

Road Beat: Honda Clarity plug-in hybrid impresses



The 2018 Honda Clarity plug-in hybrid, is an almost perfect EV. Photos/Larry Weitzman

By Larry Weitzman

Clarity was originally a name reserved for Honda's venture into fuel cells, which still exists in the Clarity Fuel Cell. But at a price approaching \$60,000, its sales are very small at about 500 units for 2017. However, the new Clarity Plug-in Hybrid is having robust sales in comparison and for many a good reason.

This new mid-size Clarity looks like a Civic, but it is actually a half inch longer than the all new Accord at 193 inches. But it uses its own smaller wheelbase of just 108 inches. Width is a bit beamy at 74 inches. Its sleek window

line gives it that new Civic look, and I would normally say it's a good-looking ride, which overall it is. But probably in the interests of low wind resistance, it has ugly wheel wells with the rears looking like something out of the 1950s resembling a hearse. Maybe the new buyers think "till death do us part."

But this ride is about fuel economy and the type of fuel, in this case gasoline and electrons. Both sources of energy powers the Clarity, singularly or in combination and in combination in two ways. Either the gas engine is connected directly into the front wheels (via a CVT) in concert with the electric motor or with the engine powering a generator providing electricity for the electric motor only. For electrons, Clarity has a 17 kWh L-I battery which can power the Clarity for over 50 miles without the gas intervention. Honda says 47 miles, but I routinely got over 50 miles solely on the battery and it should as the rule of thumb is 3-4 miles of range per kWh and the Clarity as said before has 17 of them at full charge which takes about 10-12 hours on 110v, 15-amp receptacle. Perhaps the lesser range reported by Honda is due to the computer always retaining 2 kWh for operating in hybrid mode, leaving 15 kWh for EV mode.

This is a high-performance car as it knocked off 0-60 mph with a full battery in sport mode in an average of 7.56 seconds and it really doesn't get rolling until about 20 mph. With a depleted battery the number drops to a still good 8.74 second average. How does it do it? Clarity PHEV has one engine and one motor, with the engine being an Atkinson cycle 1.5L DOHC, 16 valve VTEC unit pumping out 103 hp at 5,500 rpm with 99 pounds of twist at 5,000 rpm combining with powerful 181 hp electric sucker (at 5,000-6,000 rpm) and a substantial 232 pounds of twist from 0-2,000 rpm with a maximum total combined 212 hp meaning you don't get all 181 hp from the electric motor with the gas engine running. But that's some substantial moxie.



Specifications

Price \$36,600 plus \$890 destination and delivery

Engine

1.5L DOHC 16 valve VTEC inline four 103 hp @ 5,500 rpm

99 lb.-ft. of torque @ 5,000 rpm

Electric power

AC Permanent magnet synchronous motor 181 hp @ 5,000-6,000 rpm

232 lb.-ft. of torque @ 0-2,000 rpm

Combined hp 212 hp

Battery

17 kWh Lithium-ion

Transmission

Fixed single speed

Ratio 2.454-0.805 CVT

Configuration

Transverse mounted front engine/front wheel drive

Dimensions

Wheelbase 108.3 inches

Length 192.7 inches

Width 73.9 inches

Height 58.2 inches

Track (f/r) 62.2/62.5 inches
Weight 4,059 pounds
Weight distribution (f/r)
57/43 percent
Passenger volume 101.5 cubic
feet
Cargo volume 15.5 cubic feet
Fuel capacity 7.0 gallons
Turning circle 38.4 feet
Steering lock to lock 2.41
turns
Wheels 18-inch alloys
Tires 235/45X18

Performance

0-60 mph with some battery
range and charge 7.56
seconds

0-60 mph hybrid only (EV
range of 0 miles) 8.74
seconds

50-70 mph with some battery
4.04 seconds

50-70 mph hybrid only 4.40
seconds

50-70 uphill with some
battery 5.62 seconds

50-70 uphill hybrid only
8.15 seconds

Top speed well into triple
digits

Fuel economy EPA rated
(hybrid) 44/40/42 mpg
city/highway/combined, EPA
Electric only mpg equivalent
110 mpg. Expect 60 mpg in
overall driving. In hybrid
only driving expect 40-46

mpg.

Passing times are excellent when you have all 212 ponies with 50-70 mph coming up in 4.04 seconds and the same run up a 6-7 percent grade only slowing a second and a half to 5.62 seconds. However, with a depleted battery those times slow to 4.40 and 8.15 seconds respectively. So, if you are entering any traffic light grand prix or looking to overtake a big semi on a grade, having that battery with more than a minimum charge is a good thing. The tranny is a super smooth CVT unit.

The other half of the Clarity equation is fuel economy. Filling up the electron box takes at least 17 kWh of electrical energy and here in El Dorado County that is normally not inexpensive at 28 cents a kWh or about \$4.76 cents meaning that the cost per mile for energy is about 10 cents a mile. Gasoline is about \$3 a gallon and at 42 mpg which is Clarity's EPA combined fuel economy rating, it works out to 7 cents a mile. When no subsidies are involved the true cost of operation is less with gasoline.

As a hybrid the Clarity is rated at 44/40/42 mpg city/highway/combined. MPGe is rated at 110 mpg. On the highway at 70 mph in a two-way run it actually returned 45.9 mpg. Overall hybrid use averaged about 40 mpg. However, with nightly charging, and daily use it rarely used the gas engine and the trip computer consistently showed 199.9 mpg as the engine rarely fired. It operated as a pure EV. It's a good thing the engine doesn't fire as fuel capacity is a measly seven gallons. There are motorcycles that carry more fuel. Overall in 518 miles of driving including a round trip to Carson City, the Clarity averaged 61.6 mpg. In that round trip to Carson City of 216 miles starting with a full charge the average was 63.4 mpg, the highest ever recorded by the Road Beat. Awesome.

In level driving expect an EV range of 50-52 mpg. However, in my climb up the Sierra on Highway 50 starting at Missouri Flat

Road, the battery was all done in about 33 miles. I picked up a few miles coming into Tahoe from Echo Summit and about 6 miles going down Spooner Grade (about 8 miles of downhill) into Carson City.

Handling for this 2 ton (curb weight is 4,059 pounds) mid-size ride is actually quite good. It certainly has the creds. Listen to this: State of the art four-wheel independent suspension, a quick electric power steering rack that is 2.41 turns lock to lock, big 18-inch (if not to pretty) alloys shod with serious 235/45 rubber and a 62-inch track. It has cornering power and plenty of it, but it's too easy, numb steering and weight keep it from being perfect. But for 99 percent of you and me and 100 percent of Clarity buyers, they will think they are ready for Le Mans.

Ride quality is good and on smooth roads it is very quiet with no tire noise. But when the road is coarse the Michelin Energy Saver tires make some noise. There is no wind and engine noise. It is very smooth riding and compliant. In EV mode it is unbelievably smooth and quiet.

All the safety inventions come with Clarity, including auto emergency braking and lane departure assist. Headlights are very good.

Leather bathes the interior and the seats are comfortable. Rear seating is copious and comfortable as well. Instrumentation is reasonably complete except there is no tach which would be useless in this vehicle since the engine sometimes acts as a generator controlled by a computer or doesn't run at all in EV mode. It has an excellent trip computer.

The hatchback trunk is large.

Admission to this select vehicle will cost you (Touring model, imagine a Touring model with a 7-gallon gas tank) will set you back \$36,600 plus \$890 for the boat from Sayama, Saitama,

Japan. Everything talked about is standard. If we in California paid the national average for electricity which is about 14 cents a kWh, Clarity makes lots of dollars and sense, but at PG&E rates, gasoline is a much cheaper energy source, making straight hybrids more economically sensible. However, there is a performance price to pay with a straight hybrid.

Larry Weitzman has been into cars since he was 5 years old. At 8 he could recite from memory the hp of every car made in the U.S. He has put in thousands of laps on racetracks all over the Western United States.