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

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

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

Reported Fires 400°-1300°F. Explodes under pressure
LITHIUM BATTERIES ARE EASILY 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.’

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

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