





A PERFECT MATCH FOR GRAPE HARVESTING



eUtility 2 **40-HP equivalent**

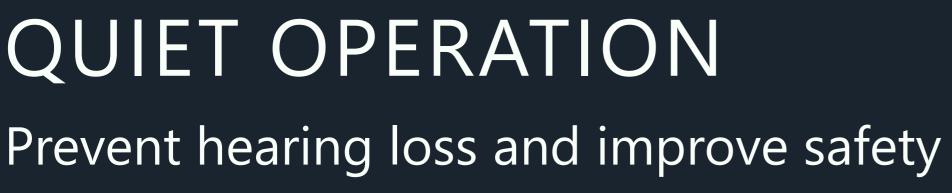
- Does not need to • idle during picking.
- Only uses energy ulletwhile moving.
- 2000 times quieter • than diesel.
- No toxic exhaust or fluids. ullet

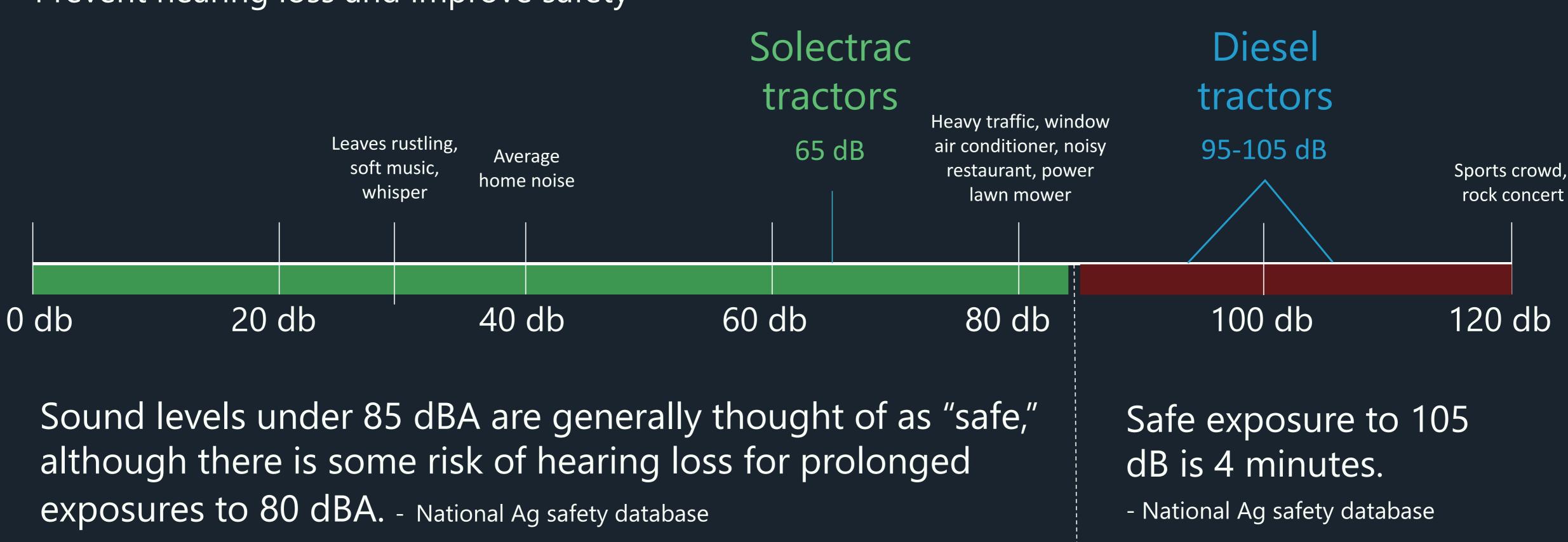














REDUCED MAINTENANCE COSTS & DOWNTIME

DIESEL TRACTOR

Maintenance cost is 25% of purchase price



ELECTRIC TRACTOR

- No oil
- No oil filter or injector changes
- No hydraulic fluids or hoses
- No lubrication of engine





LESS FUEL COST

DIESEL TRACTOR \$7.04/hour



Fuel cost = .044 x 40 HP = 1.76 gal/hr at \$4/gal = \$7.04

Does not include lubrication cost = 15% of fuel cost

- Iowa State University

ELECTRIC TRACTOR \$0.86/hour

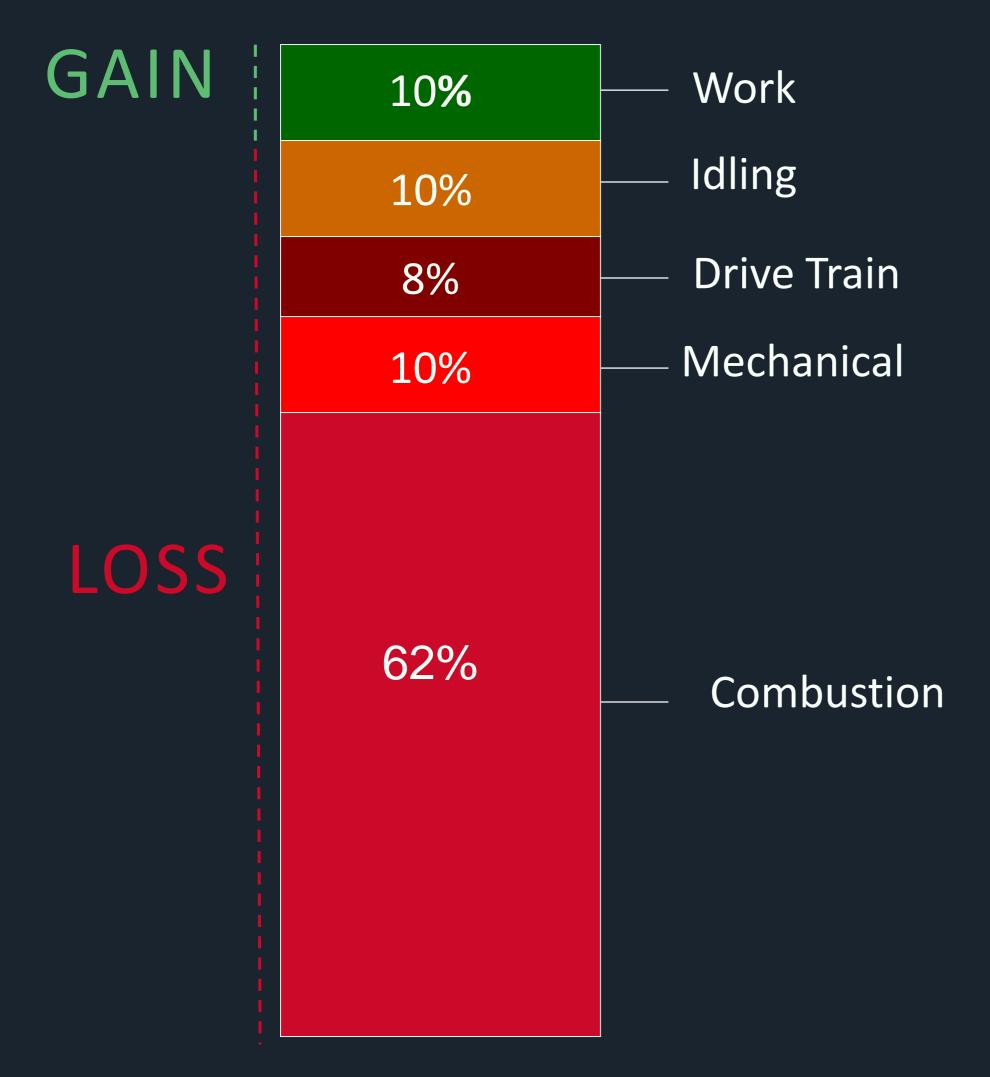


Fuel cost: 20 cents/kWh Battery pack 26 kWh last ~6 hrs = 4.3 kWh/hr used x 20 cents = \$.86

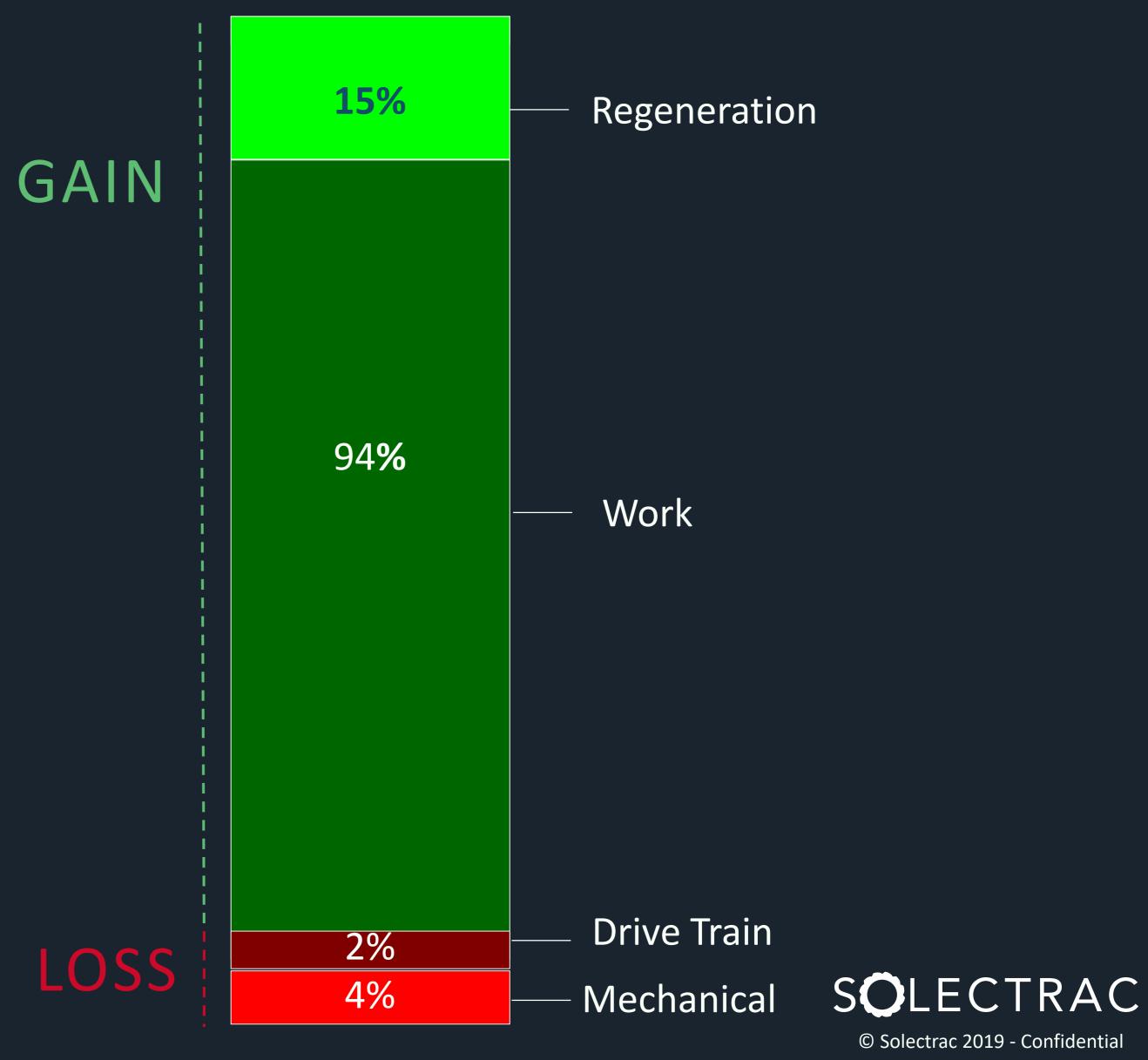


DRIVE TRAIN EFFICIENCY

DIESEL TRACTOR



ELECTRIC TRACTOR





COMPARING FOSSIL FUEL WITH SOLAR CHARGING

Vehicle Type & Fuel Source	COMBUSTION	ELECTRIC TRACTOR & 3 KW PV
Liquid fuel used - 300 hrs/yr for 25 yrs	8,000 gals	0
Upstream emissions	200 tons	700 lbs.
Energy used 25 yrs	250 MWh	60 MWh
Fuel cost/hr	\$5.00	\$0.80
Fuel cost/yr	\$1500	\$240
Fuel cost over 25 yrs - \$5.00/gal, \$4/wat	t \$40,000	\$6,000 *
Total CO ₂ / 25 years	300 tons	TRACE

Assumptions average next 25yrs : 1 gal/hr, \$5.00/gal, 30kWh/gal, 28lbs CO₂/gal, *Current installed cost and performance for 3 kW PV w/ 25 year warranty



IMPROVED WORKER AND ENVIRONMENTAL HEALTH

No more:

hearing loss or breathing toxic exhaust

> No more: Air, water and soil pollution or GHG emissions





"No more exhaust..."

-John Frey, CEO, Frey Vineyard First Bio Dynamic Vineyard in US





"This is the future. Your tractor was the quietest in 120 years of testing."

- Roger M. Hoy, Director , Nebraska Tractor Testing Laboratory, Designated Western Hemisphere Tractor Testing Lab

"So quiet..."

- Takashi Yogi, Director, School of Adaptive Agriculture - Vocational Training - CA Grange



