

# Presentation for New Plant Construction

Nippon Denkai, Ltd.

July 20th, 2022

# **Expansion of NA's Only ED Copper Foil Factory**

#### & Points

- Addition to investment at current Camden, SC site
- Located in Augusta GA. Two-hour drive from our existing ED copper foil factory in Camden SC.
- Large-scale dedicated EV battery copper foil manufacturing
- 9,500 metric ton per year capacity, capable of tripling the capacity
- Competitive electricity cost and business-friendly community environment
- Scheduled to start shipping samples in the summer of 2024

\*ED = Electrodeposited

### Augusta Site: Bigger, More Competitive Future

	November 2021 Plan	July 2022 Plan	Change
Location	Camden, South Carolina	Augusta, Georgia	2 Hr. Drive
Investment Amount	\$140M	\$150M	\$10M ↑
Annual Capacity (Metric Tons)	9,000	9,500	<b>↑</b>
Workforce Skill Transfer	Easy	Easy	None
Access to Skilled Talent	Good	Good	None
Property Acreage	Limited (Existing Factory)	Room for Expansion	$\uparrow$
Equipment Layout	Conventional	Advanced	$\uparrow$
Provisions for Future Growth	None	Triple Production (up to 28,500Mt)	$\uparrow$
Future Growth Investment Savings	None	Substantial	<b>↑</b>
Electricity Price	Base	More Competitive*	$\uparrow$

<sup>\*</sup> We are locked-in to competitive electricity cost for long term.

Augusta proximity to Camden allows for easy transfer of skills





#### Camden, SC to Augusta, GA

- 170 km, 1hour 45minutes drive
- Use Camden existing infrastructure for training and workforce development
- Nearby all major East Coast ports and highways

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### **Designed for Future Growth**



Balance economy of construction and speed to market for full three phase expansion

# Sample shipment start in the summer of 2024

Location / Site area	Augusta, Georgia / 115 acre	
Investment amount	US\$ 150 Million	
Product / Capacity	EV Battery Copper Foil / 9,500Mt per year	
Construction period	Start construction in September 2022,  ~ Start sample shipment in the summer 2024	
Supply destination	Major LIB manufacturers in US	
September 2022 Start construction	Summer 2024 Start sample shipment 2023	

### **Cost Inflation Risk is Small**

Cost Element	Fluctuation Risk for Augusta Project
Copper	Metal sales and procurement prices are pegged to the same copper price index; no recurring risk exposure.
Electricity	Regional power in Georgia will legally commit to the current competitive price for a long term.
Labor	Labor-saving productive equipment
Others	Relatively small.

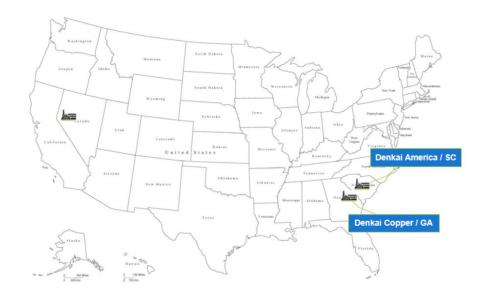
Inflation risks are mostly hedged.

### Many Battery Projects, Few Copper Foil Projects

#### Many Battery Projects Announced in the US



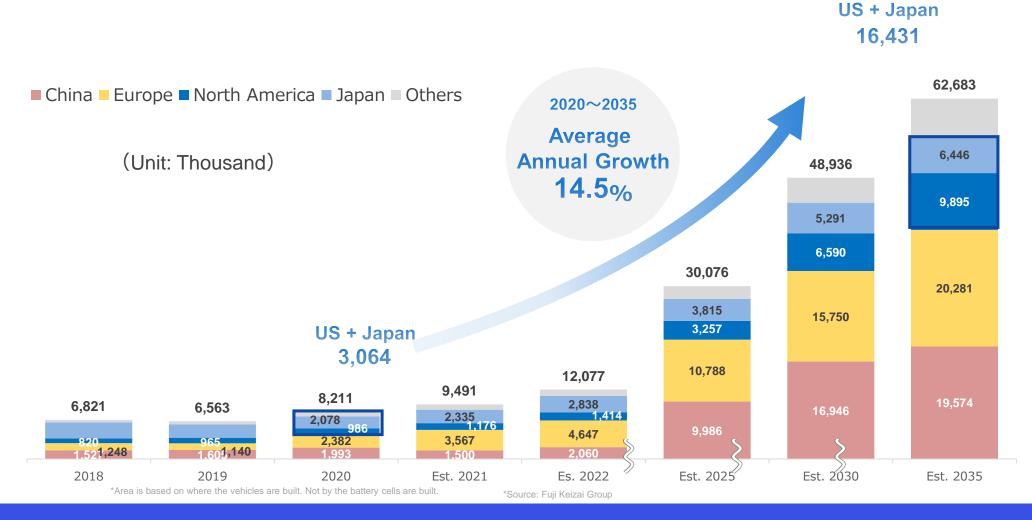
#### **Few Copper Foil Projects Announced**



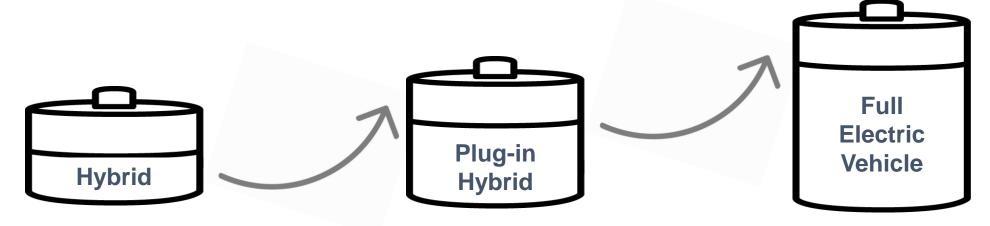
Domestic source of copper foil is strategically important to battery makers. Greater dependence on imported copper foils have known supply chain issues and are susceptible to greater geopolitical risk.

### **xEV Market Will Grow Rapidly**

Global xEV production is projected to grow at 14.5% per year. US plus Japan will be one of the biggest slice of the markets.

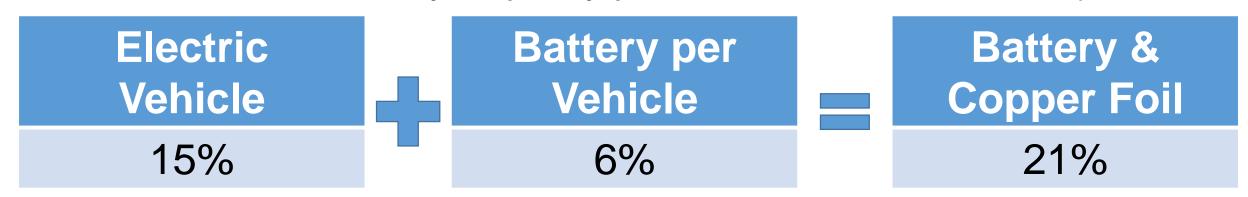


### **Battery Requirements Growing Faster Than EVs**



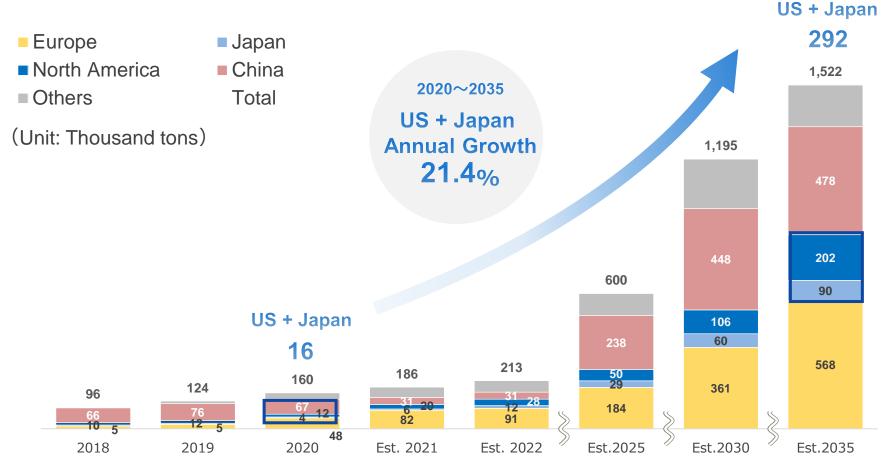
**EVs Need More Battery Than HVs** 

Growth of Battery Capacity per Vehicle (Annual rate / %)



### **Copper Foil's Rapid Growth**

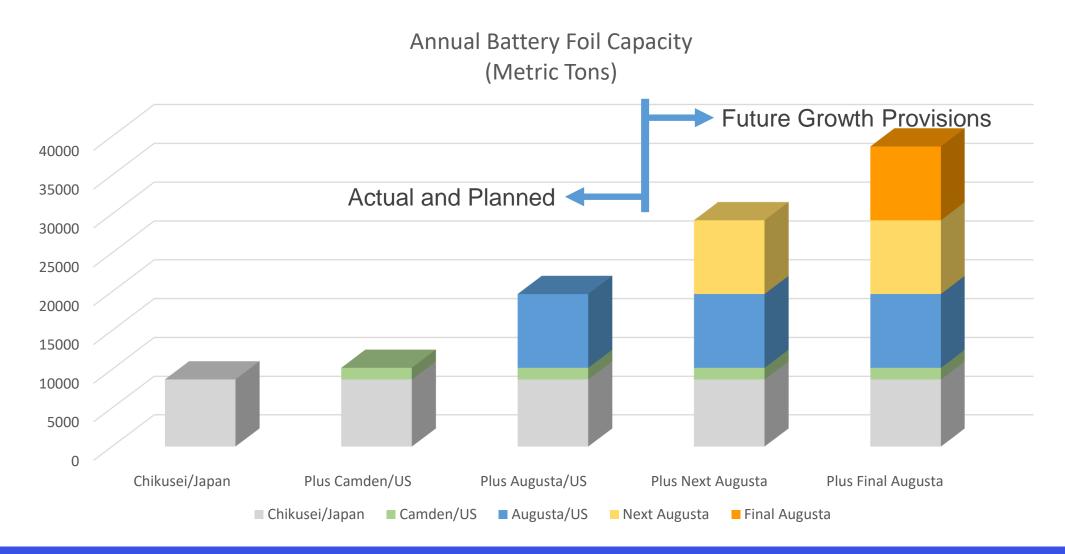
Anode Electrode Market will Grow More Rapidly Because Battery volume per vehicle will also grow on top of xEV growth.



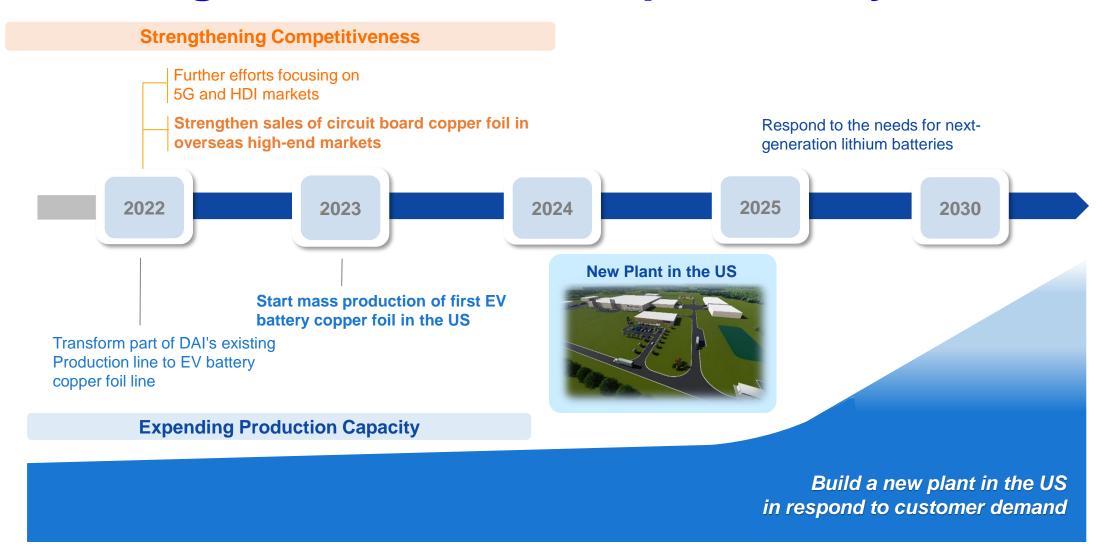
(1) Exhibited in an area where the vehicles are built, not where batteries are built

(2) Source Fuji Keizai Group

### Denkai's Battery Foil Capacity Will Grow Significantly



## The Image of Production Expansion by 2 bases



<sup>\*</sup>The expectations such as next-generation lithium batteries or all solid-state batteries on the above image are based on the latest technological trends at the time of preparation of this document and are shown at the time when they are considered feasible.

(Reference: Image of EV batteries' Technology Shift on this document P.34.)

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The above figure shows the image of growth objective

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