



# Mack Engineering

## Minneapolis, Minnesota

### Project background

Mack Engineering is a “job shop” that manufactures precision machined parts for the OEM market. Mack Engineering contacted Energy Intelligence because they wanted to better understand their energy use, find ways to save money, and improve their operations.

### Understanding daily energy use

Energy Intelligence staff installed a pulse output board on the electric meter at Mack Engineering to allow the visualization of daily electric data in 15 minute intervals, showing how their electrical demand changes throughout the day. Staff also performed a walkthrough with the team at Mack Engineering to understand their process and identify the major electricity end uses. They followed up with a discussion of potential energy savings opportunities and confirmed the best practices already in place.

### Savings

Energy Intelligence analyzed several weeks of data before presenting potential energy savings opportunities. Mack Engineering took three key actions to start saving energy right away: reducing the overnight baseload; aligning the morning start up of equipment with business operations; and turning off idle equipment during production hours.

After a week of testing, Mack Engineering permanently implemented all three measures at a cost of less than \$1,000. The result was a reduction in annual electric costs equal to one monthly bill and a payback of less than six weeks.



**“We saved 20%  
on utilities in 2016  
over 2015!”**

*- Jackie Salisbury, owner*

### Annual savings potential

Switch to smaller compressor overnight	20,000 kWh; 2% reduction in electric bill
New policy: Turn off equipment when not needed	78,000 kWh; 7% reduction in electric bill
Adjust morning equipment start by 45 minutes	3,300 kWh; <1% reduction in electric bill
<b>Total</b>	<b>91,300 kWh; 9% reduction in electric bill</b>

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