

COATING AND CASTING ENERGY STORAGE PRODUCTS

Whether developing or manufacturing products for batteries, supercapacitors or fuel cells, Carestream can add value to your energy storage systems.

We combine our precision coating expertise with lab, small-scale pilot and production coater assets to reduce up-front investment costs and efficiently scale-up energy storage products to commercialization. We leverage our energy storage experience, partnership with Polaris Battery Labs and our established relationships with substrate and chemical suppliers to help customers overcome common roadblocks to commercializing their technology.

Energy Storage Coating and Casting Capabilities:

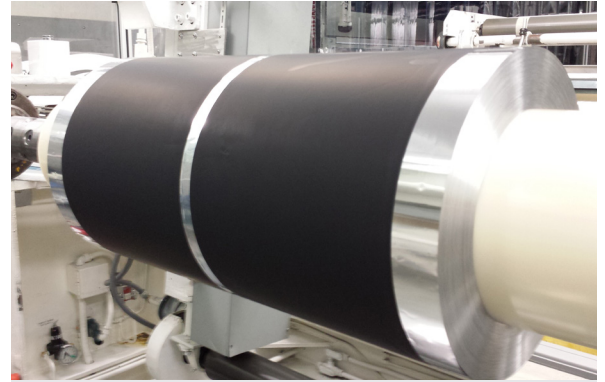
- Precision 2-side lane coating
- Multilayer coating – many discrete layers at a single application point
- Membrane casting
- On-site mixing of the slurries
- High viscosity particle filled slurries in NMP
- Thickness uniformity of $\pm 1\%$ to 5%
- Handling of thin foils
- Long ovens offering significant drying capacity
- Slitting
- Supply chain service to Asia
- Analytical, process and product development lab
- Small-scale pilot
- Lamination
- 100% automated optical inspection

Carestream Partnership Advantages:

- Proven ability to develop and manufacture high quality products at a massive scale for demanding markets
- Installed asset base and optimized infrastructure required to support it
- Ability to invest in development and scale-up
- Access to world class coating technology including multilayer coating
- Product development and commercialization expertise including design for manufacturability
- Protection of IP via formulation, mixing and coating processing in the United States
- Exceptional 6 Sigma / Lean Manufacturing quality system
- Benchmark supply chain and logistics (including existing routes into China)
- Experience with multiple applications in the energy storage market
- Partnership with Polaris Battery Labs, an industry-leading sample make and test lab

Custom Energy Storage Product Expertise:

- Casting electrode materials
- Casting and coating separators and membranes
- Primed foils for specific electrode chemistries
- Fuel cell membrane electrode assemblies (MEAs)



ABOUT CARESTREAM

Precision, Roll-to-Roll Contract Coating Services

Carestream builds on more than 100 years of precision coating leadership to develop a wide range of products for energy storage, display, medical, optical, electronic and other advanced materials applications. Customers leverage Carestream's aqueous and solvent coating expertise at bench, pilot and production-scale manufacturing for optimal product design, technology integration and support. Carestream also actively seeks growth partnerships, which combine customer product IP and market channels with its high speed roll-to-roll processing, quality systems and worldwide presence to bring new products through commercialization quickly and efficiently.

For more information, contact **Robert Wildman** at info@tollcoating.com to learn how Carestream can bring your energy storage products to commercial scale-up and manufacturing quantities.