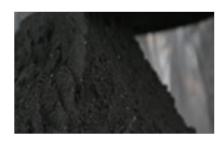


## SOLUTIONS

Blue Whale Materials (BWM) is an American lithium-ion battery testing and recycling company.

Since the company's founding in 2015 to help U.S. companies find recycling outlets, BWM has evolved to offer a full suite of domestic collection, testing, and processing solutions, building on its legacy of expertise and understanding of the global industry.

#### **BLACKSAND<sup>TM</sup>**



**14ktpa** processing plant in Bartlesville, OK by **2025** 

54ktpa by 2028 with DOE award

#### **TESTING**





Performance testing for manufacturers to end-of-life grading for 2<sup>nd</sup> life

### COLLECTION INFRASTRUCTURE



Expanding collection network for efficient, cost-saving logistics

### BATTERY MINERAL EXTRACTION



Ongoing R&D to add lithium, graphite & other metal extraction



# FLAGSHIP FACILITY BARTLESVILLE, OK

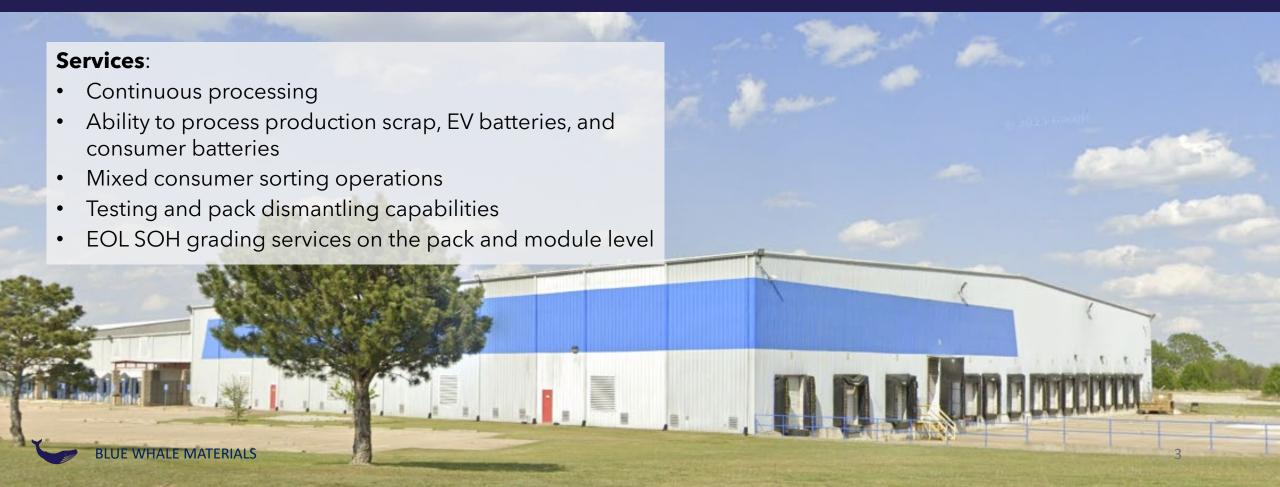
**Processing**: +14ktpa (2025); 54ktpa (2028)



Storage: 50,000sqft



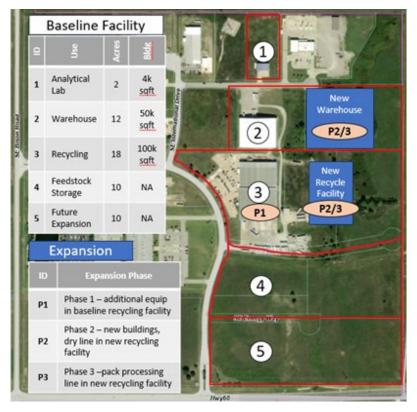
**Testing & Evaluation** 



#### AWARDED DOE GRANT TO EXPAND BARTLESVILLE FACILITY

Fully operational, the plant will produce materials for

# >10GWh of LiBs per year & power 100k EVs





- BWM selected for DOE award negotiation to expand Bartlesville site
- Expand feedstock capacity to > 54,000 tonnes per year
- Additional Line to process batteries and Mfg scrap with electrolyte
- Additional Line to process Mfg scrap without electrolyte
- Additional warehousing and storage space

#### Federal Cost Share:

\$55,232,669

Non-Federal Cost Share:

\$55,232,675

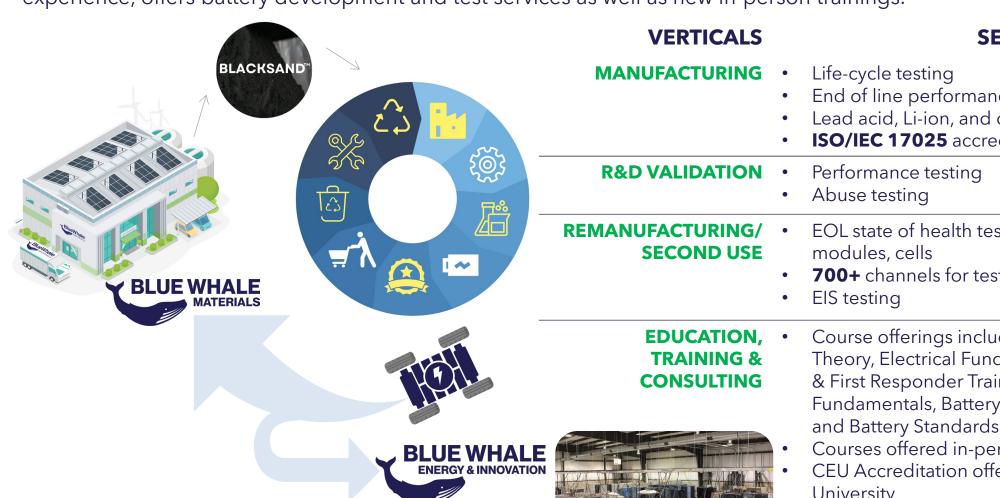
#### Comprehensive CBP:

Creating **150** full-time jobs & **180** construction jobs in a DAC & Energy Community



#### **BW ENERGY & INNOVATION**

BWE&I, formerly Eclipse Energy, has been in the battery testing business since 2012. The team, with 100+ years of experience, offers battery development and test services as well as new in-person trainings.





- End of line performance testing up to 900V
- Lead acid, Li-ion, and complex chemistries
- ISO/IEC 17025 accredited since 2017

- EOL state of health testing for packs,
  - 700+ channels for testing and grading



- Course offerings include Battery 101 (Cell Theory, Electrical Fundamentals), Fire Safety & First Responder Training, Energy Storage Fundamentals, Battery Management Systems, and Battery Standards & applications
- Courses offered in-person or virtual
- CEU Accreditation offered through Purdue University

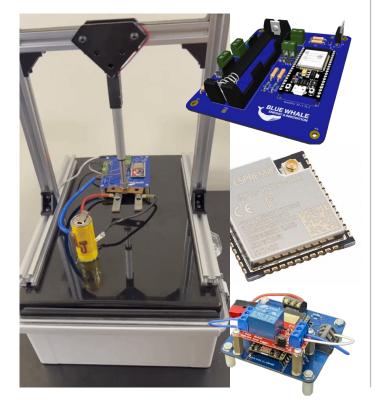




#### **BW ENERGY & INNOVATION**

# Specializing in Novel, Complex Test Requirements

 From designing custom PCB for a client with niche needs to developing a custom LIN communication board to interface with cyclers.



# Comprehensive, Rigorous Testing with Reliable Test Data

- BWEI specializes in comprehensive abuse testing up to 5kWh modules:
  - Mechanical

- Overcharge
- Nail penetration
- Overheat
- Electrochemical
- & more
- Thermal cycle/thermal shock



 Offers comprehensive data reports with customized testing solutions.



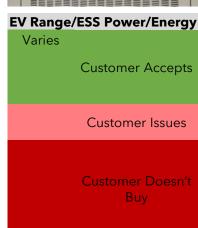
#### Testing & Grading of End-Of-Life Packs

- EOL state of health testing for packs, modules, cells
- Service model for recalls or EOL determination for warranty batteries
- EIS testing





Grading	(Capacity Basis)
100%	
90%	Service Quality ~
80%	10-15 years
70%	
60%	Unknown Life
50%	Left
40%	Can't Power a
30%	Car
20%	
10%	Rapid Failure
0%	Poss.







# Thank You

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