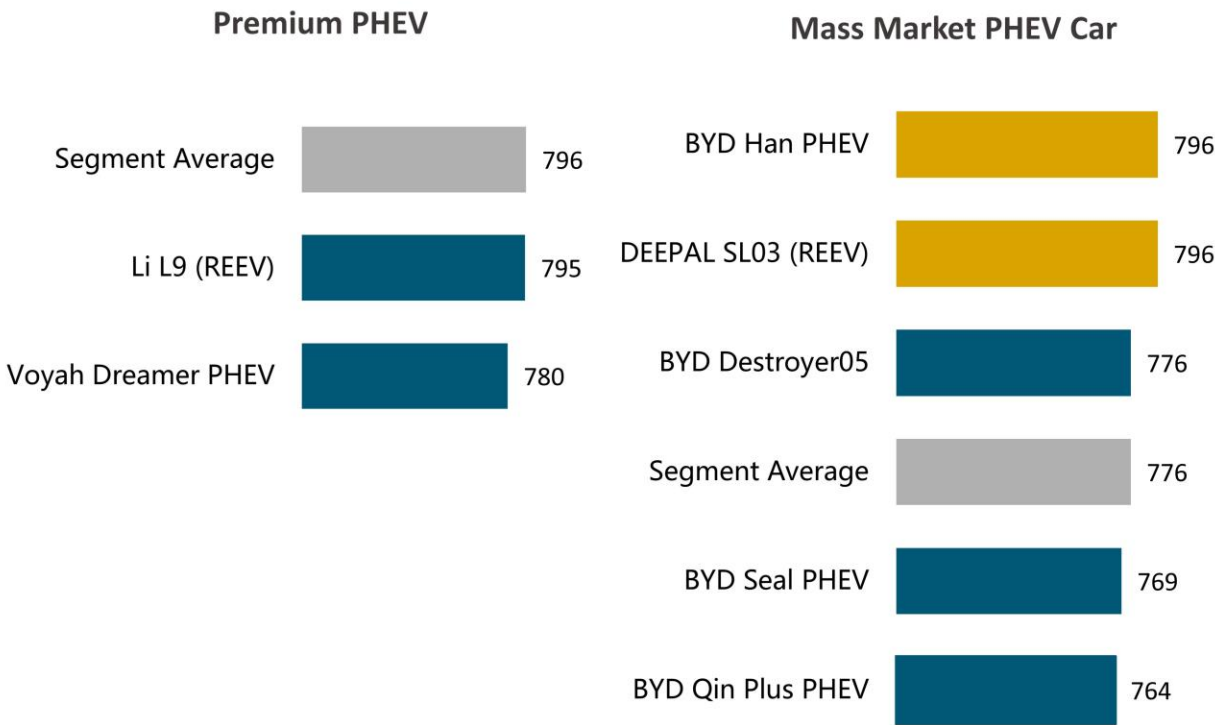
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Model Ranking per Segment
(on a 1,000-point scale)



Scores are not shown for small sample (n=30~99) models. (Premium PHEV: BMW 5 Series PHEV, Mercedes-Benz C-Class PHEV, Mercedes-Benz E-Class PHEV, Volvo XC60 PHEV. Mass Market PHEV Car: Changan, Galaxy L6 PHEV, NETA S, UNI-V iDD)
J.D. Power defines a model as Premium if the average MSRP exceeds 400,000 RMB.
Premium PHEV segment above does not meet the foregoing criteria for segment awards, thus there is no award for this segment, only ranking and scores are released for reference.

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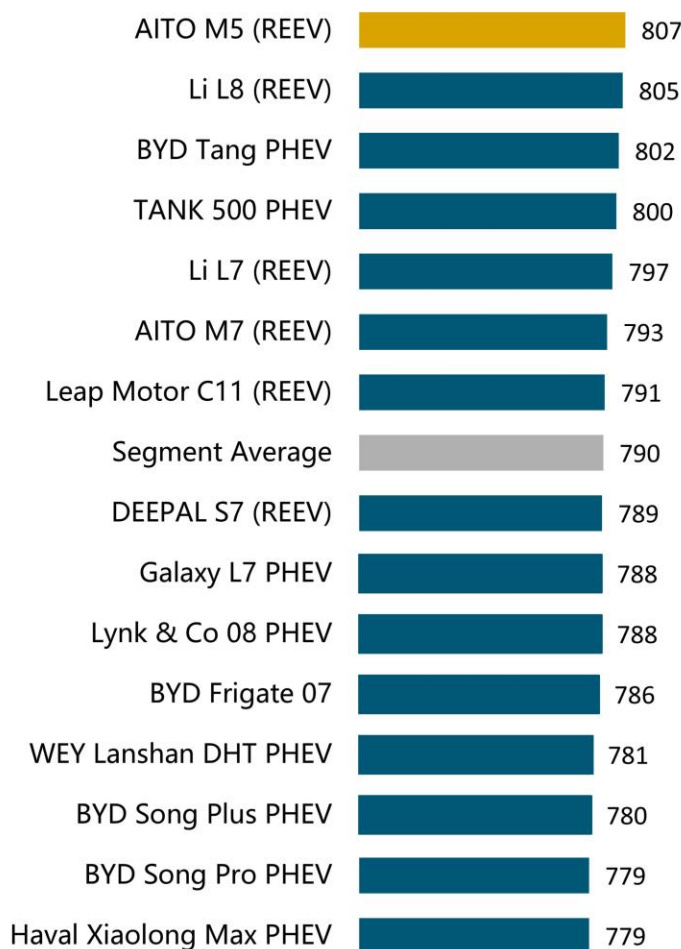
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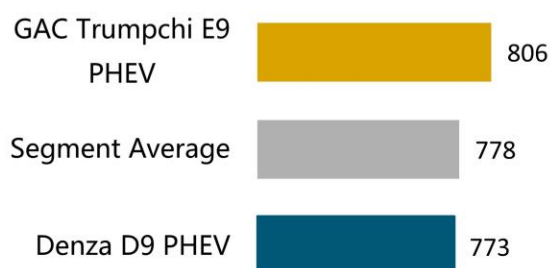
Model Ranking per Segment

(on a 1,000-point scale)

Mass Market PHEV SUV



Mass Market PHEV MPV



Scores are not shown for small sample (n=30~99) models. (Mass Market PHEV SUV: Haval Menglong PHEV, Oshan Z6 PHEV, Voyah Free.) Mass Market PHEV MPV segment above does not meet the foregoing criteria for segment awards, thus there is no award for this segment, only ranking and scores are released for reference.

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