TESLA

CIRCULAR SOLUTIONS

NAATBATT 2023

FEBRUARY 22, 2023

WHY DO WE CARE?

RISK MUST BE MANAGED

Safety Risk

Regulatory Risk

Financial Risk

WHERE DO WE START?

MATERIAL CLASSIFICATION

What is it?

What happened?

IMAGE: CONOR ROSLING/CAWLEYS GROUP

What now?

WHAT DO WE HAVE?

MATERIAL DETERMINATION

IMAGE: NEEDSDECAF/TESLAMOTORSCLUB

Damaged

IMAGE: YARO_S/REDDIT

Critically Damaged

WHAT CAN WE DO ABOUT IT?

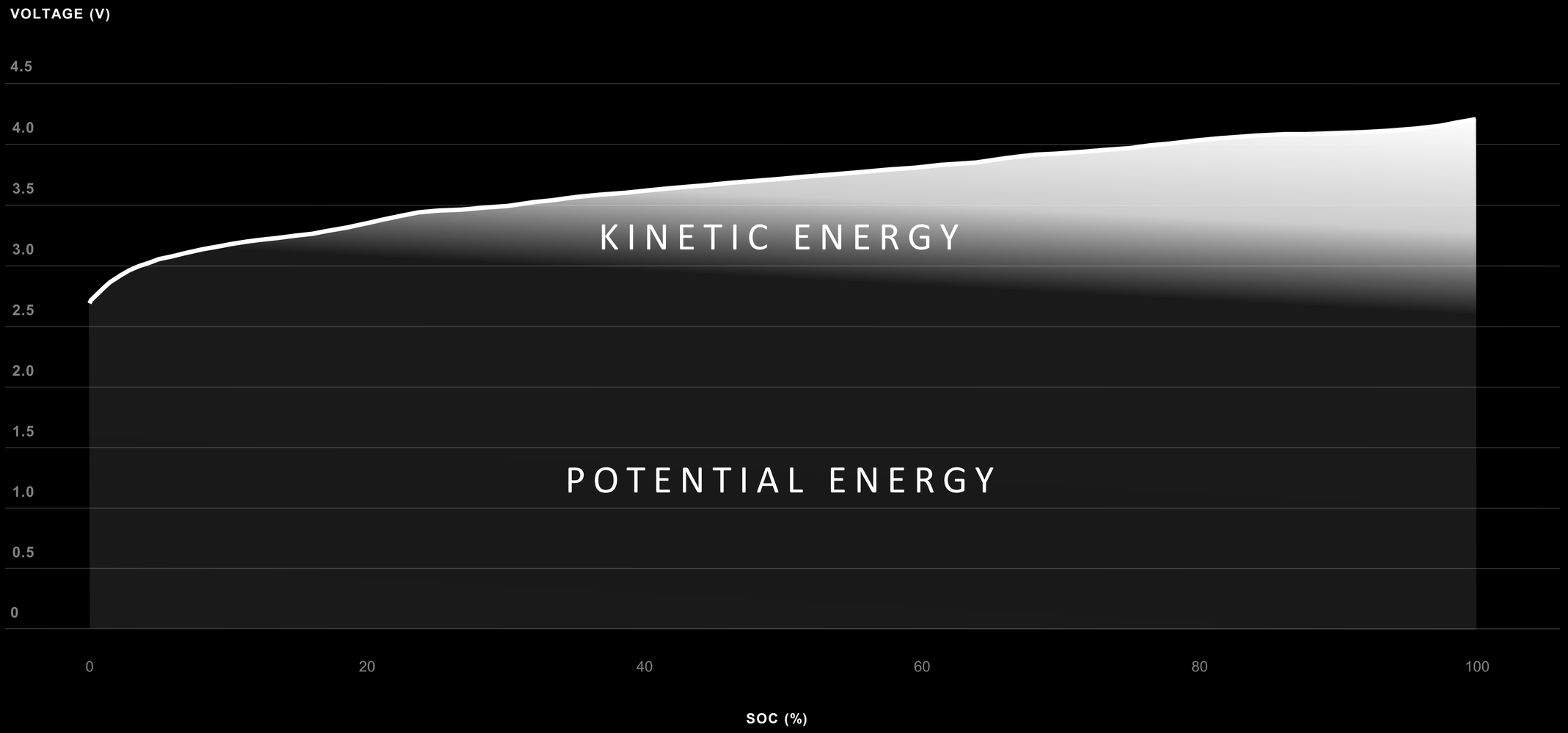
PRE-TRANSPORTATION ACTIVITIES

Discharge

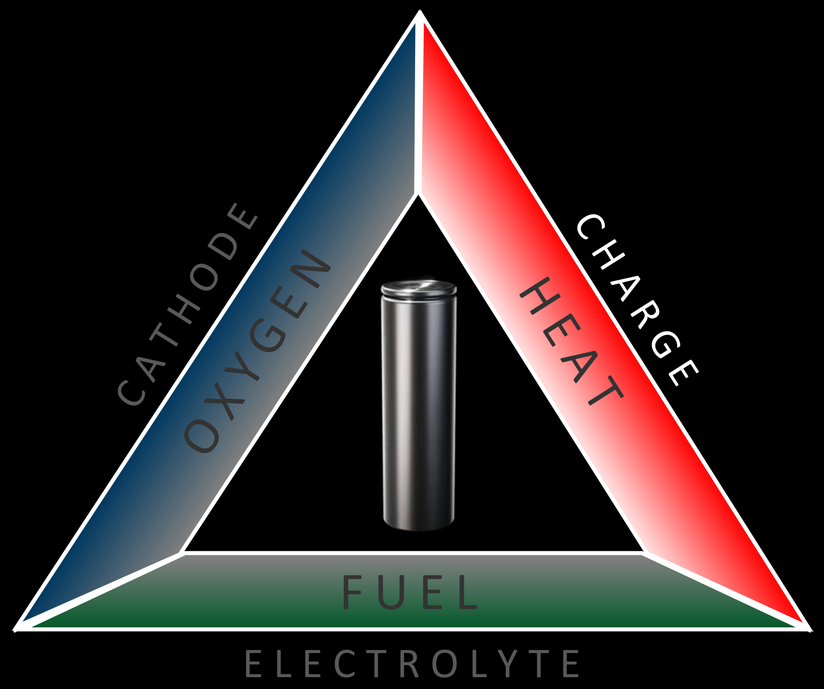
Dismantle

Shipping Checklist

OPEN CIRCUIT VOLTAGE



SOC LIMITS BY CONDITION



UNDERPERFORMING + GOOD ISOLATION	DAMAGED + LOW ISOLATION	NO DAMAGE + AIRBAGS DEPLOYED	
50%	30%	20%	
DAMAGED + AIRBAGS DEPLOYED	END OF LIFE / RECYCLING		
10%	0%		

"IT WAS OBSERVED THAT NONE OF THE CELLS HAVING 0% SOC EJECTED THEIR CONTENTS AT FAILURE DURING THERMAL RUNAWAY. BY COMPARISON, HALF OF THE CELLS AT 20% SOC, MOST OF THE CELLS AT 50% SOC, AND ALL OF THE CELLS AT 100% SOC EJECTED THEIR CONTENTS"
DOT/FAA/TC-15/40

CONSIDERATIONS

WHEN IS A BATTERY NO LONGER A BATTERY?

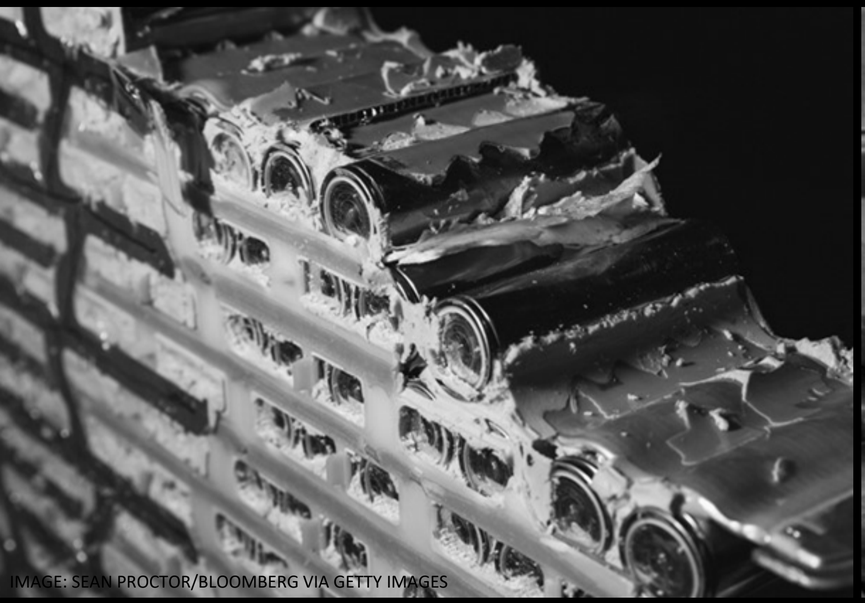


IMAGE: SEAN PROCTOR/BLOOMBERG VIA GETTY IMAGES

Resistive Discharge

IMAGE: INVESTOR RELATIONS/TESLA

Electrolysis / Brine Discharge

Fire Damage

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