2013 Ford Fusion Energi
Battery Charge Profiles at Different Temperatures

Select Battery Specifications

Manufacturer: Panasonic
Type: Lithium-Ion (NMC)
Nominal System Voltage: 310.8 V
Rated Pack Energy: 7.6 kWh
Cooling: Fan Forced Cabin Air

Key Charging Experiment Results

<table>
<thead>
<tr>
<th>Temperature (°F)</th>
<th>Peak Power (kW)</th>
<th>Energy Consumed (kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>95</td>
<td>3.75</td>
<td>7.16</td>
</tr>
<tr>
<td>72</td>
<td>3.58</td>
<td>6.89</td>
</tr>
<tr>
<td>20</td>
<td>3.51</td>
<td>6.92</td>
</tr>
</tbody>
</table>

Summary

The 2013 Ford Fusion Energi battery was charged from charge sustaining mode at 95°F, 72°F, and 20°F. For all temperatures, the charger consumes constant power until the last 15 minutes when power gradually tapers off. In this data set, both the peak power and energy consumed demonstrate a monotonic increase as the temperature rises.

Notes:

1. Vehicle specifications were supplied by the manufacturer, measured, or derived from a literature review. For detailed specifications, see Baseline Testing Results available at avt.inl.gov.
2. The experiments were conducted at Argonne National Laboratory (ANL) for the Advanced Vehicle Testing Activity (AVTA).

As a production vehicle, this vehicle is assumed to meet all Federal Motor Vehicle Safety Standards (FMVSS) for Battery Electric Vehicles.

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