

Estimate Time in Hours for AC Chargers

ESTIMATED CHARGE TIMES CHART FOR (Pure) ELECTRIC VEHICLES

| VEHICLE                                                                                    | ACCEPTANCE RATE (kW) | BATTERY SIZE (kWh) | LEVEL 1 1.4 kW | LEVEL 1 1.4kW | LEVEL 2 3.8kW | LEVEL 2 4.8kW | LEVEL 2 5.8kW | LEVEL 2 7.7kW | LEVEL 2 9.6kW | LEVEL 2 11.5kW | LEVEL 2 15.4kW |
|--------------------------------------------------------------------------------------------|----------------------|--------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| Audi e-tron SUV                                                                            | 9.6                  | 95                 | 68             | 68            | 25            | 20            | 16.5          | 12.5          | 10            | 10             | 10             |
| BMW ActiveE                                                                                | 7                    | 32                 | 23             | 23            | 8.5           | 6.5           | 5.5           | 4.5           | 4.5           | 4.5            | 4.5            |
| BMW i3 2014-2016                                                                           | 7.4                  | 23                 | 16.5           | 16.5          | 6             | 5             | 4             | 3             | 3             | 3              | 3              |
| BMW i3 2017 (60 Ah battery)                                                                | 7.4                  | 23                 | 16.5           | 16.5          | 6             | 5             | 4             | 3             | 3             | 3              | 3              |
| BMW i3 2017 (90 Ah battery)                                                                | 7.4                  | 32                 | 23             | 23            | 8.5           | 6.5           | 5.5           | 4.5           | 4.5           | 4.5            | 4.5            |
| Chevy Bolt                                                                                 | 7.2                  | 60                 | 43             | 43            | 16            | 12.5          | 10.5          | 8.5           | 8.5           | 8.5            | 8.5            |
| Chevy Spark                                                                                | 3.3                  | 23                 | 16.5           | 16.5          | 7             | 7             | 7             | 7             | 7             | 7              | 7              |
| Coda                                                                                       | 6.6                  | 31                 | 22             | 22            | 8             | 6.5           | 5.5           | 4.5           | 4.5           | 4.5            | 4.5            |
| Fiat 500E                                                                                  | 6.6                  | 24                 | 17             | 17            | 6.5           | 5             | 4             | 3.5           | 3.5           | 3.5            | 3.5            |
| Ford Focus EV                                                                              | 6.6                  | 23                 | 16.5           | 16.5          | 6             | 5             | 4             | 3.5           | 3.5           | 3.5            | 3.5            |
| Ford Focus EV 2017-2018                                                                    | 6.6                  | 33.5               | 24             | 24            | 9             | 7             | 6             | 5             | 5             | 5              | 5              |
| Honda Clarity EV                                                                           | 6.6                  | 25.5               | 18             | 18            | 6.5           | 5.5           | 4.5           | 4             | 4             | 4              | 4              |
| Hyundai Ioniq                                                                              | 6.6                  | 28                 | 20             | 20            | 7.5           | 6             | 5             | 4             | 4             | 4              | 4              |
| Hyundai Kona                                                                               | 7.2                  | 64                 | 45.5           | 45.5          | 17            | 13.5          | 11            | 9             | 9             | 9              | 9              |
| Kia Niro                                                                                   | 7.2                  | 64                 | 45.5           | 45.5          | 17            | 13.5          | 11            | 9             | 9             | 9              | 9              |
| Kia Soul                                                                                   | 6.6                  | 27                 | 19.5           | 19.5          | 7             | 5.5           | 4.5           | 4             | 4             | 4              | 4              |
| Kia Soul 2019                                                                              | 7.2                  | 64                 | 45.5           | 45.5          | 17            | 13.5          | 11            | 9             | 9             | 9              | 9              |
| Jaguar I-Pace                                                                              | 7                    | 90                 | 64.5           | 64.5          | 23.5          | 19            | 15.5          | 13            | 13            | 13             | 13             |
| Mercedes B Class B250e                                                                     | 9.6                  | 28                 | 20             | 20            | 7.5           | 6             | 5             | 3.5           | 3             | 3              | 3              |
| Mitsubishi i-MiEV                                                                          | 3.3                  | 16                 | 11.5           | 11.5          | 5             | 5             | 5             | 5             | 5             | 5              | 5              |
| Nissan Leaf 2011-12 <small>(3.3kW onboard charger, S, SL &amp; SV Model)</small>           | 3.3                  | 24                 | 17             | 17            | 7.5           | 7.5           | 7.5           | 7.5           | 7.5           | 7.5            | 7.5            |
| Nissan Leaf 2013-16 S <small>(3.3 onboard charger)</small>                                 | 3.3                  | 24                 | 17             | 17            | 7.5           | 7.5           | 7.5           | 7.5           | 7.5           | 7.5            | 7.5            |
| Nissan Leaf S 2013-15 <small>(6.6kW onboard charger, S Upgrade, SL &amp; SV Model)</small> | 6.6                  | 24                 | 17             | 17            | 6.5           | 5             | 4             | 3.5           | 3.5           | 3.5            | 3.5            |
| Nissan Leaf S 2016 <small>(6.6kW onboard charger, S Upgrade)</small>                       | 6.6                  | 24                 | 17             | 17            | 6.5           | 5             | 4             | 3.5           | 3.5           | 3.5            | 3.5            |
| Nissan Leaf S 2016 <small>(6.6kW onboard charger, SL &amp; SV Model)</small>               | 6.6                  | 30                 | 21.5           | 21.5          | 8             | 6.5           | 5             | 4.5           | 4.5           | 4.5            | 4.5            |
| Nissan Leaf 2017 <small>(3.3kW onboard charger S Model)</small>                            | 3.3                  | 30                 | 21.5           | 21.5          | 9             | 9             | 9             | 9             | 9             | 9              | 9              |
| Nissan Leaf 2017 <small>(6.6kW onboard charger, S Upgrade, SL &amp; SV Model)</small>      | 6.6                  | 30                 | 21.5           | 21.5          | 8             | 6.5           | 5             | 4.5           | 4.5           | 4.5            | 4.5            |
| Nissan Leaf 2018-19                                                                        | 6.6                  | 40                 | 28.5           | 28.5          | 10.5          | 8.5           | 7             | 6             | 6             | 6              | 6              |
| Nissan Leaf Plus 2019                                                                      | 6.6                  | 62                 | 44.5           | 44.5          | 16.5          | 13            | 10.5          | 9.5           | 9.5           | 9.5            | 9.5            |
| Smart Car                                                                                  | 3.3                  | 17.6               | 12.5           | 12.5          | 5.5           | 5.5           | 5.5           | 5.5           | 5.5           | 5.5            | 5.5            |
| Smart Fortwo ED 2017                                                                       | 7.2                  | 17.6               | 12.5           | 12.5          | 4.5           | 3.5           | 3             | 2.5           | 2.5           | 2.5            | 2.5            |
| Tesla Model 3 Standard                                                                     | 7.7                  | 50                 | 35.5           | 35.5          | 13            | 10.5          | 8.5           | 6.5           | 6.5           | 6.5            | 6.5            |
| Tesla Model 3 Long Range                                                                   | 11.5                 | 70                 | 50             | 50            | 18.5          | 14.5          | 12            | 9             | 7.5           | 6              | 6              |
| Tesla Model S 60 Single                                                                    | 9.6                  | 60                 | 43             | 43            | 16            | 12.5          | 10.5          | 8             | 6.5           | 6.5            | 6.5            |
| Tesla Model S 70 Single                                                                    | 9.6                  | 70                 | 50             | 50            | 18.5          | 14.5          | 12            | 9             | 7.5           | 7.5            | 7.5            |
| Tesla Model S 75 & 75D                                                                     | 11.5                 | 75                 | 53.5           | 53.5          | 19.5          | 15.5          | 13            | 9.5           | 8             | 6.5            | 6.5            |
| Tesla Model S 85 Single                                                                    | 9.6                  | 85                 | 60.5           | 60.5          | 22.5          | 17.5          | 14.5          | 11            | 9             | 9              | 9              |
| Tesla Model S 90 Single                                                                    | 9.6                  | 90                 | 64.5           | 64.5          | 23.5          | 19            | 15.5          | 11.5          | 9.5           | 9.5            | 9.5            |
| Tesla Model S 60 Dual                                                                      | 19.2                 | 60                 | 43             | 43            | 16            | 12.5          | 10.5          | 8             | 6.5           | 5              | 4              |
| Tesla Model S 70 Dual                                                                      | 19.2                 | 70                 | 50             | 50            | 18.5          | 14.5          | 12            | 9             | 7.5           | 6              | 4.5            |
| Tesla Model S 85 Dual                                                                      | 19.2                 | 85                 | 60.5           | 60.5          | 22.5          | 17.5          | 14.5          | 11            | 9             | 7.5            | 5.5            |
| Tesla Model S 90 Dual                                                                      | 19.2                 | 90                 | 64.5           | 64.5          | 23.5          | 19            | 15.5          | 11.5          | 9.5           | 8              | 6              |
| Tesla Model S 100 & P100D                                                                  | 17.2                 | 100                | 71.5           | 71.5          | 26.5          | 21            | 17            | 13            | 10.5          | 8.5            | 6.5            |
| Tesla Model X 60 Single                                                                    | 11.5                 | 60                 | 43             | 43            | 16            | 12.5          | 10.5          | 8             | 6.5           | 5              | 5              |
| Tesla Model X 75 Single                                                                    | 11.5                 | 75                 | 53.5           | 53.5          | 19.5          | 15.5          | 13            | 9.5           | 8             | 6.5            | 6.5            |
| Tesla Model X 90 Single                                                                    | 11.5                 | 90                 | 64.5           | 64.5          | 23.5          | 19            | 15.5          | 11.5          | 9.5           | 8              | 8              |
| Tesla Model X 60 Dual                                                                      | 17.2                 | 60                 | 43             | 43            | 16            | 12.5          | 10.5          | 8             | 6.5           | 5              | 4              |
| Tesla Model X 75 Dual                                                                      | 17.2                 | 75                 | 53.5           | 53.5          | 19.5          | 15.5          | 13            | 9.5           | 8             | 6.5            | 5              |
| Tesla Model X 90 Dual                                                                      | 17.2                 | 90                 | 64.5           | 64.5          | 23.5          | 19            | 15.5          | 11.5          | 9.5           | 8              | 6              |
| Tesla Model X 100 & P100D                                                                  | 17.2                 | 100                | 71.5           | 71.5          | 26.5          | 21            | 17            | 13            | 10.5          | 8.5            | 6.5            |
| Tesla Roadster                                                                             | 17.2                 | 56                 | 40             | 40            | 14.5          | 11.5          | 9.5           | 7.5           | 6             | 5              | 3.5            |
| Toyota Rav4                                                                                | 9.6                  | 41.8               | 30             | 30            | 11            | 8.5           | 7             | 5.5           | 4.5           | 4.5            | 4.5            |
| VW e-Golf <small>(3.6kW onboard charger)</small>                                           | 3.6                  | 24                 | 17             | 17            | 6.5           | 6.5           | 6.5           | 6.5           | 6.5           | 6.5            | 6.5            |

| VEHICLE | ACCEPTANCE RATE | BATTERY SIZE | 12A Charging | 12A Charging | 16A Charging | 20A Charging | 24A Charging | 32A Charging | 40A Charging | 48A Charging | 64A Charging |
|---------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|---------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|



| VEHICLE                             | ACCEPTANCE<br>RATE<br>(kW) | BATTERY<br>SIZE<br>(kWh) | LEVEL 1<br>1.4 kW | LEVEL 1<br>1.4kW | LEVEL 2<br>3.8kW | LEVEL 2<br>4.8kW | LEVEL 2<br>5.8kW | LEVEL 2<br>7.7kW | LEVEL 2<br>9.6kW | LEVEL 2<br>11.5kW | LEVEL 2<br>15.4kW |
|-------------------------------------|----------------------------|--------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|
| Audi A3 E-Tron                      | 3.3                        | 8.8                      | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| BMW 330e                            | 3.6                        | 7.6                      | 5.5               | 5.5              | 2                | 2                | 2                | 2                | 2                | 2                 | 2                 |
| BMW 530e                            | 3.6                        | 9.2                      | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| BMW 740e                            | 3.6                        | 9.2                      | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| BMW i8                              | 3.6                        | 7.1                      | 5                 | 5                | 2                | 2                | 2                | 2                | 2                | 2                 | 2                 |
| BMW X5 xDrive-40e                   | 3.6                        | 9                        | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| Cadillac CT6                        | 3.6                        | 18.4                     | 13                | 13               | 4.5              | 4.5              | 4.5              | 4.5              | 4.5              | 4.5               | 4.5               |
| Cadillac ELR                        | 3.3                        | 16.5                     | 12                | 12               | 4.5              | 4.5              | 4.5              | 4.5              | 4.5              | 4.5               | 4.5               |
| Chevy Volt                          | 3.3                        | 16.5                     | 12                | 12               | 4                | 4                | 4                | 4                | 4                | 4                 | 4                 |
| Chevy Volt 2016-2018                | 3.6                        | 18.4                     | 13                | 13               | 4.5              | 4.5              | 4.5              | 4.5              | 4.5              | 4.5               | 4.5               |
| Chevy Volt 2019 LT                  | 3.6                        | 18.4                     | 13                | 13               | 4.5              | 4.5              | 4.5              | 4.5              | 4.5              | 4.5               | 4.5               |
| Chevy Volt 2019 LT Upgrade          | 7.2                        | 18.4                     | 13                | 13               | 4.5              | 3.5              | 3                | 2.5              | 2.5              | 2.5               | 2.5               |
| Chevy Volt 2019 Premier             | 7.2                        | 18.4                     | 13                | 13               | 4.5              | 3.5              | 3                | 2.5              | 2.5              | 2.5               | 2.5               |
| Chrysler Pacifica                   | 6.6                        | 16                       | 11.5              | 11.5             | 4                | 3.5              | 3                | 2.5              | 2.5              | 2.5               | 2.5               |
| Fisker Karma                        | 3.3                        | 20                       | 14.5              | 14.5             | 5                | 5                | 5                | 5                | 5                | 5                 | 5                 |
| Ford C Max Energi                   | 3.3                        | 7.6                      | 5.5               | 5.5              | 2                | 2                | 2                | 2                | 2                | 2                 | 2                 |
| Ford Fusion Energi                  | 3.3                        | 7.6                      | 5.5               | 5.5              | 2                | 2                | 2                | 2                | 2                | 2                 | 2                 |
| Honda Accord                        | 6.6                        | 6.7                      | 5                 | 5                | 2                | 1.5              | 1.25             | 1                | 1                | 1                 | 1                 |
| Honda Clarity Plug-In               | 6.6                        | 17                       | 12                | 12               | 4.5              | 3.5              | 3                | 2.5              | 2.5              | 2.5               | 2.5               |
| Hyundai Ioniq Plug-in               | 3.3                        | 8.9                      | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| Hyundai Sonata                      | 3.3                        | 9.8                      | 7                 | 7                | 3                | 3                | 3                | 3                | 3                | 3                 | 3                 |
| Karma Revero                        | 6.6                        | 21.4                     | 15.5              | 15.5             | 5.5              | 4.5              | 3.5              | 3                | 3                | 3                 | 3                 |
| Kia Niro                            | 3.3                        | 8.9                      | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| Kia Optima                          | 3.3                        | 9.8                      | 7                 | 7                | 3                | 3                | 3                | 3                | 3                | 3                 | 3                 |
| Mercedes C350 Hybrid                | 3.3                        | 6.2                      | 4.5               | 4.5              | 2                | 2                | 2                | 2                | 2                | 2                 | 2                 |
| Mercedes GLC 350e                   | 3.7                        | 8.7                      | 6                 | 6                | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| Mercedes GLE 550e                   | 3.3                        | 8.8                      | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| Mercedes S550 Hybrid                | 3.3                        | 8.7                      | 6                 | 6                | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| MINI Cooper SE Countryman ALL4      | 3.3                        | 7.6                      | 5.5               | 5.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| Mitsubishi Outlander                | 3.3                        | 12                       | 8.5               | 8.5              | 3.5              | 3.5              | 3.5              | 3.5              | 3.5              | 3.5               | 3.5               |
| Porsche Cayenne S E-Hybrid          | 3.6                        | 10.8                     | 7.5               | 7.5              | 3                | 3                | 3                | 3                | 3                | 3                 | 3                 |
| Porsche Cayenne S E-Hybrid Upgrade  | 7.2                        | 10.8                     | 7.5               | 7.5              | 3                | 2.5              | 2                | 1.5              | 1.5              | 1.5               | 1.5               |
| Porsche Panamera S E-Hybrid         | 3.6                        | 9.4                      | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| Porsche Panamera S E-Hybrid Upgrade | 7.2                        | 9.4                      | 6.5               | 6.5              | 2.5              | 2                | 1.5              | 1.25             | 1.25             | 1.25              | 1.25              |
| Porsche Panamera 4 E-Hybrid         | 3.6                        | 14.1                     | 10                | 10               | 4                | 4                | 4                | 4                | 4                | 4                 | 4                 |
| Porsche Panamera 4 E-Hybrid Upgrade | 7.2                        | 14.1                     | 10                | 10               | 3.5              | 3                | 2.5              | 2                | 2                | 2                 | 2                 |
| Porsche 918 Spyder                  | 3.6                        | 6.8                      | 5                 | 5                | 2                | 2                | 2                | 2                | 2                | 2                 | 2                 |
| Range Rover P400e                   | 7                          | 13.1                     | 9.5               | 9.5              | 3.5              | 2.5              | 2.25             | 2                | 2                | 2                 | 2                 |
| Subaru Crosstrek PHEV               | 3.3                        | 8.8                      | 6.5               | 6.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5               | 2.5               |
| Toyota Prius EV                     | 3.3                        | 4.4                      | 3                 | 3                | 1.5              | 1.5              | 1.5              | 1.5              | 1.5              | 1.5               | 1.5               |
| Toyota Prius Prime EV               | 3.3                        | 8.8                      | 6.5               | 6.5              | 2.5              | 2.               |                  |                  |                  |                   |                   |

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