

40% REDUCTION IN ENERGY COSTS AT METAL PRODUCTION COMPANY

The largest ferroalloy manufacturer in Russia requested the RUSEFF experts to assess energy efficiency potential within the company.

During the energy assessment the experts discovered a number of energy saving opportunities and made the following recommendations:

Replace outdated air compressors with new higher efficiency models to reduce energy costs by around 40%.

Install variable speed drivers to regulate several motors resulting in reduced electricity consumption.

Reconstruct and insulate the hot water pipes.

Regulate the electric furnace with a control system to allow a more flexible operation further reducing energy costs.

The proposed investment of USD 1.0m will result in annual savings of USD 243 000, a payback period of 3.5 years and an overall return on investment in terms of energy savings of 24.7%.



Company

Economic sector	Metallurgy - manufacturing of ferroalloys.
Region	Sverdlovsk

Project Goal and Main Investment

Project goals	<ul style="list-style-type: none"> Reduction of energy costs
Main investments	<ul style="list-style-type: none"> Equipment: air compressors Variable speed drivers Furnace control Reconstruction of the hot water pipes
Investment size	USD 1 000 000

Results

Project Results	<ul style="list-style-type: none"> Energy savings equivalent to 12 795 MWh per year Energy savings: 15.1 kWh per USD invested Emission reduction equivalent to more than 2 000 tonnes CO₂ per year
Financial viability	<ul style="list-style-type: none"> Annual cost savings: USD 243 000 Payback period: 3.5 years IRR: 24.7 %



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