

Lincoln Storm Limited Energy Efficiency Statement and Three-year Energy Efficiency Plan

Our Worle lithium-ion battery recycling plant is committed to increasing its energy efficiency and reducing its environmental impact over the next three years. By optimizing our processes, investing in advanced technologies, and implementing best practices, we aim to improve our 98% recovery rate (production of Storm Black, copper, aluminum, and polymer from recycled lithium-ion batteries). This plan outlines the key steps and milestones we will take to reach our energy efficiency goals and contribute to a more sustainable future.

Three-Year Energy Efficiency Plan

Year 1: Assessment and Optimisation

1. **Energy audit:** Conduct a comprehensive energy audit of the entire facility to identify areas of energy inefficiency, energy losses, and opportunities for improvement. The audit will cover all aspects of the plant, including building envelope, lighting, heating, ventilation, air conditioning, and diesel-generator performance.
2. **Process optimisation:** Analyse our current recycling processes and identify opportunities to improve efficiency and reduce energy consumption. This could include implementing more efficient sorting and shredding techniques, optimizing furnace temperatures, or modifying the hydrometallurgical process.
3. **Diesel generator efficiency:** Evaluate the performance of our diesel generators and identify opportunities for improvement, such as regular maintenance, upgrading to more energy-efficient models, or incorporating waste heat recovery systems.
4. **Employee training:** Provide training and resources to employees on energy-saving practices and the importance of energy efficiency.

Year 2: Implementation and Investment

5. **Retrofitting:** Implement energy-saving measures identified during the energy audit, such as installing energy-efficient lighting, insulating the building envelope, and upgrading heating, ventilation, and air conditioning systems.
6. **Invest in advanced recycling technologies:** Invest in innovative recycling technologies that can help improve the recovery rate and energy efficiency of the process, such as advances to our shredding and separation methods.
7. **On-site renewable energy:** Explore the feasibility of integrating renewable energy sources, such as solar panels or wind turbines, to supplement the diesel generators and reduce overall diesel consumption.
8. **Harness discharge:** pilot the generation of energy from the discharge of partially charged modules.
9. **Monitor and evaluate progress:** Continuously monitor energy consumption and efficiency improvements to track progress towards our goals.

Year 3: Expansion and Continuous Improvement

9. **Expand recycling capacity:** With more efficient processes in place, consider expanding the plant's recycling capacity to process a higher volume of lithium-ion batteries, further increasing the recovery of valuable materials.
10. **Review and update the plan:** Regularly review the energy efficiency plan to ensure that it remains up-to-date with the latest technologies and best practices. Incorporate new findings and insights to continuously improve the plant's energy performance.
11. **Share best practices:** Collaborate with other recycling facilities and industry partners to share best practices, exchange ideas, and encourage the adoption of energy-efficient technologies across the lithium-ion battery recycling sector.

By following this three-year energy efficiency plan, our diesel-powered lithium-ion battery recycling plant will significantly improve its energy performance, reduce its environmental impact, and contribute to a more sustainable and circular economy.