

Lexus goes electric

by Joe Sage

Toyota-Lexus has gained somewhat of a reputation for moving cautiously into the EV realm. Some might say wisely. Most are diving in head-first, at the expense of existing well-honed internal combustion technologies. Toyota-Lexus starts from a bit of a different spot, though, technically and philosophically, as pioneers and leaders in hybrids and plug-in hybrids (both now called “electrified” to blend with the bandwagon) long enough to have them mastered, to the point that they remain competitive with all the latest, especially when including all factors from extraction impacts to purchase price to refueling speed and range.

Their e-shift does continue apace, however, as Lexus now has its first globally available, purpose-

built battery-electric vehicle (BEV)—the Lexus RZ 450e—as they embark on a promise to offer 100 percent battery electrics globally by 2035.

Their comprehensive approach starts with a new e-TNGA platform, a lightweight and rigid assembly with low center of gravity, controlled inertia, heating and cooling achieved by an integrated under-floor battery placement. With sophisticated suspension and a complex DIRECT4 all-wheel drive system controlling counterbalanced front and rear eAxle sets, the whole setup is capable of sending up to 100 percent of torque to the front or rear.

Coming in two grades, the vehicle combines 150kW front and 80kW rear units for 308 system hp, with a zero-to-60 time of 5.0 seconds. Range is about 220 miles on 18-inch wheels or 196 miles on 20-inch wheels. Base trim (Premium) offers either wheel size, the bigger wheels adding 22 pounds; Luxury has 20-inchers only, with features bringing its weight another 33 pounds higher. Combined

MPGe is 107 miles for Premium with 18s, 95 miles with 20s, but also 95 for the heavier Luxury with 20s, suggesting the difference is due to the tires’ rolling resistance, since it’s apparently not vehicle weight. Prices are close on all three (see sidebar).

Tech features abound, in an interior Lexus describes as minimalist with maximum luxury. The cabin’s spacious feel is augmented by a panoramic glass roof with a smart e-coating to suppress heat, while a dimming function via an optional Dynamic Sky roof (\$550) sounds ideal in our climate.

The rotary shifter has a bit different operation from most, but intuition conquers it pretty quickly—all in all a good balance between zoomy tech and familiarity (we consider the latter essential for times a different driver may need to grab and go).

While the cabin has ample interior space, air handling was of note. It was not all that hot out yet, but we were finding it extremely stuffy even with AC seemingly optimized in the usual ways. A

deeper dive into the screen revealed that the air was all focused on just the driver. We’ve all seen that in, say, an audio system balanced to the driver—but for air handling, if you’re not cooling the rest of the cabin, too, your corner will suffer. This seems to fall into the “did it because we could” engineering category. We set it to cool the whole cabin; problem solved and highly recommended.

Mission number one, of course, is to drive—and we had nothing but praise. Handling is superb. Acceleration through sweeping two-lane curves hugged pole position tightly, smoothly and accurately, even as we dug in with more power. This Lexus dedicated platform should be a big success.

Suspension was also a standout around town—we could hear seams in the road but not really feel them, a great balance of comfort and road awareness—and it was unusually smooth, strong and comfortable on rain troughs and speed bumps.

Whether you’re familiar with EVs or this is your first, you are not only going to like it, but you may even forget it’s an EV, in the sense that it delivers a clear and transparent performance drive—while

with all the EV advantages.

While this is a bit of a golden age for power, the RZ 450e’s combined output is not extreme—308 hp. And acceleration is more in line with internal combustion performance sedans. But weight is kept favorably under control. We’ve all seen more dramatic power and acceleration in EVs, but many go beyond the point of silliness. The RZ 450e is fast without feeling reckless and nimble in maneuvers; anything more might be wasted. (That said, we’ll of course happily hop right into any higher-output versions that may come later.)

The only downside, given all that, is that its range is not higher. On the plus side, our range readouts met or exceeded its ratings for the duration—and its recharging was faster than average.

Toyota-Lexus may not have been flooding the market with EVs to date, but they’ve clearly been busy. It’s easy to note that the Lexus RZ 450e is a very solid first entry—but of course it’s more than just a first attempt. This is their new global EV platform, and it’s going to see plenty of use. They are definitely ready for prime time. ■

We like the blind shark-nose of the evolving Lexus spindle (non)-grille (they call this the spindle body) on an electric. Ours is in Ether paint; Lexus is also bringing back two-tones, with a dark contrast color for the spindle area, hood and roof.



SPECIFICATIONS

ASSEMBLY	.....Motomachi Plant, Toyota City, Japan
SEATING	.....five
MOTORS	.....F: perm magnet synchronous; R: perm magnet synchronous
BATTERY	.....355V lithium-ion 71.4 kWh, 96-cell
POWER	.....Max output (F/R): 150/80 kW Max torque (F/R): 196.4/124.3 lb-ft Total system power: 308 hp
MAX SPEED	.....99 mph
0-TO-60 MPH	.....5.0 sec
TRANSMISSION	.....dial-type shift knob
DRIVETRAIN	.....Direct4 AWD, rear eAxle coupled w engine & front motor, two high-output high-torque eAxle units per wheel set, 150-kW front, 80-kW rear, three-point eAxle motor mounts w lightweight alum brackets, symmetrical to counterbalance eAxle torque
SUSPENSION	.....F: indep MacPherson strut; R: trailing arm multi-link
STEERING	.....rack-assist-type elec power; (future: steer-by-wire w road surface monitoring)
BRAKES	.....F: 12.91 vented, double-piston floating caliper; R: 12.48 vented, single-piston floating caliper; Active Hydraulic Booster-G system works w drivetrain and regen motors to improve vehicle posture and brake force distribution
WHEELS	.....20-in black machine finish
TIRES	.....(ours: Dunlop) 235/50R20 104V
LENGTH / WHEELBASE	.....189.17 / 112.2 in
GROUND CLEARANCE	.....7.87 in
TURNING CIRCLE	.....36.8 ft
HEADROOM (F/R)	.....39.88 / 39.69 in
LEGROOM (F/R)	.....42.11 / 37.52 in
WEIGHT	.....4619 lb
CARGO CAPACITY	.....23.74 / 47.97-55.57 cu.ft
CHARGING TIME	.....110V AC (0-100%) ± 50 hrs 120V AC (0-100%) ± 9.5 hrs DC Fast Charge (0-80%) ± 30 min
RANGE	.....(EPA est, 20-in wheels) 196 miles
MPGe	.....(20-in whl) 102/87/95 (city/hwy/comb)
BASE PRICE	.....\$64,000
PREMIUM PAINT: Ether	.....500
COLD AREA PKG	.....200
ILLUMINATED FRONT BADGE	.....200
PANORAMIC GLASS ROOF	.....550
CARPET CARGO MAT	.....140
KEY GLOVES	.....25
PUDDLE LAMPS: side/rear	.....325
DESTINATION CHARGE	.....1150
TOTAL	.....\$67,090

2023 LEXUS RZ 450e LINEUP

Premium AWD (18-in wheels)	..... 58,500
Premium AWD (20-in wheels)	..... 59,740
Luxury AWD (20-in wheels)	..... ▼ 64,000