



# Equipment Design & Engineering

The combination of targeted capital improvements and engineering design helps companies achieve durable, quantifiable emissions reductions while improving system reliability and reducing long-term operating costs.

“By maximizing engineered energy efficiency applications, you can empower your organization to establish economic certainty while achieving your sustainability goals.”

– Trio, Energy Optimization

## Highlights

Payback Potential: **Medium**

Implementation Complexity: **Medium**

Key Stakeholders: Engineering Mgrs. and Facilities Mgrs.

GHG Reduction Potential: **Medium**

GHG Scopes Reduced: Scopes 1 & 2

## Progress toward these Honda Scorecard Requirements

- Reduce emissions 5.7% annually
- Reduce emissions by 34% by 2030
- Achieve carbon neutrality



## How this drives GHG reductions

Equipment upgrades and system-level improvements can deliver substantial emissions reductions by replacing outdated, energy-intensive equipment with high-performance technologies. When paired with engineering analyses, such as right-sizing equipment and refining system design, upgrades ensure assets operate at peak efficiency throughout their lifecycle.

## Where to start

Use focused engineering studies and life-cycle maintenance assessments to identify opportunities for system redesign, modernization, and upgrades that strengthen overall facility energy performance.

Create a holistic strategy based on carbon reduction targets and other business goals, including consideration of incentives, load forecasting, and financial impact modeling. Pursue the most impactful upgrades and schedule engineering reviews to optimize system design.

## Project examples

- Boiler and chiller upgrades
- Waste heat capture and utilization
- High-efficiency compressors, fans, motors and drives
- Life-cycle maintenance specifications for new equipment efficiency
- Advanced HVAC and heat pumps
- Improved insulation and thermal management



## Resources to guide you

[SP Energy Optimization Playbook](#): This playbook provides practical guidance for identifying, prioritizing, and implementing energy performance improvements across manufacturing facilities. By offering a clear, step-by-step framework, this resource can help organizations strengthen energy performance while supporting broader sustainability goals.