

January 31, 2019

UCSF Transportation Services operates 65 shuttles and transit buses, which is the largest intra-campus transportation fleet in the UC system. Approximately 2.5 million passengers are transported each year to 18 UCSF destinations in the City of San Francisco.

In 2018, Transportation Services acquired 15 all-electric transit buses from Build Your Dreams (BYD), which manufactures the buses in Lancaster, California.

Below are quick facts regarding UCSF's BYD transit buses:

- The BYD model acquired by UCSF is 30 feet long, all-steel frame and body, and has an unloaded or curb weight of 22,400 lbs. The BYD model is rated to transport 22-seated passengers, 1 driver, and 18 standees.
- Collectively, UCSF's 15 all-electric BYD transit buses will reduce UCSF's CO2 emissions by 61 metric tons per year.
- Each BYD all-electric transit bus has a range of 135 miles per charge. At UCSF, each bus only needs to be charged once a day, even though the bus travels through hilly terrain. The battery that fuels the BYD bus is an ion-phosphate battery.
- BYD's regenerative braking system adds energy back into the battery each time brakes are applied, extending the driving range.
- BYD buses have no gearbox, transmission shaft, or differential mechanism. The power from the motor is directly transmitted to the wheels, resulting in improved transmission efficiency and reductions in noise and vibration.
- With fewer moving parts than a gasoline engine, the all-electric BYD transit bus is expected to require less maintenance than its gasoline-fueled counterpart, thereby lowering UCSF's operating costs.
- Each BYD bus costs \$450,000, though UCSF received funding under the California Hybrid and Zero Emission Truck & Bus Voucher Incentives Program, which reduced the cost per vehicle to \$350,000. The buses were leased with an option to buy.
- 28% of UCSF's intra-campus fleet is currently all electric (15 BYD buses plus 4 all-electric vans).