



LITHIUM ION BATTERIES IN THE SOLID WASTE SYSTEM UPDATE: POST-SBWMA STUDY

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Are you ready to
effect change?



ORGANICS
MANAGEMENT



WASTE
RECOVERY



GLOBAL
CORPORATE
SUSTAINABILITY

since 1986



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LI-BASED BATTERY VECTOR



NEWSDAY
NEW YORK

FDNY: Lithium battery caused 5-alarm fire that disrupted LIRR service

By Jesse Coburn jesse.coburn@newsday.com [@jesse_coburn](https://twitter.com/jesse_coburn) Updated March 17, 2018 5:55 PM

The blaze that started outside a Queens recycling plant Friday afternoon was finally brought under control Saturday morning, the FDNY

LITHIUM BATTERIES SOLVING STORAGE RIDDLE FOR GREEN ENERGY



- Wind, sun, tides can't be turned on and off at will
- Excess energy goes to waste during production
- Batteries collect and store energy to be used in between production
- Reliability during disruption
- May reach household use within 10 years

LITHIUM BATTERIES ARE A BIGGER AND BIGGER PART OF US

COMPARED TO 2010, LITHIUM BATTERIES ARE...



60%
more powerful



55%
lighter



40%
cheaper



Consumption
Rate
1.75/Person/Yr.

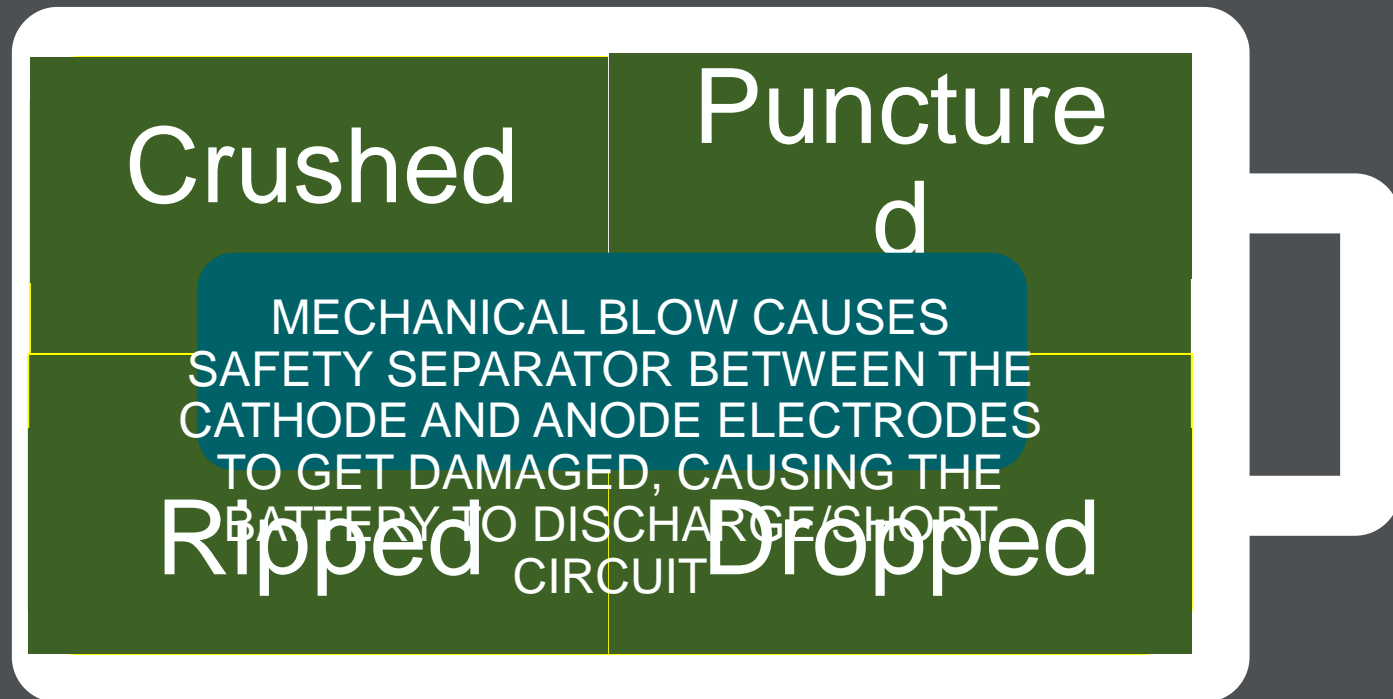


175
M
Pounds



575
M Units
(2016 x growth
rate of 2.7%
CAGR)

POTENTIAL FOR LITHIUM BATTERIES FIRES IN THE RESIDENTIAL RECYCLING SYSTEM



The International Air Transport Association (IATA) calls lithium batteries “dangerous goods... requiring special handling”.

Reported Fires
400°-1300°F.
Explodes under pressure

LET THEM BATTERIES TAKE EXACTLY DAMAGED IN THE RESIDENTIAL REFUSE AND RECYCLING SYSTEM



COLLECTION

- Dropping
- Blade Scraping
- Crushing +1,800# PSI compression ram
- Puncturing by sharp objects, glass, metal
- Unloading and running over with tires
- Push material with container bodies



MATERIAL RECOVERY OPERATIONS

- Pushing into piles
- Scraping with Blade
- Puncturing by sharp objects and metal
- Running over with tires
- Loading onto conveyor belt
- Dropping through screens
- Dropping to storage

LI-ION BATTERIES SUGGESTIONS- IMMEDIATE NEED



Could be construed as 'do not put in the garbage but instead put battery in the recycling bin.'



Li-ion

Appears more prominently than other warnings on many batteries. And sometimes without No Garbage Can Symbol. Users may mistakenly put batteries in recycling bins.

DANGER NO BATTERIES



**MAY CAUSE FIRES AND EXPLOSIONS! NEVER DISCARD
IN THE RECYCLING BIN. DISPOSE OF PROPERLY.**