



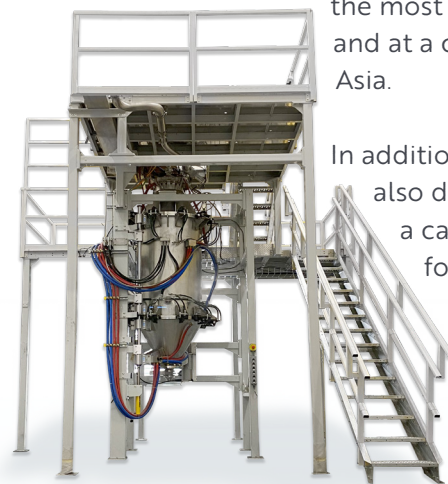
## 6K ENERGY – CREATING A CIRCULAR ECONOMY FOR DOMESTIC, COST-EFFECTIVE, SUSTAINABLE BATTERY MATERIAL RECYCLING

### Opportunities and Challenges of Battery Recycling

The global electric vehicle market will reach 221 million vehicles in 2030 – more than 30 times today’s level. Over the next decade more and more batteries will reach end of life providing an opportunity to recycle and recover the EOL batteries to supply new battery demand. While recycling of batteries is a topic running at fever pitch in the media, at the highest levels of government and certainly with automotive OEMs its doesn’t come without its challenges. The process and technology used today to recover battery material is environmentally unfriendly, and has major drawbacks that make the process complicated and costly. The most critical and largest challenge is the recycling, healing and upcycling of the critical elements and materials that make up a battery.

### Enabling Battery Cathode Recycling with UniMelt Microwave Plasma Production

At 6K Energy we have solved the battery cathode recycling problem with our UniMelt® microwave plasma technology. With the UniMelt we can deliver battery cathode material back into the market with performance that meets the most stringent specifications in the industry; and at a cost lower than material sourced from Asia.



In addition to the sustainability benefits, 6K Energy also drives down capital investment cost for a cathode plant by occupying 50% less footprint than a typical co-precipitation plant. All these benefits allow the setup of a plant for recycling/upcycling to be co-located with the “black-mass” material recovery plant or any other strategic location that may be required.

### Sustainability of UniMelt Vs. Co-Precipitation



#### ZERO

Hazardous waste (ammonia/sulfates)



#### MASSIVE

Reduction in water usage



#### SIGNIFICANT

Reduction in power usage and CO<sub>2</sub> emissions



#### UP TO 60%

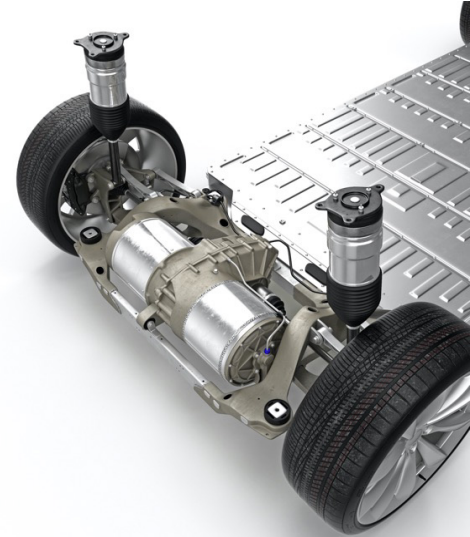
Reduction in conversion cost

*6K Energy has the only cathode production technology that manufactures battery material in an environmentally friendly way.*

# WE PARTNER TO CREATE THE **ONLY SUSTAINABLE END-TO-END SOLUTION** FOR RECYCLED BATTERY MATERIAL PRODUCTION

The innovative UniMelt platform from 6K Energy offers a unique technology where it can accept salts and materials recovered from recycled batteries and with less energy, water and a fraction of the time can upcycle and turn them into new battery material.

This offers a unique solution to the critical battery material situation developing in the United States. With the push for more EVs in the marketplace, the need to find a scalable, economic and sustainable solution to recycle these batteries and turn them into new battery material is crucial.



## SPOTLIGHT CIRBA SOLUTION PARTNERSHIP



### A Partnership to Create Domestic Supply of Recycled Cathode Material

The key challenge for recyclers is to drive down processing and logistics costs, which account for a combined 50% of total recycling costs.

6K Energy and Cirba Solutions (formerly Retriev - the battery recycling division of Heritage Environmental Services) have established a partnership that leverages Cirba Solution's established infrastructure and 6K Energy's sustainable, low-cost cathode production technology to deliver recycled cathode material at a fraction of the cost. This partnership allows the creation of a closed loop, circular economy cathode production based in the US. Cirba Solution, with their established infrastructure will collect and extract recyclable materials such as nickel, cobalt, and copper and 6K will take these materials and will upcycle them back into cathode material that will go into the battery supply chain through an exclusive development agreement between the two organizations.

- Reduced carbon through logistical efficiencies
- Successful collection with nation-wide network
- Proper handling of batteries (safety and compliance)

#### THE CIRBA SOLUTIONS + HERITAGE GROUP PLATFORM INCLUDES:

-  2 PROVEN BATTERY RECYCLING FACILITIES
-  100+ TOTAL FACILITY LOCATIONS ACROSS THE US
-  2,500+ KNOWLEDGEABLE EMPLOYEES
-  1,300+ VEHICLES ON THE ROAD
-  50+ YEARS OF ENVIRONMENTAL MANAGEMENT EXPERTISE

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**6K** ENERGY