

# Knocking 'em out of the ballpark

84 MPGe / 566-mile range / 33-mile electric-only range / EPA Green Vehicle Guide 10 rating – record-smashing early goals eclipsed even further in final testing by Joe Sage

The Chrysler Pacifica, introduced last spring in gasoline-engine form (an entirely new vehicle replacing the longstanding Town & Country in the lineup), already has a thousand tricks up its sleeve—seven-passenger seating (even with 32.3 cubic feet of luggage), Stow 'n Go seats (both second and third row, plus a button to tilt the front row while loading the second), a flat loading floor (with volume enough for 64 sheets of plywood), additional storage below the floor under the seats, a tri-pane panoramic sunroof for a spacious feeling front to rear, even a tough-duty in-vehicle vacuum cleaner with a 14-foot hose long enough to clean the whole area including your other car.

Calling the Pacifica innovative is an understatement. Now add another trick—really a bag of tricks—the all-new FCA eHybrid powertrain, an entirely new system FCA sees spreading through the majority of vehicles by 2025. Bearing both a

gasoline fuel filler on its rear flank and an electrical plug-in port on its front flank, this is not an electric vehicle, not a conventional hybrid, not like other plug-in hybrids and of course not a conventional gasoline vehicle. It's the best of all of the above, or better—what chief electrified powertrain engineer John Gibson calls a “blended plug-in hybrid,” with its gasoline engine joining the effort seamlessly whenever needed.

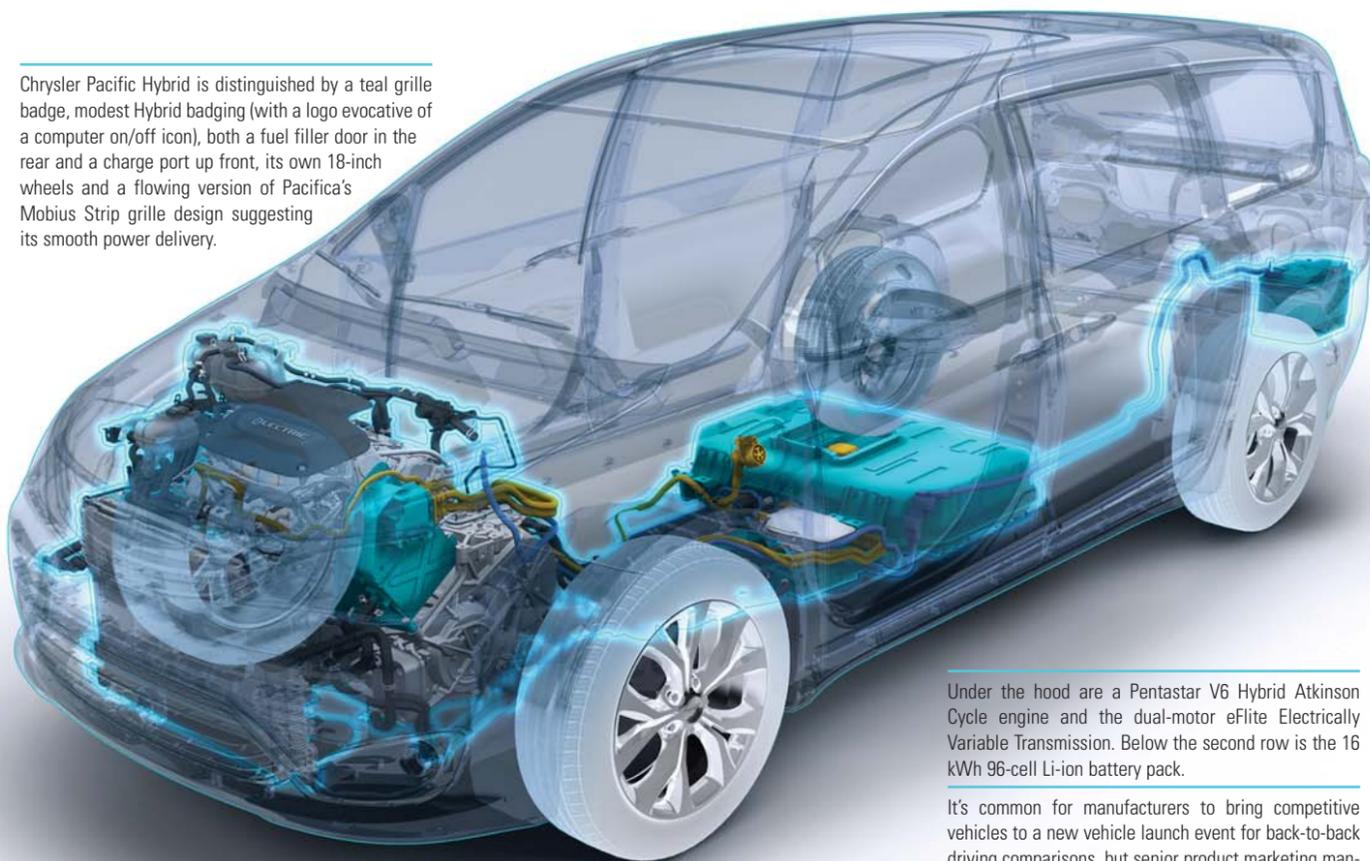
A key element of the Pacifica Hybrid is its eFlite dual-motor electrically variable transmission, developed in-house to deliver both powertrain efficiency and normal fully functional minivan duty. Most electrification schemes have one motor dedicated as a generator and a second, usually much larger, to send torque to the wheels. But Pacifica Hybrid's one-way clutch allows the motor typically used only as a generator to deliver torque to the wheels, depending on driving conditions.

The average daily commute is under 30 miles, and the Pacifica Hybrid can get you around town for “days, weeks, even months without a gas station,” says senior product marketing manager Matt McAlear. Yet a minivan also says take me somewhere and bring everybody and everything—and for this, the vehicle can run conventionally.

Pacifica uses regenerative braking for additional charging power in normal deceleration, but below 8 mph—or in a high demand situation—the van applies full friction braking.

Advanced aerodynamics achieve a Cd of 0.3, an industry best, and in the Pacific Hybrid, it's what chief engineer Kevin Mets calls a “bonus benefit”—all the more energy converted to range.

Engineers shaved 240 pounds to accommodate hybrid components while also offsetting battery weight. The 96-cell, 16-kWh lithium-ion battery pack is located under the second-row floor, keep-



Chrysler Pacific Hybrid is distinguished by a teal grille badge, modest Hybrid badging (with a logo evocative of a computer on/off icon), both a fuel filler door in the rear and a charge port up front, its own 18-inch wheels and a flowing version of Pacifica's Mobius Strip grille design suggesting its smooth power delivery.

Under the hood are a Pentastar V6 Hybrid Atkinson Cycle engine and the dual-motor eFlite Electrically Variable Transmission. Below the second row is the 16 kWh 96-cell Li-ion battery pack.

It's common for manufacturers to bring competitive vehicles to a new vehicle launch event for back-to-back driving comparisons, but senior product marketing manager Matt McAlear pointedly noted, “there are none.”



ing the rear cargo area as flat-floored and roomy as ever, with third-row Stow 'n Go seating and room for seven passengers. The Hybrid forgoes second row Stow 'n Go and loses the gasoline model's under-floor storage space to the battery. (In the wonderful world of tradeoff assessments, our codriver at the vehicle's launch event said he actually preferred the Hybrid's second-row seats.)

The Hybrid also is not recommended for towing, while the gasoline version tows 3600 pounds.

Recharging takes as little as two hours with a dealer-available Mopar 240-volt Level 2 charger.

With a 120-volt Level 1 charger (included with the vehicle), a full charge takes about 14 hours.

The wheels are powered by the electric drive system or, when the battery's energy is depleted to a certain threshold, supplemented by an Atkinson Cycle hybrid version of FCA's widely acclaimed Pentastar 3.6-liter V6 gasoline engine (three times named to the Wards 10 Best Engines list).

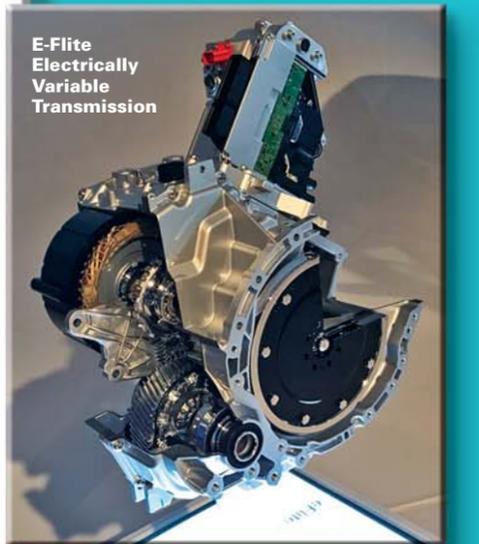
Family utility rules throughout the Pacifica's interior, with cupholders, map pockets, even seat-



## SPECIFICATIONS

SEATING	.....7 (2/2/3)
ENGINE	.....3.6L Pentastar V6 Hybrid (Atkinson Cycle), transverse mount
DRIVETRAIN	.....FWD
BATTERY PACK	.....High voltage, 96 cell Li-ion, 16kWh total energy, 360 V nominal
TOTAL SYSTEM POWER	.....est 260 hp
TRANSMISSION	.....eFlite EVT Electrically Variable with dual-motor/one-way clutch EV drive capability
SUSPENSION	.....F: indep MacPherson strut, coil over gas shocks, stabilizer bar w hydroformed steel perimeter cradle R: indep twist-blade w coils, twin-tube shocks w integrated rebound springs
STEERING	.....electric rack & pinion
BRAKES	.....F: 13.0 vent, R: 13.0 solid 1-piston
LENGTH / WHEELBASE	.....203.8 in / 121.6 in
TURNING CIRCLE	.....39.7 ft
LEG ROOM F/2/3	.....41.1 / 39.0 / 36.5 in
HEAD ROOM F/2/3	.....40.1 / 39.6 / 38.7 in
INTERIOR VOLUME	.....197.3 cu.ft
Passenger vol max	.....165.0 cu.ft
Cargo behind F/2/3	.....140.5 / 87.5 / 32.3 cu.ft
CARGO WIDTH AT WHEELS	.....48.8 in
LIFTOVER HEIGHT	.....24.3 in
WEIGHT/DISTRIB	.....4943 lb / 56.5/43.5
DRAG COEF (Cd) / AERO Cda	.....0.300 / 9.95
FUEL CAPACITY / FUEL	.....17 gal / 87 oct reg
MPG	.....in full electric mode 84 MPGe
DRIVING RANGE	.....566 miles
DRIVING RANGE ELECTRIC-ONLY	.....33 miles
EPA GREEN VEHICLE GUIDE RATING	.....*10
	*(best possible—a first for any minivan)

BASE PRICE PREMIUM	.....\$41,995
BASE PRICE PLATINUM	.....\$44,995
Less \$7500 federal tax credit, from	.....\$34,495



E-Flite Electrically Variable Transmission

A core component of the Chrysler Pacifica Hybrid's eHybrid system is its E-Flite Electrically Variable Transmission (above), an in-house development which operates in both electric vehicle (EV) or hybrid electric vehicle (HEV) modes, utilizing two electric machines and planetary gear set with one-way clutch. The innovative one-way clutch enables both electric machines to drive the front wheels in electric-only mode.

back grocery bag hooks. The Pacifica Hybrid's interior—conceived as both a tool and an object of desire—emphasizes wide open space, functional “islands,” precision control points, an 8.4-inch Uconnect touchscreen plus a gesture-pad remote control, a pass-through console, and a drawer big enough for your iPad. A charge indicator sits at top center of the instrument panel, and the electric blue of efficiency instrumentation is reflected in teal interior stitching and a teal logo embedded in the steering wheel.

Layers of technical information include Hybrid Electric Pages in the touchscreen, with charging schedules and other information; a smartphone app providing the vehicle's current charge state, plus charging locations and schedules; and in the binnacle, customizable displays for battery and fuel levels, driving range and your own “onboard efficiency coach” to inform and motivate.

The 8.4-inch touchscreen is augmented by a 7-inch color cluster display. Premium audio by Alpine and Harman Kardon have up to 20 speakers and 760 watts, and Pacifica's all-new Uconnect Theater rear seat entertainment includes two 10-inch screens, wireless headphones and 115-volt power.

At the launch of the Pacifica six months prior, Chrysler had shown us a prototype of the hybrid version that would follow. It's not uncommon to release variants of a new model in phases, but the Pacifica Hybrid introduces so many break-

throughs, the team was surely devoting additional long hours to perfecting it. And perfect it they did, even beyond their own expectations.

Exceeding initial program targets, the Pacifica Hybrid has earned a fuel economy rating of 84 MPGe (miles-per-gallon-equivalent) from the EPA—no other minivan has ever come close to this rating. The results reflect combined city- and highway-cycle performance in electric-only mode, representing the distance a vehicle can travel using the same energy content as a gallon of gasoline. (FCA's target had been 80 MPGe.)

The 2017 Chrysler Pacifica Hybrid also achieves an EPA-tested total driving range of 566 miles (beating their goal of 530), and an electric-only range of 33 miles (against a goal of 30).

The EPA also gave Pacifica Hybrid the highest possible score of 10 in its Green Vehicle Guide, related to combined performance on fuel economy and greenhouse-gas emissions.

The EPA estimates the 2017 Chrysler Pacifica Hybrid's annual fuel cost—gas and electricity combined—at \$900. Purchase price starts at \$34,495 after an available \$7500 federal tax credit, and state and local incentives may also apply.

Pacifica has won the most awards in its category, and interest has been sky-high—online visits quickly shot from 5000 a day for Town & Country to 27,000 for the new Pacifica. Chrysler figures enthusiasm for the Hybrid will follow suit. ■

