The Future of Refuse Collection is NOW

Sourcewell
Formerly NJPA
Awarded Contract
Contract # 091219-THC

Heil® recently announced the acquisition of certain intellectual property from Boivin Evolution Inc. ("BEV") related to electrically-powered refuse collection vehicle ("RCV") bodies, Heil's entry into the fully-electric ASL market.

This technology enables the operation of a fully-electric automated RCV, versus current technologies that adapt a traditional hydraulic body to battery-powered chassis. These units can be configured to be completely self-powered with their own battery packs and integrated with any energy-powered chassis setup. The truck can complete a full ten-hour route on a single overnight charge, while packing ten tons of legal payload, and still have battery charge to spare. In addition, the use of electric RCVs offers waste haulers and their municipal waste customers a new technologically and economically-viable tool for sustainability initiatives.

With the advent of electrification of the RCV body, the need for hydraulic power is eliminated, thereby reducing the environmental impact and a significant cost component of truck bodies. All-electric body, maintenance costs are reduced, NOx emissions – when paired with a diesel chassis – are reduced, and overall energy consumption goes down. When paired with an electric chassis, BEV technology enables an RCV with virtually zero emissions.

Concurrently with the acquisition, BEV and **Heil** have entered into a commercial partnership under which BEV will manufacture RCV bodies for markets in Canada and France under the BEV brand, while RCV bodies for markets throughout the rest of the world will be manufactured and supported by **Heil**. **Heil** and BEV will also jointly collaborate in the development of future electric-powered refuse collection technologies.

BODY	**27 + 3 yd³**
Body Weight	5900 kg | 15,400 lbs. (arm & battery)
Capacity	20.6m³ | 27 yd³
Length	6700mm | 264 in.
Made Of	12 ga (2.657mm) steel, grade 80
Floor	6.35mm (1/4 in.) 100,000 tensile strength, abrasion-resistant
TAILGATE	
Capacity	2.3m³ | 3 yd³
Length	610mm | 24 in.
Made Of	12 ga (2.657mm) steel, grade 80
Mechanism	Two electrically actuated, self-contained hydraulic actuators to unlock/lock rear panel & raise/lower in same movement
HOPPER	
Capacity	2.3m³ | 3 yd³
Trough-Type Floor	6.35mm (1/4 in.) abrasion-resistant steel with 400 HB of hardness, welded on plate 9.5m (3/8 in.)
Auger Compactor	4.6m³ / min. (6 yd³ / min.) by chain-drive mechanism design to maximize compaction & develop 30,800 Nm (22,600 lbs/ft.) torque on refuse. Automatic torque and speed control allows collection of garbage, recycling, and organics, without destroying material and avoiding packing jam. The tapered screw allow a 3 phase compaction of the material, radial compaction and axial compaction into the auger area followed by the final compaction phase inside the body.

PACK-THROUGH EJECT PANEL (PATENT PENDING)

The patent-pending concept allows packing through the front wall of the body and unload with an eject panel, driven by PMDC motor, planetary and chains. The system has a moving shutter that closes the packer opening to prevent garbage from falling back behind the ejector while the unloading operation.

AUTOMATED ARM (PATENT PENDING)

Close grab, no swing-out, 2.74m (9 ft.) reach for bins 120, 240, and 360 L (30, 60, and 90 gal.) with a lifting capacity of 227 kg (500 lbs.). All 3 functions are powered by PMDC electric motors and gearbox combination for a cycle time of less than 10 seconds.

ELECTRIC

Battery	LiNMC high-density technology allows light weight and quick recharge (4-8 hours) on Type 2 charging station, 240 VAC compatible J1772. Powered heat pads are installed in the battery pack to maintain the battery at its best working condition and temperature.
Autonomy	46 kWh of capacity, allows collection over 1,200 bins per day with the overnight charge in any temperature conditions.

CHASSIS

The concept of a collection body with a 100% electric automated arm (with electric-powered hydraulic power pack for tailgate) is the most efficient unit to be installed on a 100% electric chassis. With such a concept, the electric chassis have enough autonomy to meet the standard collection routes (above 1,200 bins/day).

Conventional	56,000 GVW, 256 in. WB (27 + 3 yd³ body)
Cabover	60,000 GVW, 220 in. WB (27 + 3 yd³ body)