

Battery Cell and Cell Component Manufacturing in North America

Sam Jaffe, VP of Battery Solutions, E Source

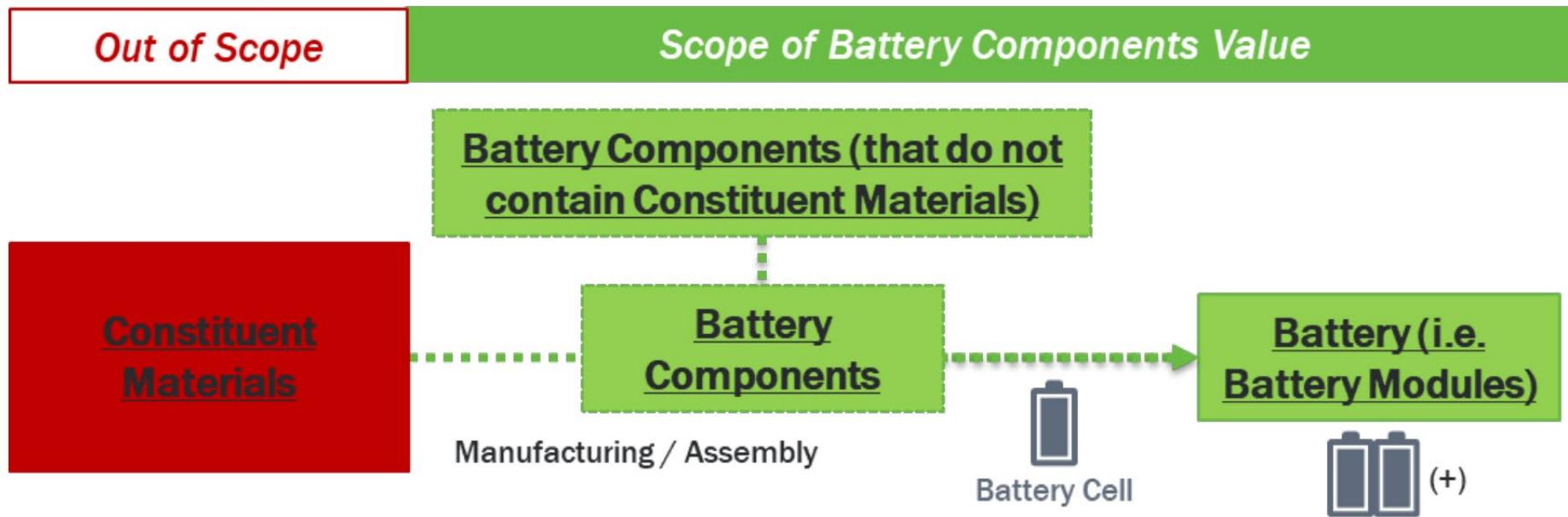
NaatBatt 2023



IRA: Nuts and bolts

- Pull:
 - EV tax credit:
 - \$55,000 or \$80,000 manufacturer's suggested retail price maximum
 - \$150,000 income maximum
 - North American assembly
 - 40%–80% strategic minerals US or free trade partner countries
 - 50%–100% components US or free trade partner countries
 - Nothing from “foreign entity of concern”
 - Investment tax credit for renewables and storage:
 - 30% through 2032 for photovoltaic (PV), wind, other renewables, and stand-alone storage projects
 - Other subsidies (postal fleet, port electrification, etc.)
- Push:
 - Production tax credit (PTC) for battery components, cells, modules:
 - \$35 per kilowatt-hour for cell production in US
 - 10% of cost for component production in US
 - PTC for wind, PV, and PV and wind components:
 - \$12 per square meter PV wafer
 - \$3 per kilogram (kg) polysilicon
 - 7¢ per watt module
 - PTC for hydrogen \$3 per kg
 - Loan guarantees:
 - \$215 billion worth of 80% loan guarantee for approved project

The Hole in the IRA

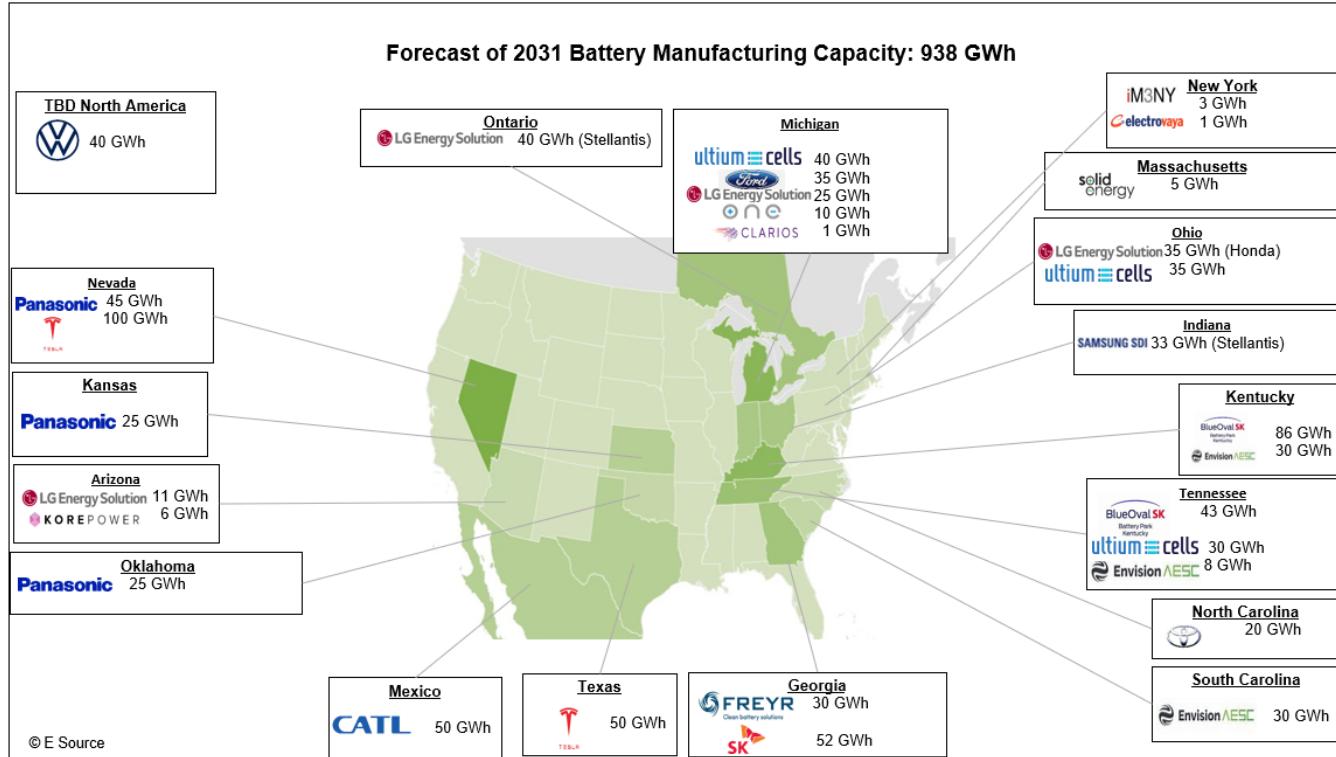


Under current IRS guidance, PCAM, processed graphite, electrolyte salt and solvents won't be covered by the component tax credit.



North American Battery Manufacturing

North American Battery Manufacturing



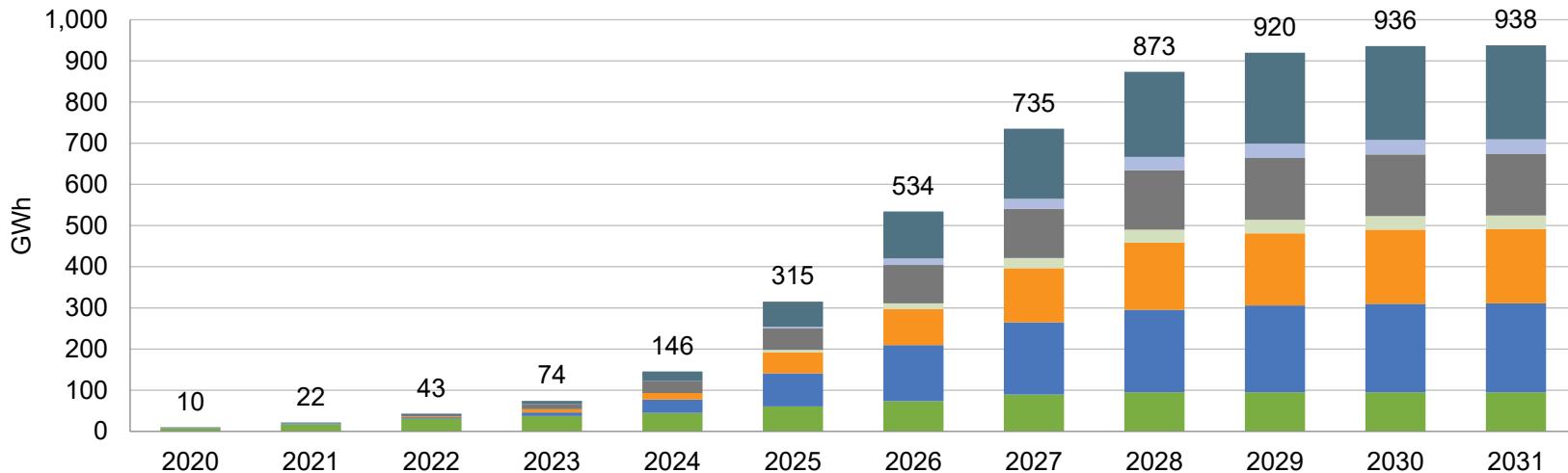
Note that factory capacity numbers are the E Source judgment of what will be built.

North American Battery Manufacturing

Total Production Capacity Forecast

North American Li-Ion Production Capacity Forecast

Panasonic LG ES Sk On Samsung SDI Tesla BlueOval Other

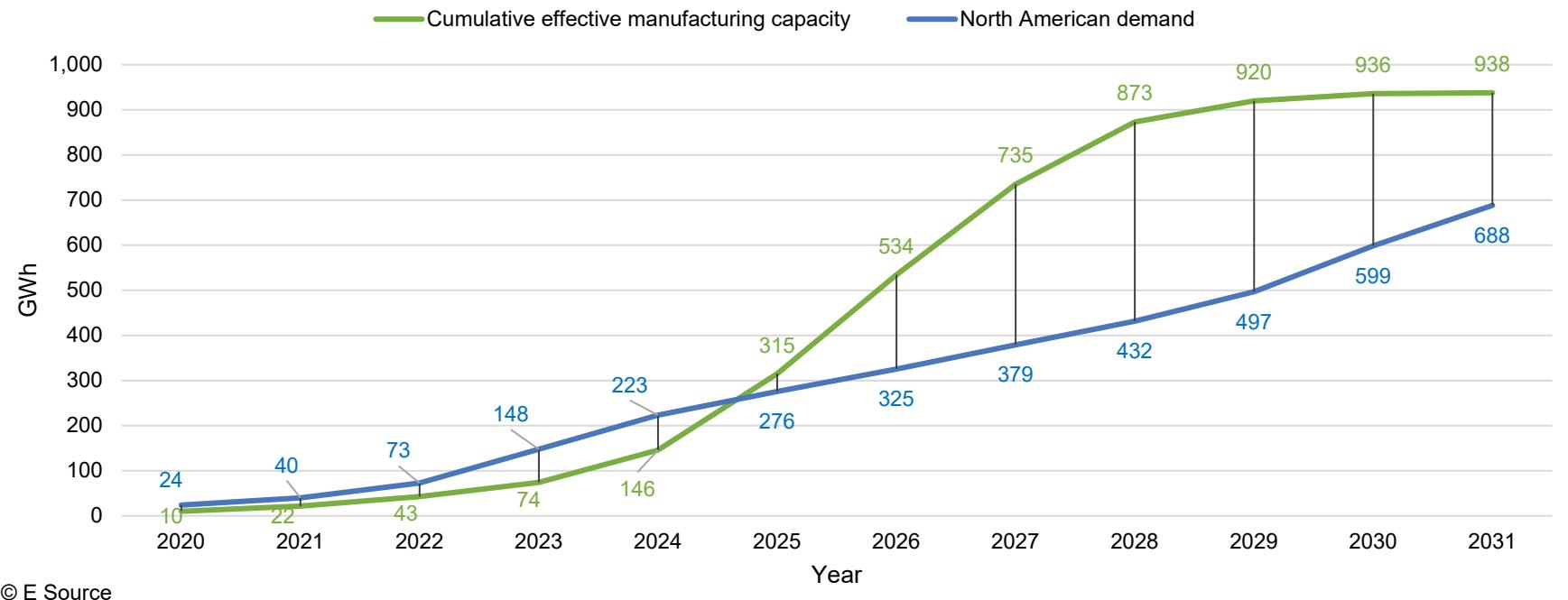


© E Source

North American Battery Manufacturing

Supply vs. Demand

North American Li-ion battery manufacturing capacity versus demand forecast

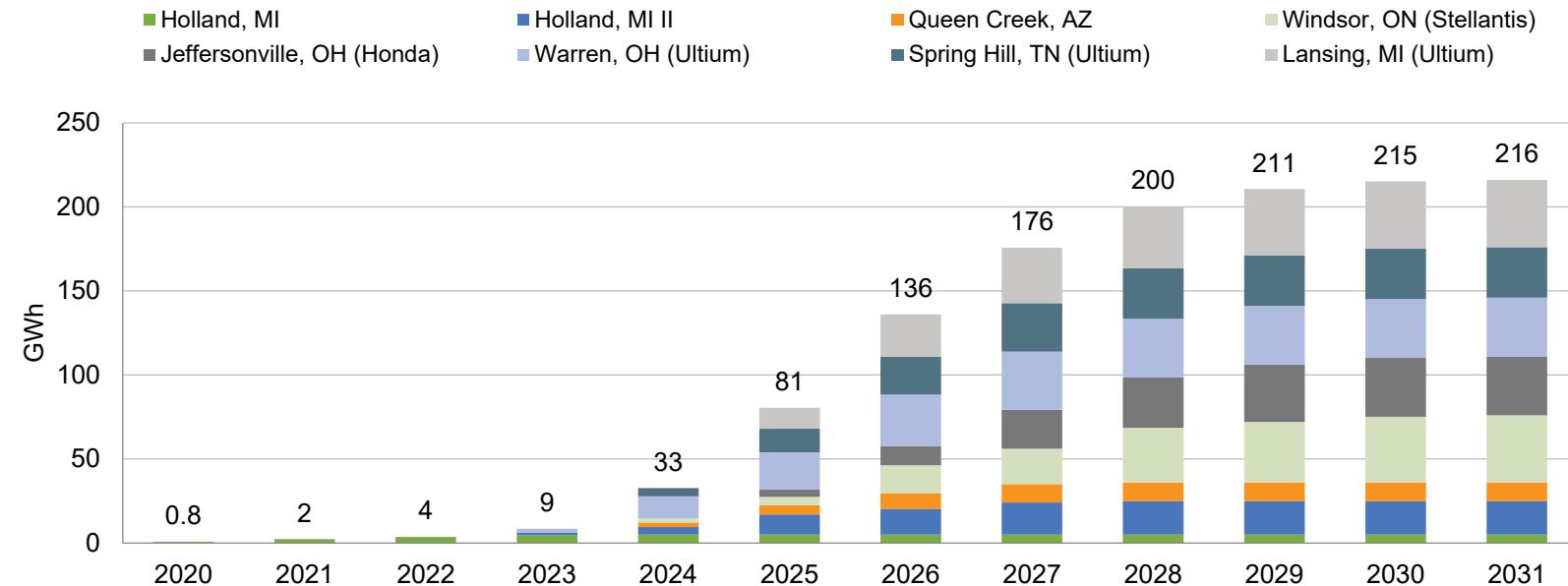


© E Source

North American Battery Manufacturing

LG ES and Ultium

LG ES North American Production Capacity Forecast



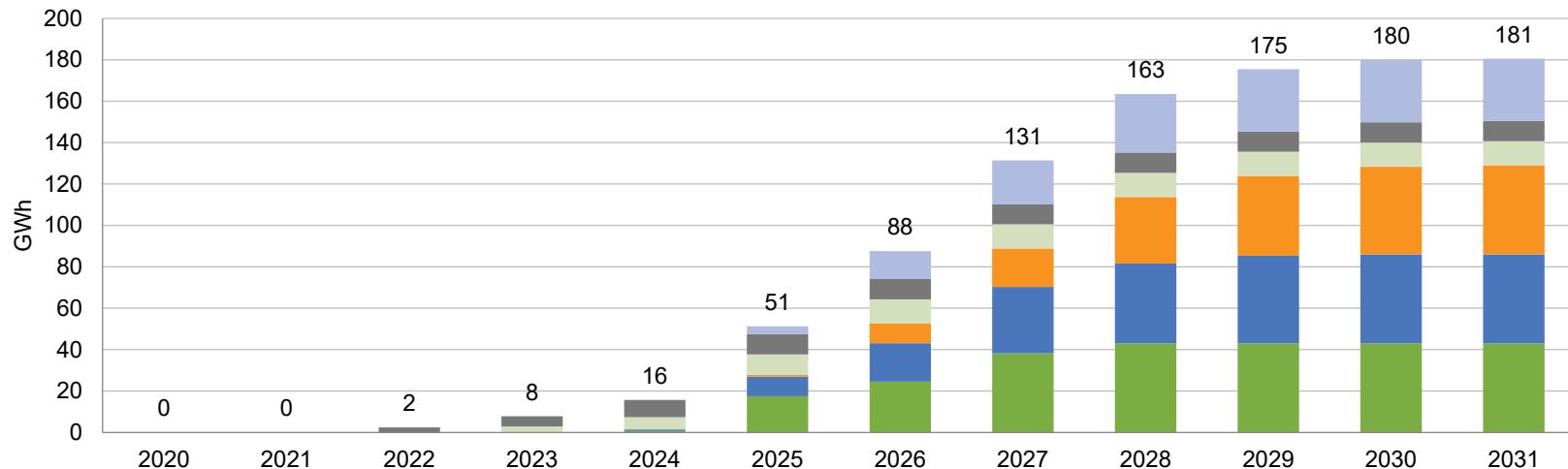
© E Source

North American Battery Manufacturing

SK On and SK Blue Oval

SK On North American Production Capacity Forecast

■ Stanton, TN (BlueOval SK)
■ Commerce, GA II
■ Glendale, KY I (BlueOval SK)
■ Commerce, GA I
■ Glendale, KY II (BlueOval SK)
■ Bartow County, GA



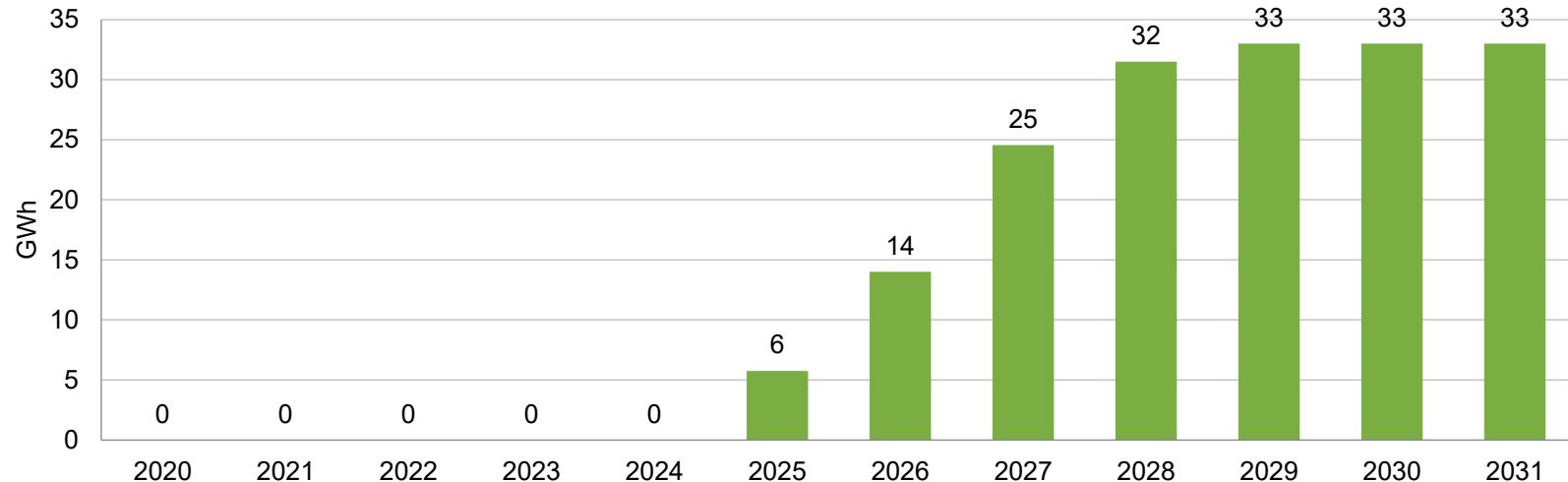
© E Source

North American Battery Manufacturing

Samsung SDI

Samsung SDI North American Production Capacity Forecast

■ Kokomo, IN (Stellantis)



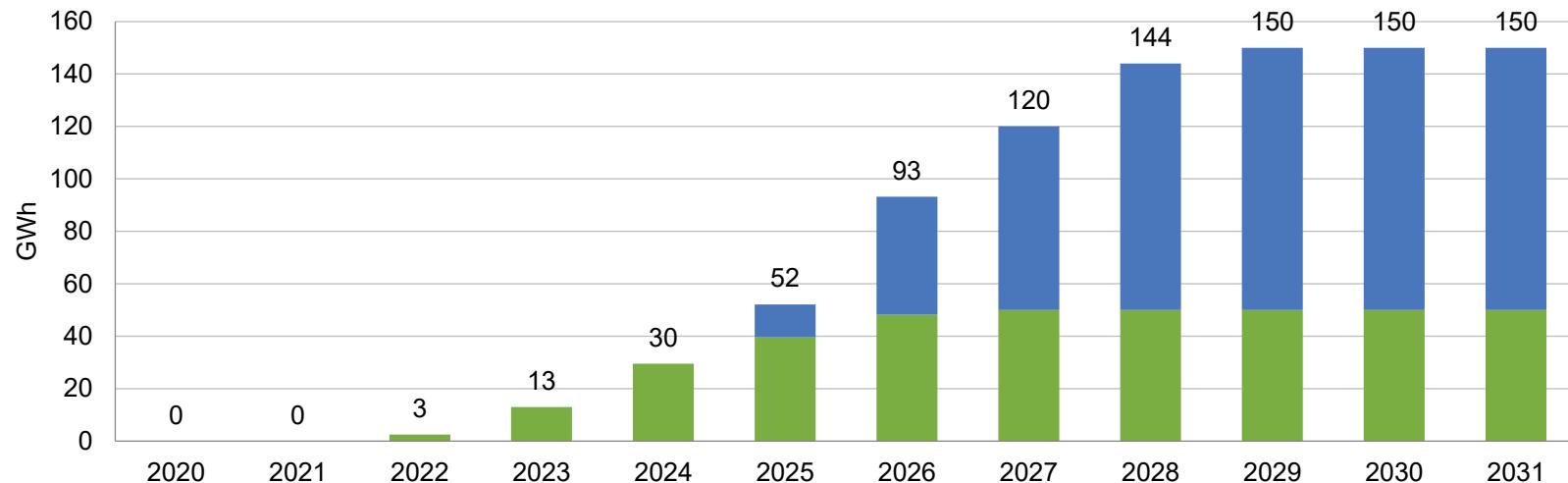
© E Source

North American Battery Manufacturing

Tesla

Tesla North American Production Capacity Forecast

■ Austin, TX ■ Sparks, NV



© E Source

North American Battery Manufacturing

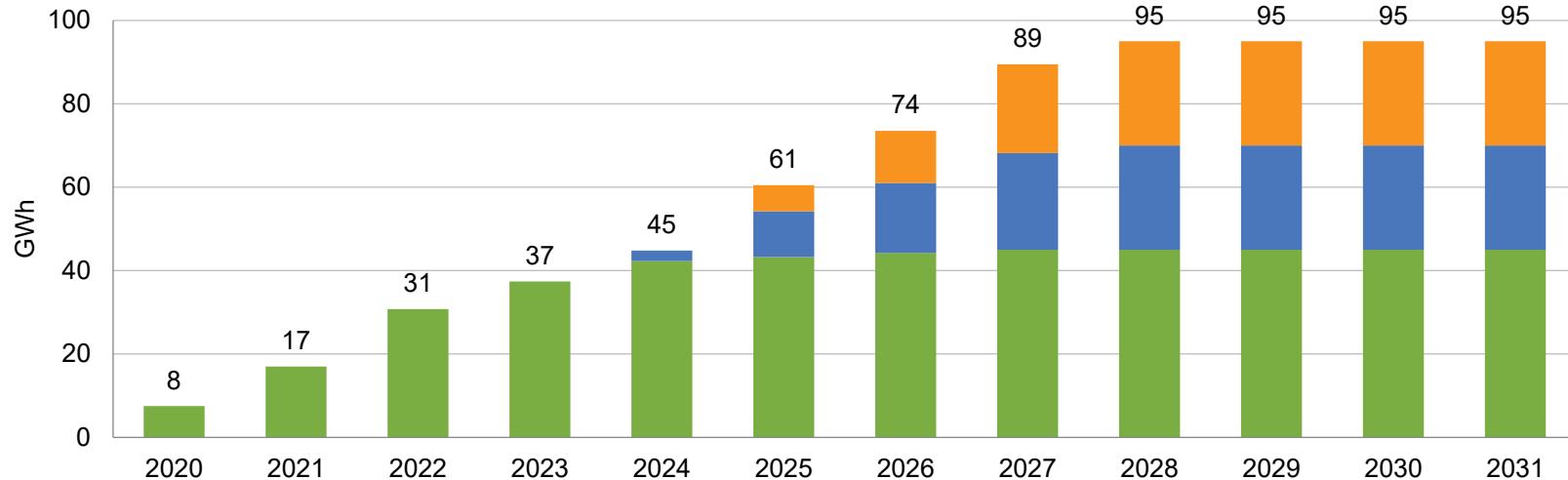
Panasonic

Panasonic North American Production Capacity Forecast

■ Sparks, NV

■ De Soto, KS

■ Oklahoma



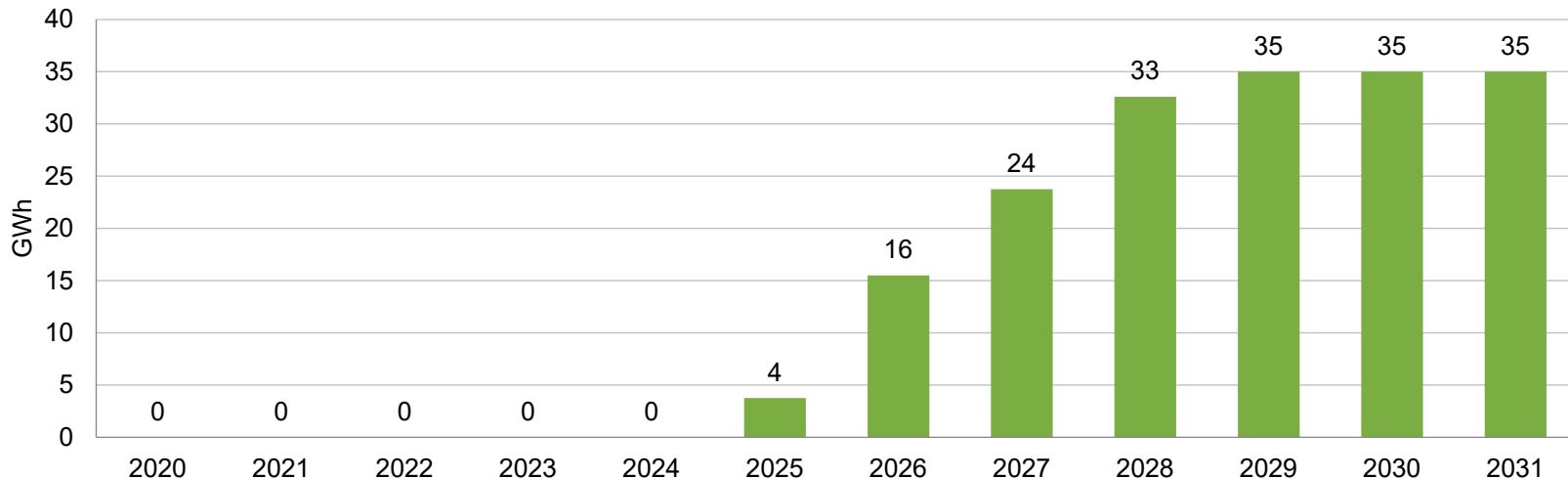
© E Source

North American Battery Manufacturing

Blue Oval Battery

BlueOval Battery North American Production Capacity Forecast

Marshall, MI

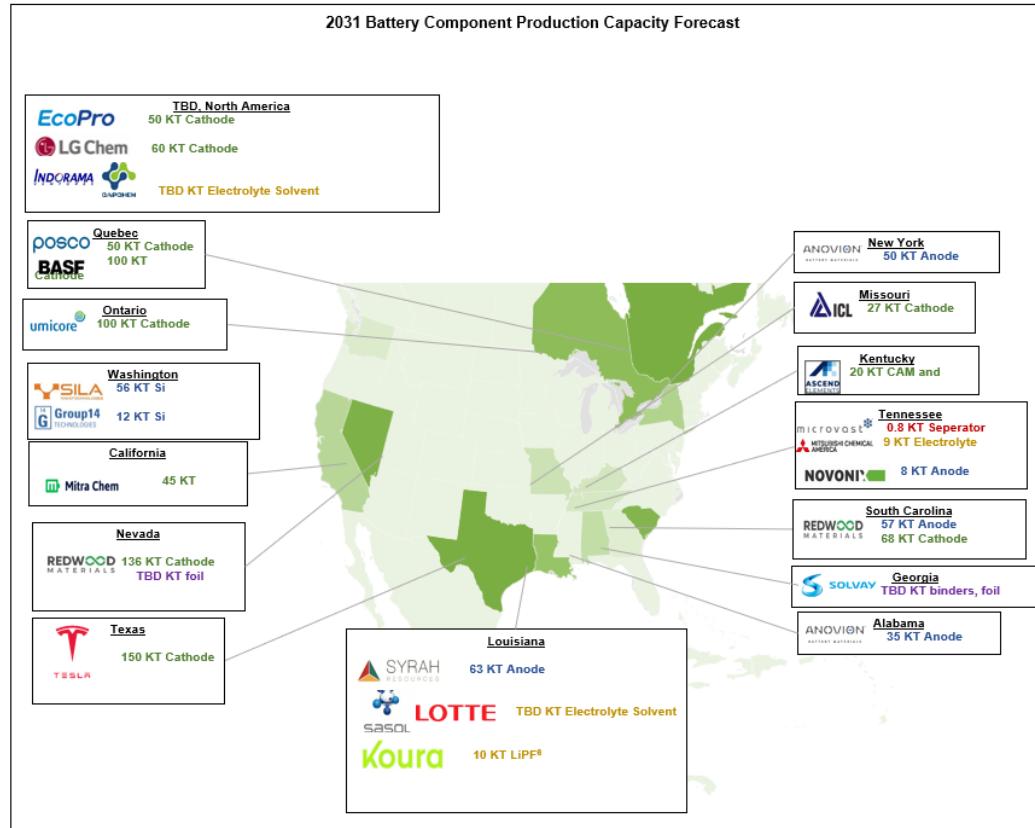


© E Source



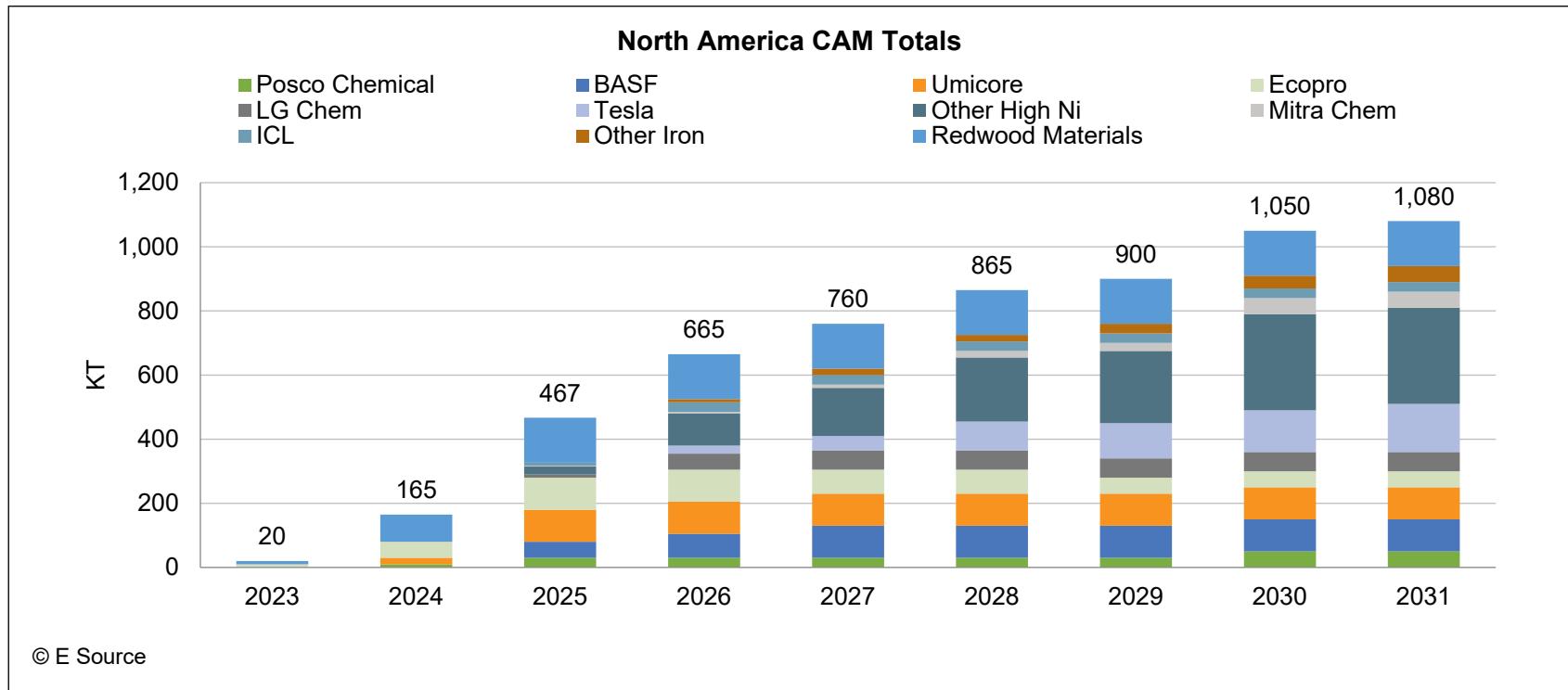
North American Cell Component Manufacturing

North American Cell Component Manufacturing



North American Cell Component Manufacturing

CAM Production Forecast



© E Source

Contact us



Sam Jaffe

Vice President, Battery Solutions

E Source

303-502-4001

sam_jaffe@esource.com

You're free to share this document inside your company. If you'd like to quote or use our material outside of your business, please contact us at esource@esource.com or 1-800-ESOURCE (1-800-376-8723).