

CASE STUDY

# Increasing Revenue through Demand Response



**CLIENT:** Alcoa

**INDUSTRY:** Aluminum Manufacturing

**LOCATION:** New York

**KEY POINTS OF INTEREST:**



Cost Reduction & Revenue Generation



\$10 Million + Since 2021



10-Min Spinning Reserves



Installed Capacity - Special Case Resource



Automated curtailment

## OVERVIEW

Alcoa, a major aluminum producer, has a longstanding commitment to efficiency and cost savings in its power-intensive aluminum smelting operations. Since partnering with Rodan Energy Solutions, Alcoa has achieved a new level of success in New York's demand response (DR) programs. Together, they have improved Alcoa's grid participation, optimized operations, and realized substantial energy cost earnings. For over 20 years, Alcoa has been participating in DR programs, helping to stabilize the grid and offset energy costs.

## CHALLENGES

Alcoa's aluminum smelting process is energy intensive, leading to high energy costs. One of the primary objectives of all metal manufacturing facilities is to reduce their DCkWh rate per kg produced. In addition, due to their energy demand to operate the plant, Alcoa Massena is one of the largest users of energy in the state, so proper energy management is crucial. As a dedicated participant in NYISO's demand response programs, Alcoa needed a reliable DR partner to help manage costs, reduce energy consumption, and contribute to grid stability. Improving the grid and helping the community is crucial as Mitch, the Power and Energy Manager, noted: "When the NYISO has the need to prevent brownouts and blackouts, we certainly understand and will participate every time we're called upon for the stability of the grid."

## SOLUTION

Rodan Energy provides Alcoa with access to New York's demand response programs, including DSASP – the fast response program, and SCR – the state-wide capacity program. This comprehensive strategy leverages Alcoa's capabilities and Rodan's expertise, allowing for maximized potential.

### IMPLEMENTATION:

To participate in these DR programs and meet their targets, Alcoa utilizes the curtailment of its potlines, where energy demands are highest. By combining automation and manual curtailment, Alcoa can consistently exceed its goals for the programs it takes advantage of today.

- **10-Minute Spinning Reserve (DSASP):** During events, Rodan sends automated signals that Alcoa's system interprets to reduce pot room power within seconds.
- **SCR (Special Case Resources):** Alcoa manually curtails power during scheduled DR events, typically reducing 55 MW over a four-hour block.

### BENEFITS:

*Being able to rely on Rodan Energy and deliver results is crucial for Alcoa. "Rodan has consistently delivered excellent customer service. The revenue split is outstanding, payments are always timely, and they're highly responsive to any technical issues. It's been a game-changer for us," said Mitch*

Participating in these programs through Rodan Energy provides several unique benefits:

- 1. Increased Earnings:** Rodan works to maximize the earning potential of Alcoa through its revenue-sharing agreement and amplifies Alcoa's capability, resulting in higher returns.
- 2. Excellent Customer Service:** Alcoa appreciates and relies upon Rodan Energy's excellent customer service, with timely payments, quick response times, and prompt data delivery during and after DR events.
- 3. Automated DR Control:** For participation in the 10-Min Spinning Reserve program, automated curtailment through Alcoa's SCADA platform reduces the operational burden on Alcoa's team, enabling real-time response to NYISO's grid needs.

## RESULTS:



**\$10 MILLION +:**  
Enhanced revenue with over \$10M earned since 2021.



**OPERATIONAL EFFICIENCY:**  
A combination of manual and automated curtailment allows them to meet goals with minimal disruption.



**FUTURE EXPANSION:**  
Continual investments to increase participation and reduce costs.

*"Our experience with Rodan Energy has been the best of any third-party provider we've partnered with during our 20 years in the demand response market. The service, support, and financial returns have exceeded our expectations."*

*Mitch Nemier,  
Power and Energy Manager  
Alcoa's Massena Facility*

To see how your organization can increase revenue, effectively manage your energy consumption, and automate participation, reach out to Rodan Energy today to get started!

Email: [connect@rodanenergy.com](mailto:connect@rodanenergy.com) to schedule your free assessment today!