

Battery Cell and Cell Component Manufacturing in North America

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NaatBatt 2023

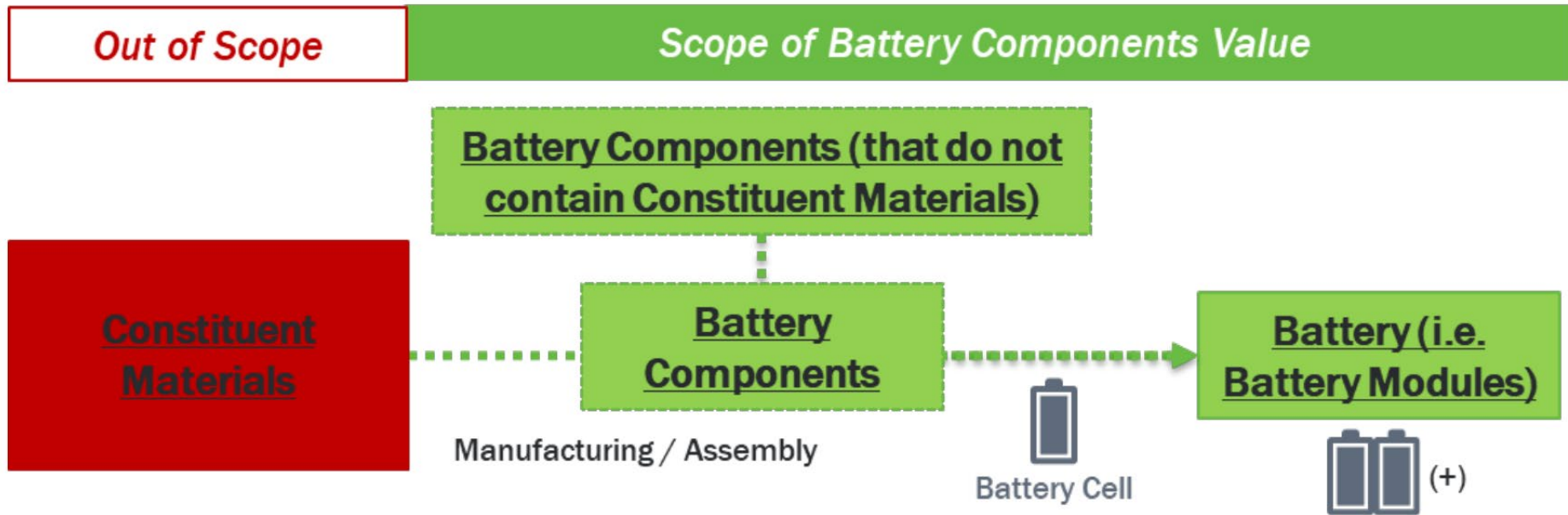


February 21, 2023


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

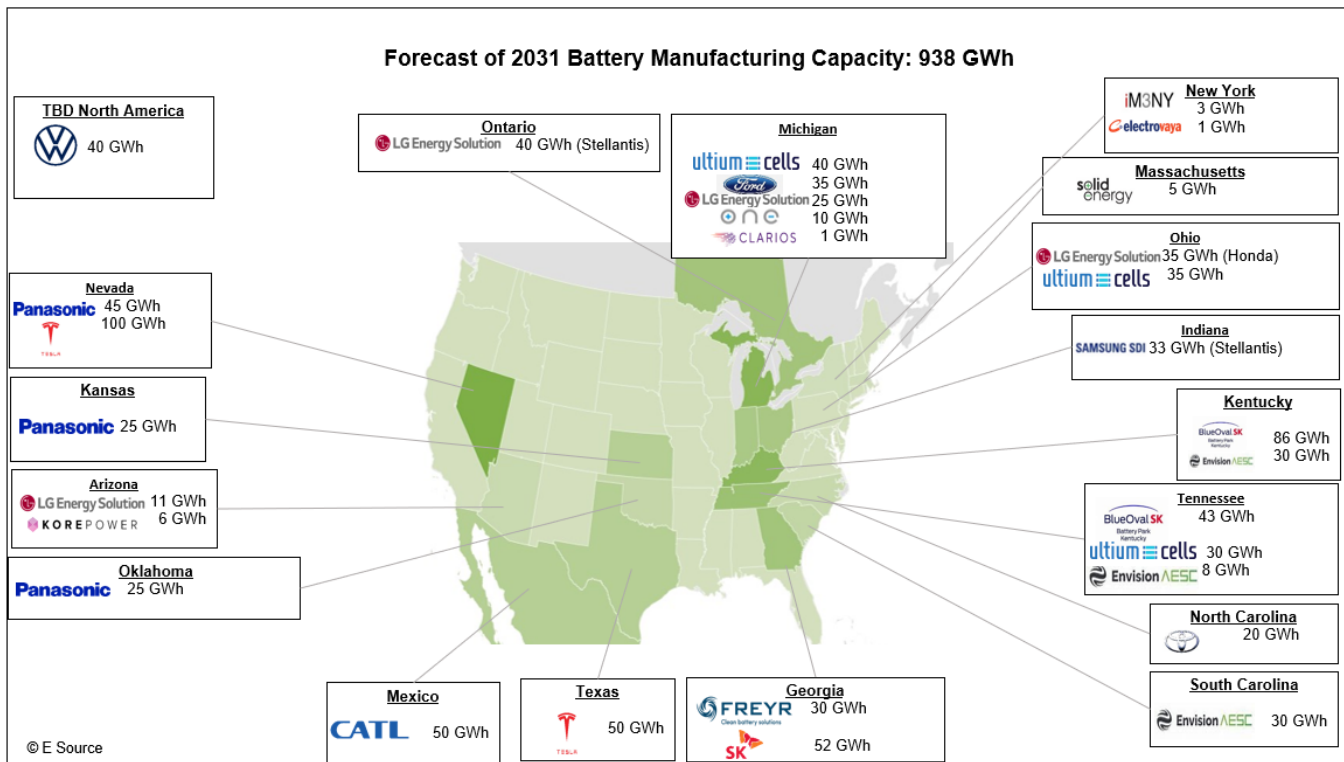


Under current IRS guidance, PCAM, processed graphite, electrolyte salt and solvents won't be covered by the component tax credit.

The background of the slide is a nighttime photograph of a city skyline. The top half shows a clear, dark blue sky. The bottom half shows a city with numerous lit-up buildings and a complex highway interchange with multiple overpasses and ramps, illuminated by streetlights and vehicle lights.

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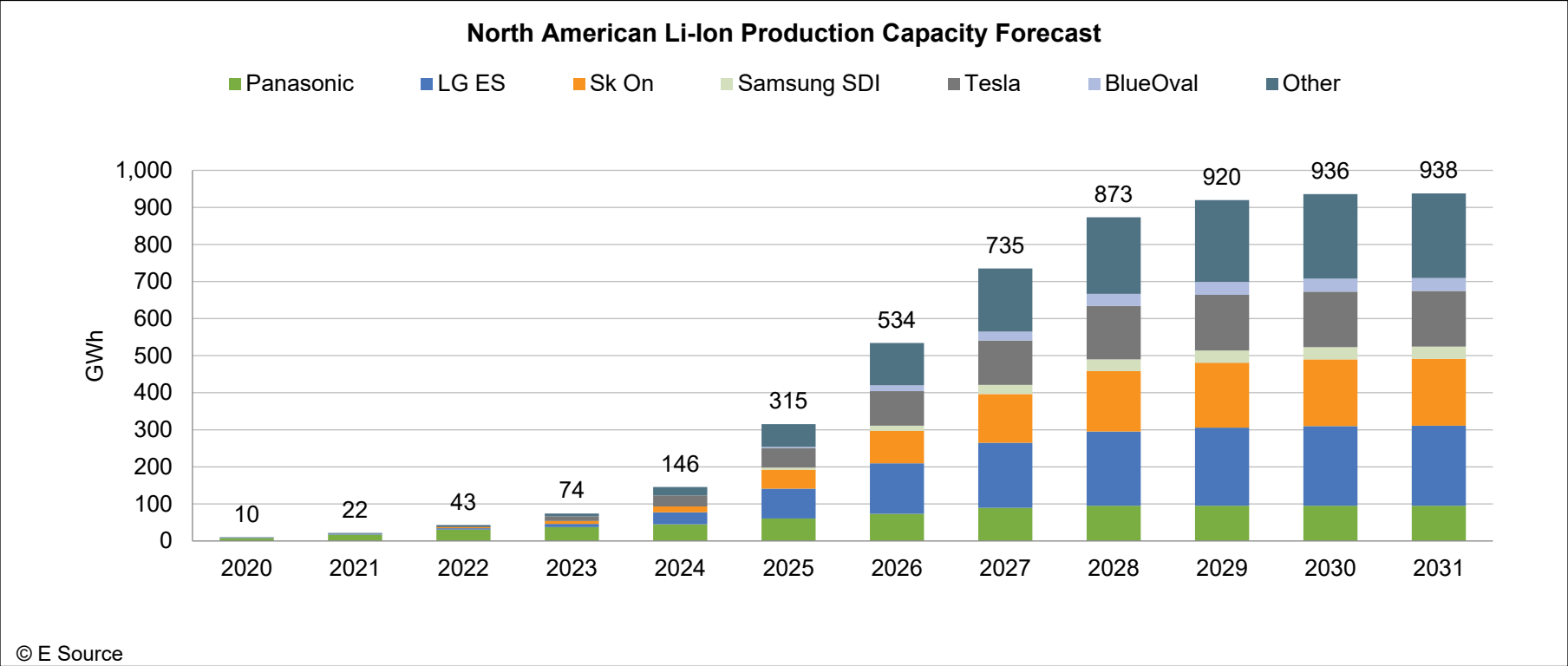
North American Battery Manufacturing



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

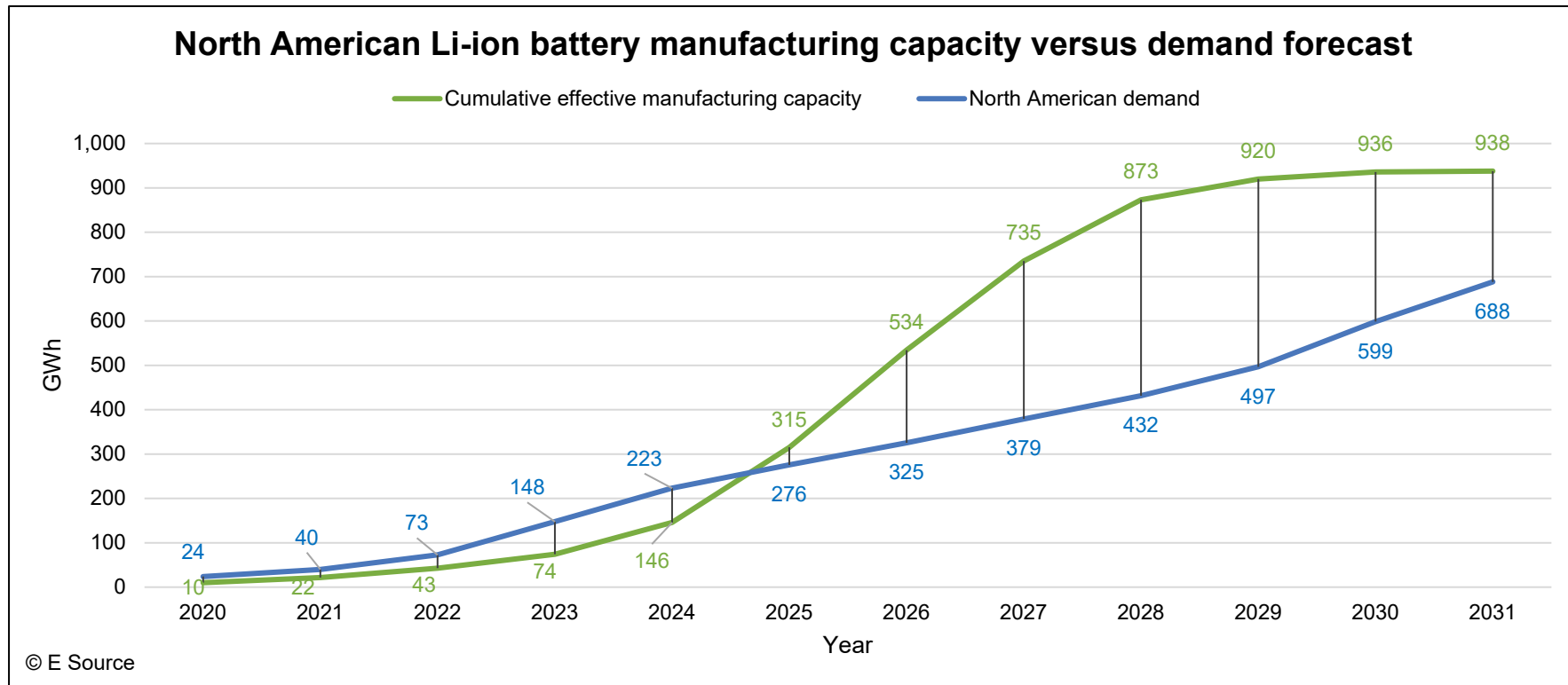
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Total Production Capacity Forecast



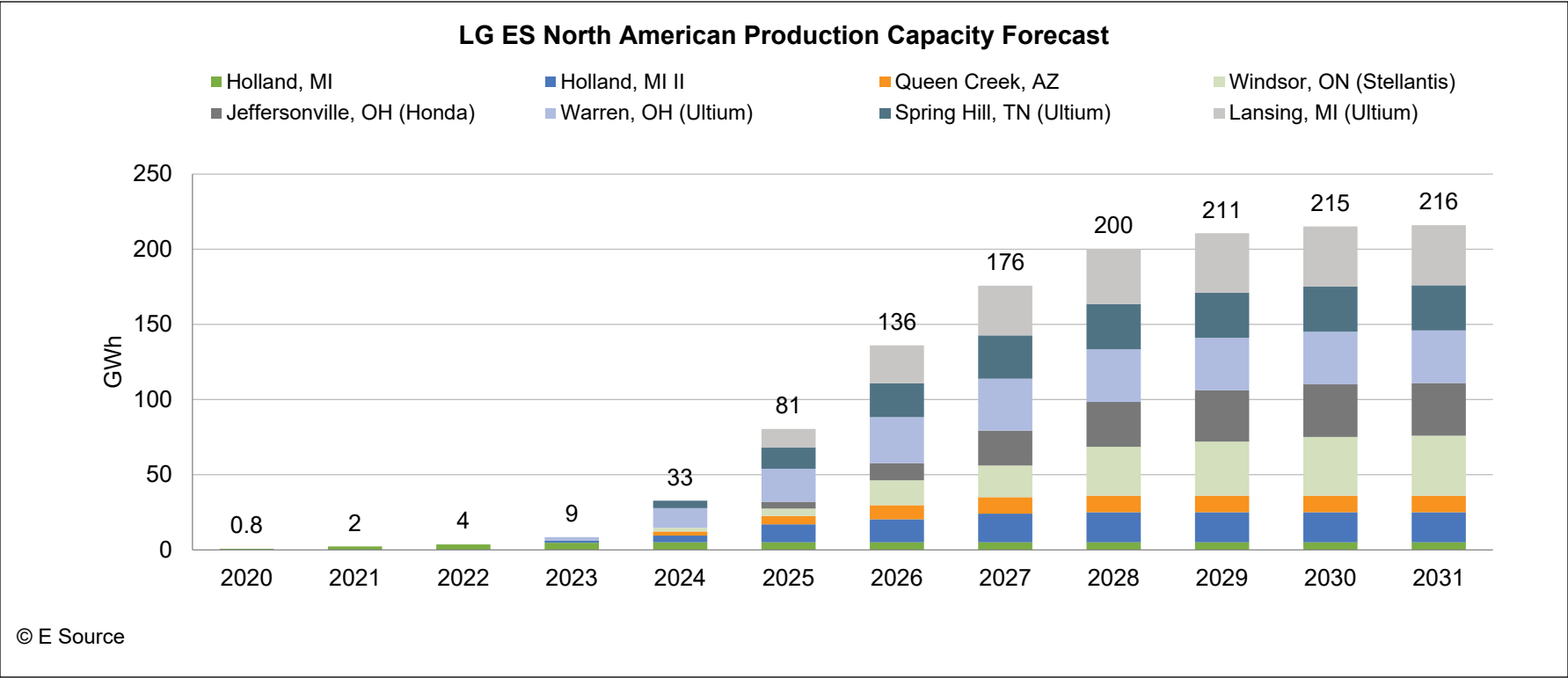
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Supply vs. Demand



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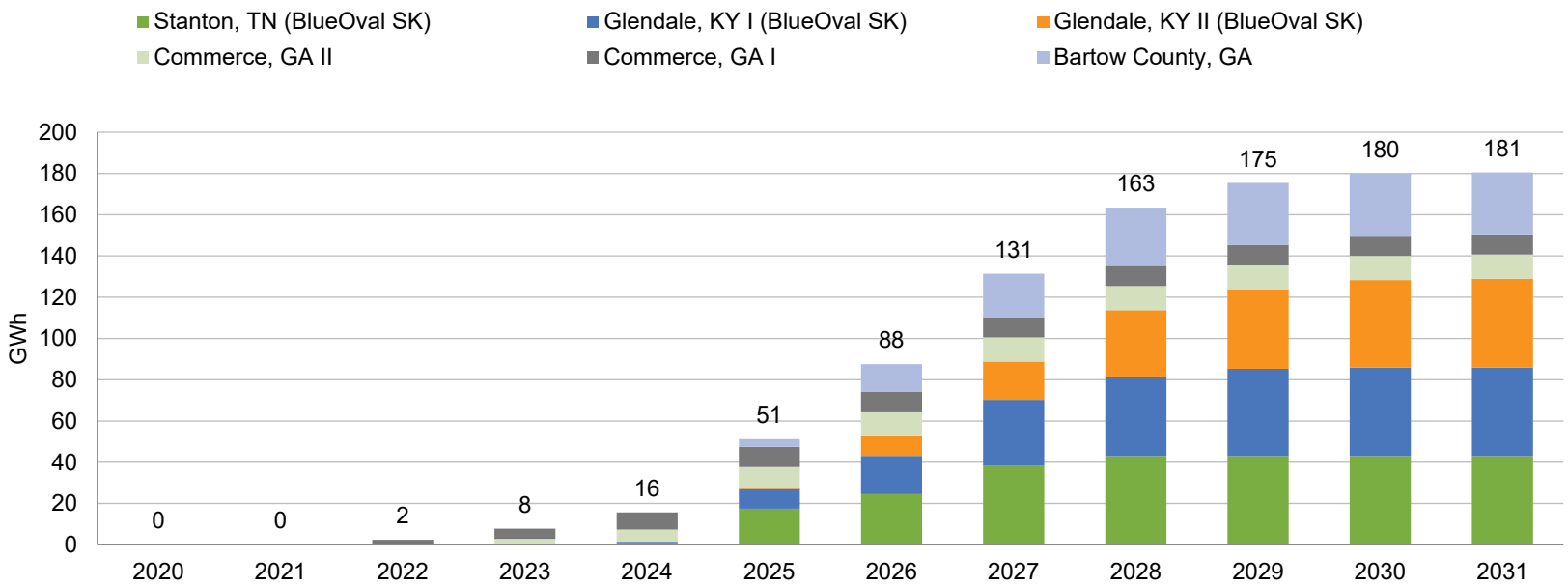
LG ES and Ultium



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SK On and SK Blue Oval

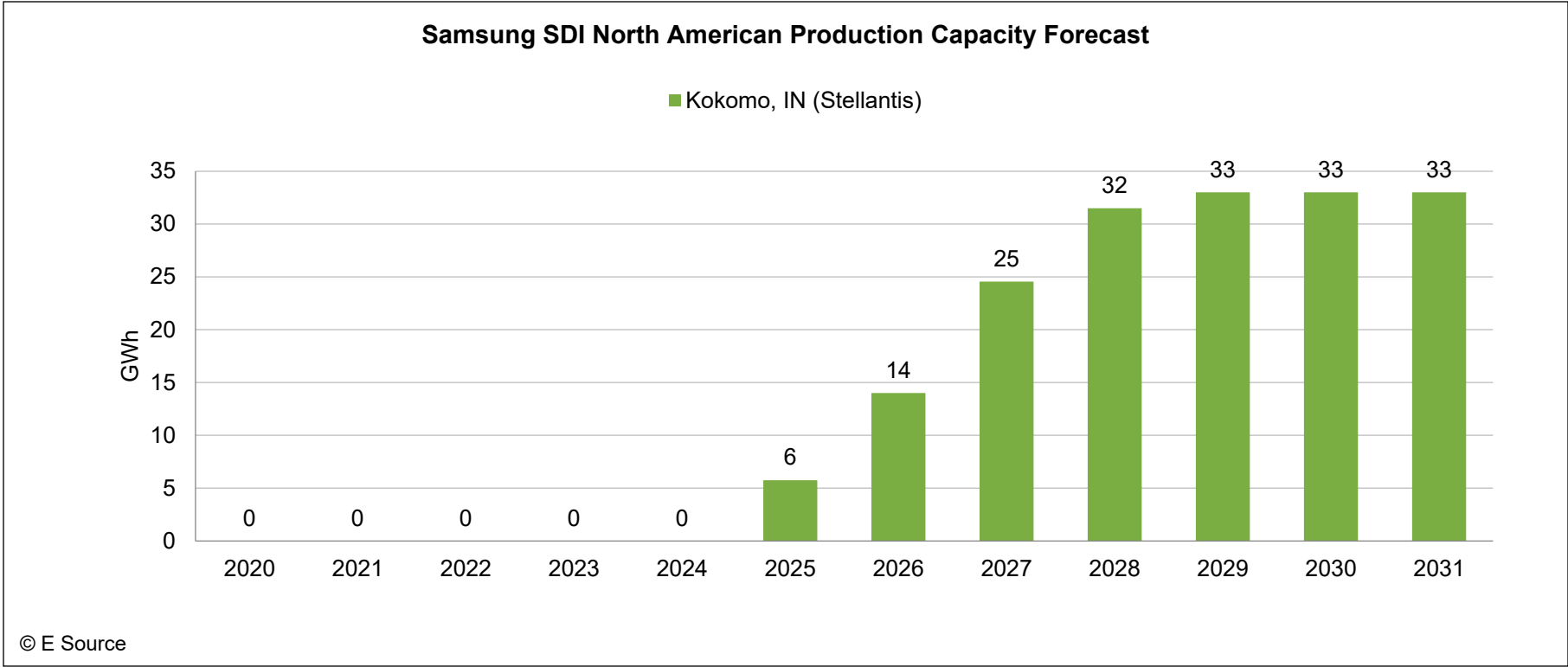
SK On North American Production Capacity Forecast



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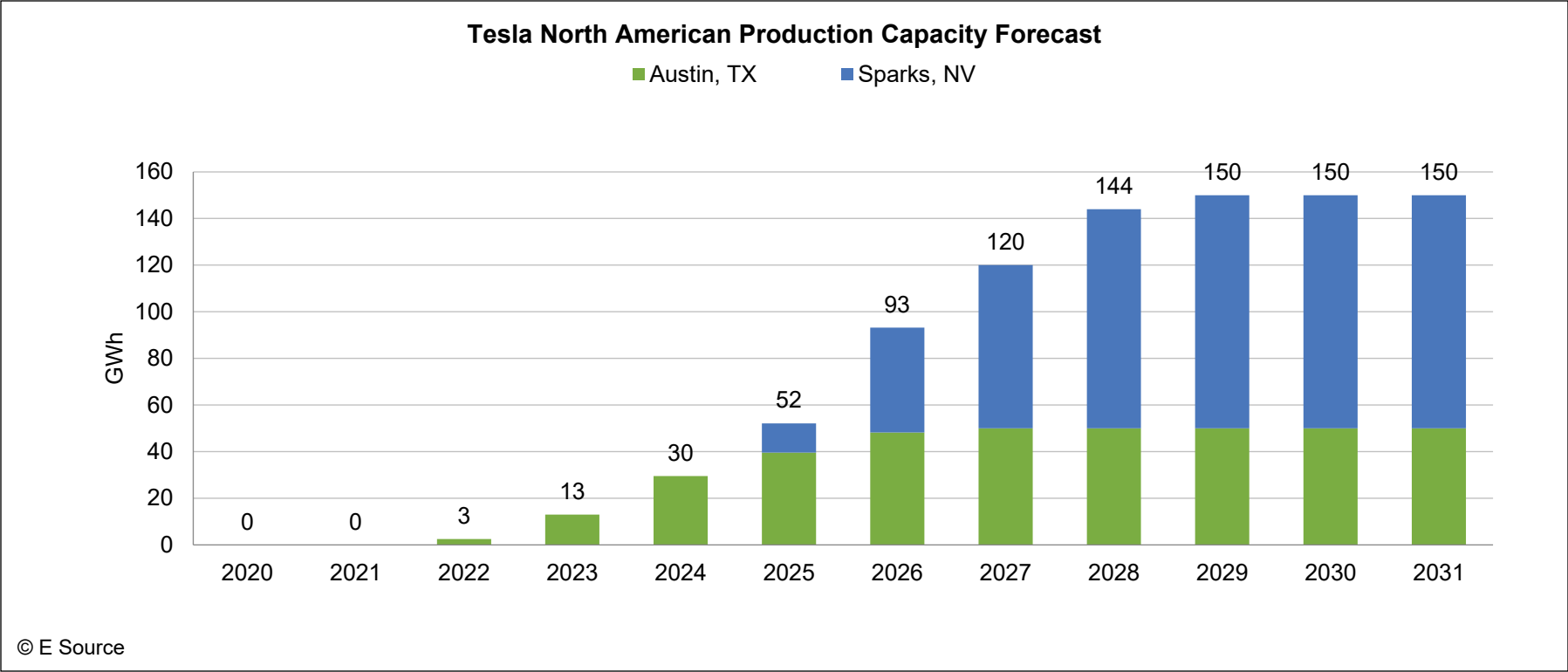
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Samsung SDI



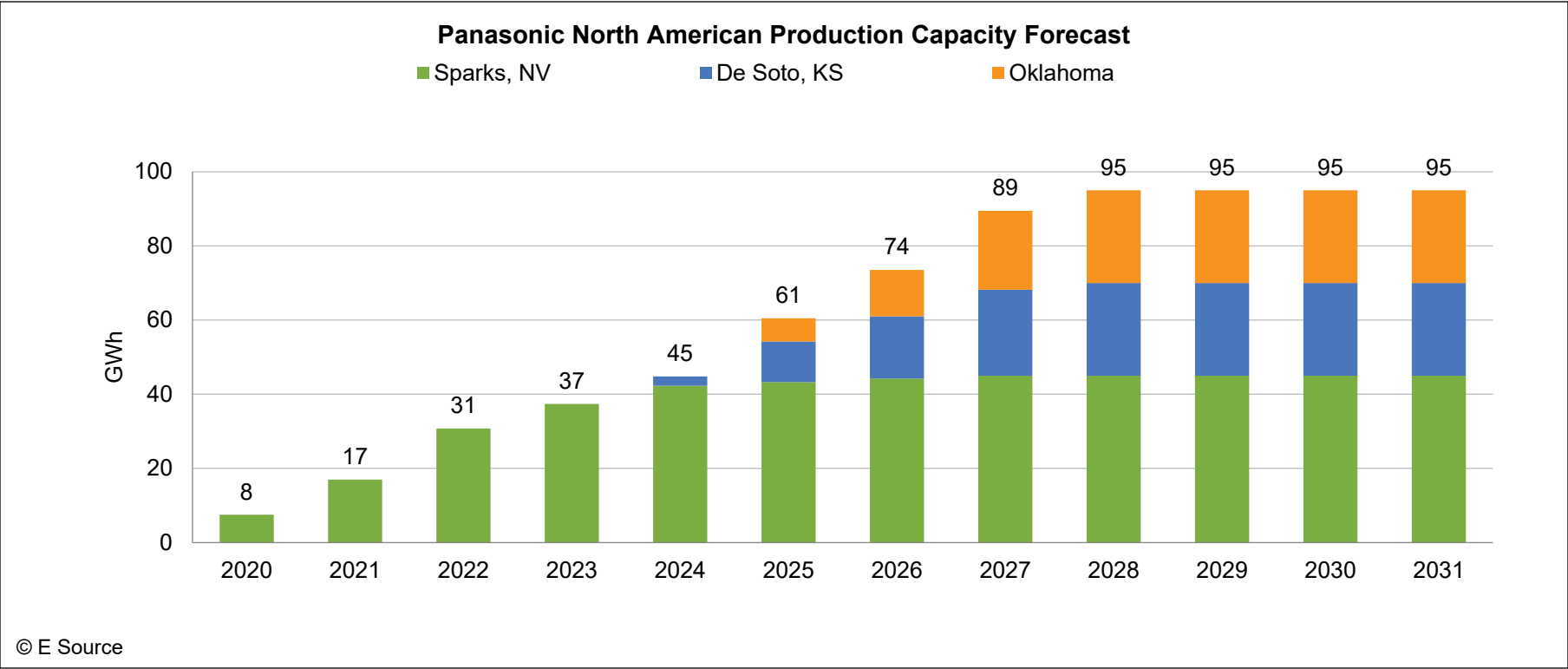
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Tesla



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Panasonic

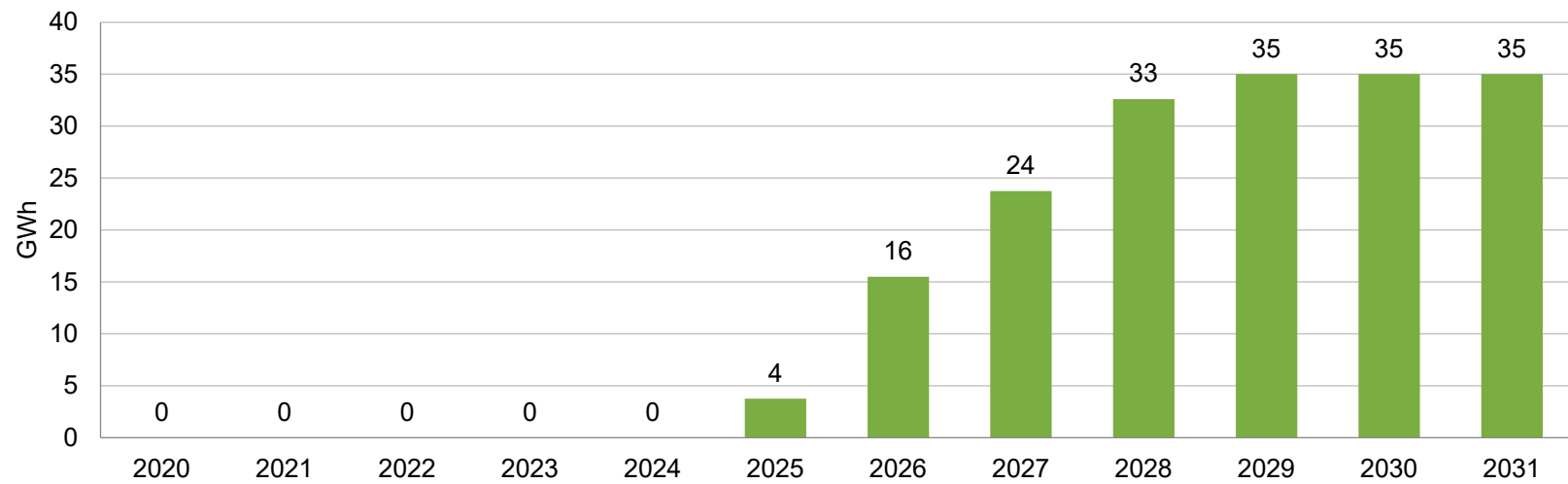


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Blue Oval Battery

BlueOval Battery North American Production Capacity Forecast

■ Marshall, MI

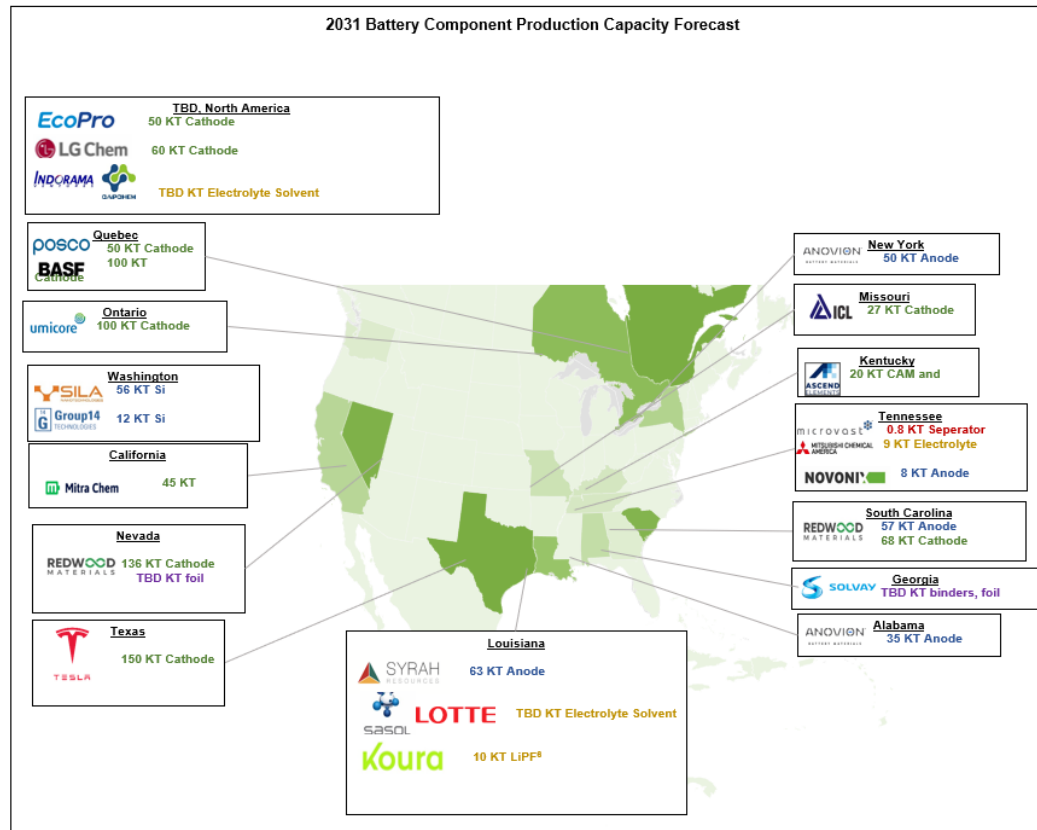


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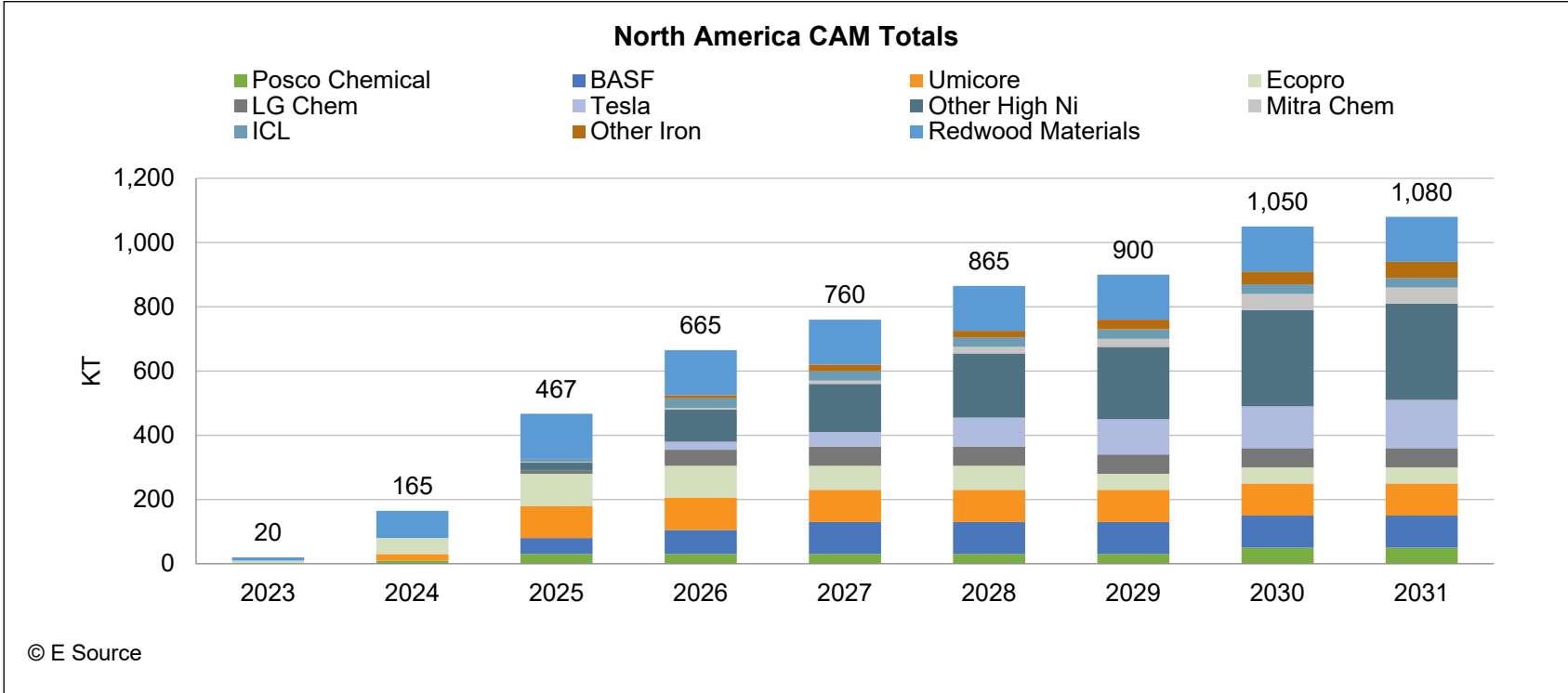
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CAM Production Forecast



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