



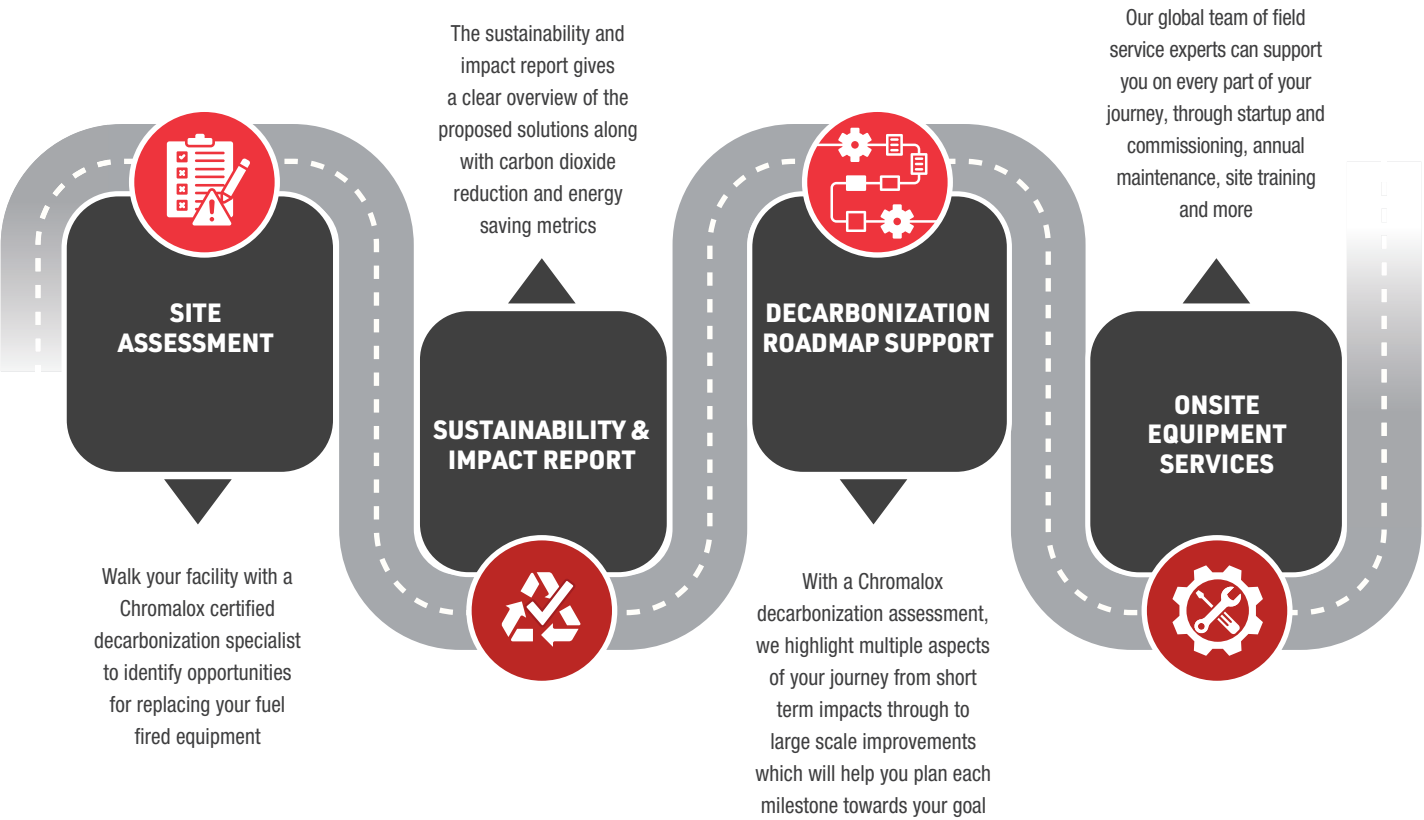
# **DECARBONIZATION ASSESSMENT**

**SUPPORTING YOUR JOURNEY TO NET ZERO**



# SUPPORTING YOUR JOURNEY TO NET ZERO

With Chromalox’s Decarbonization Assessment program, we give you the tools and solutions to achieve your sustainability goals every step of the way, from site assessments and impact reports, heater and control design and fabrication, to onsite services and support.



## REDUCE SCOPE 1 & 2 EMISSIONS

Understand your path to eliminate direct and indirect emissions at your facility with a Chromalox decarbonization assessment



# NET ZERO MODEL

At Chromalox, we are committed to engineering a more sustainable world for our customers. That is why we apply our eMission Zero model to every Decarbonization Assessment we conduct.

## DECENTRALIZE

Chromalox can identify alternative solutions to take burden off of your central equipment by placing the heat directly where it is needed. Our comprehensive portfolio of solutions cover point-of-use steam generators, tank heaters, heat transfer systems, process air heaters, comfort heaters and more. By looking at alternative ways to heat your process you will not only reduce demand on your combustion equipment to reduce emissions, but you will increase efficiency by reducing transfer losses from the source to the user.

## OPTIMIZE

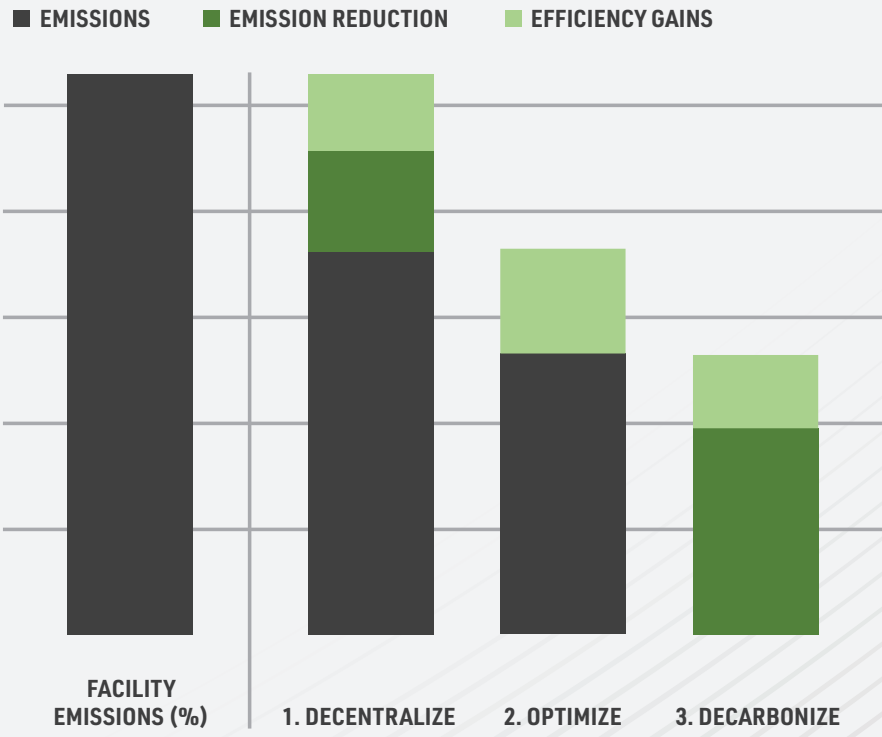
Chromalox, with Spirax Sarco, can optimize your steam system to reduce inefficiencies, waste, excess maintenance costs and overall poor performance. Through solutions such as steam superheaters and heat tracing systems, you can mitigate heat losses or boost your steam quality to keep your process running effectively and efficiently.

## DECARBONIZE

Chromalox DirectConnect™ medium voltage technology is an ideal way to address large central combustion systems where conventional electric systems may not have been viable. DirectConnect™ steam and process heating systems greatly reduces the amperage drawn by the system which effectively reduces infrastructure and wiring, reduces losses, and simplifies your installation.



## SUSTAINABILITY OPPORTUNITIES

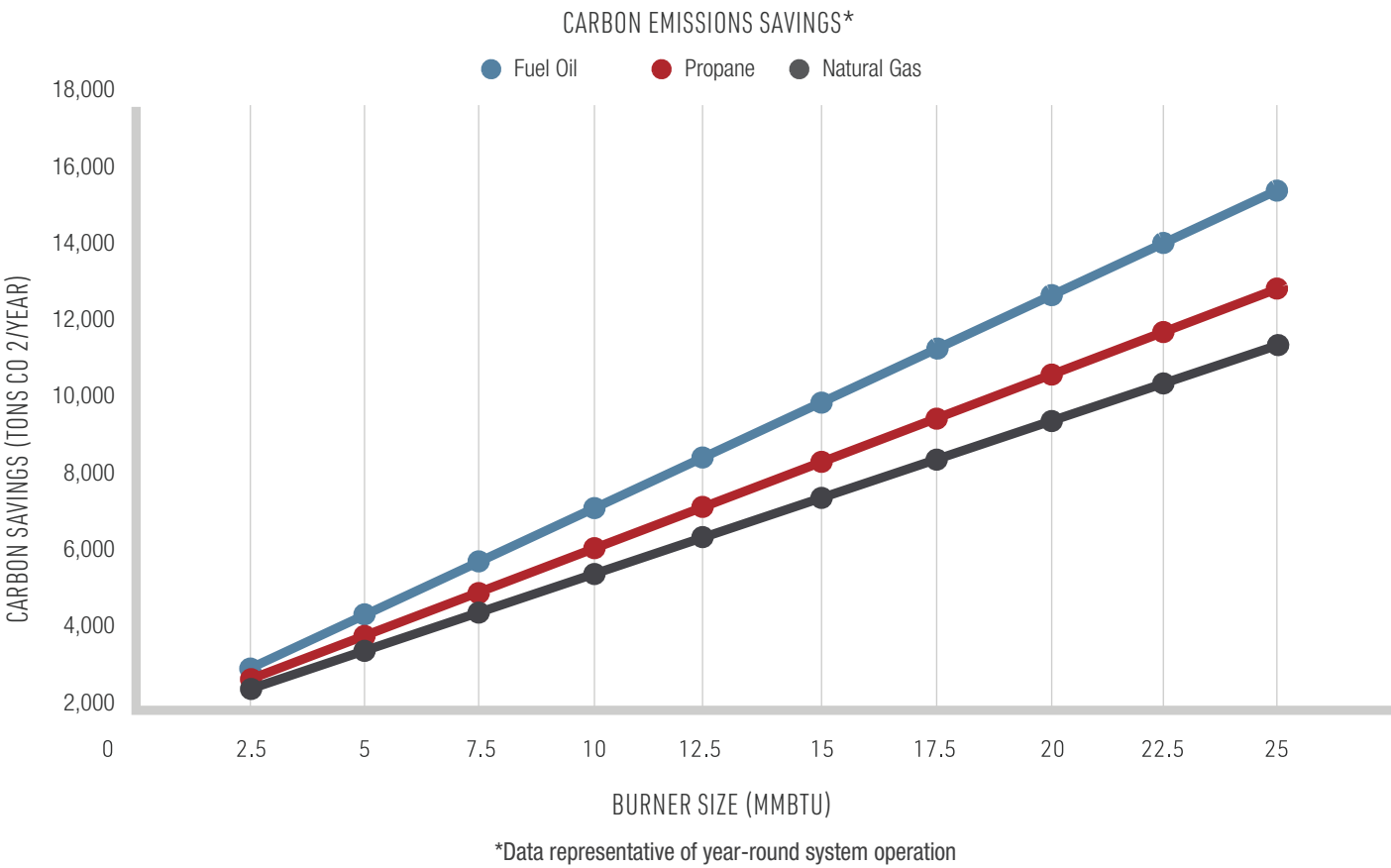


# TAKE THE LEAD ON SUSTAINABILITY

The demands to prove you're taking action on sustainability increase every day; but where to start? Helping to solve that puzzle is the Chromalox Decarbonization Assessment, a detailed look at exactly where you can make improvements within the budget available to you.

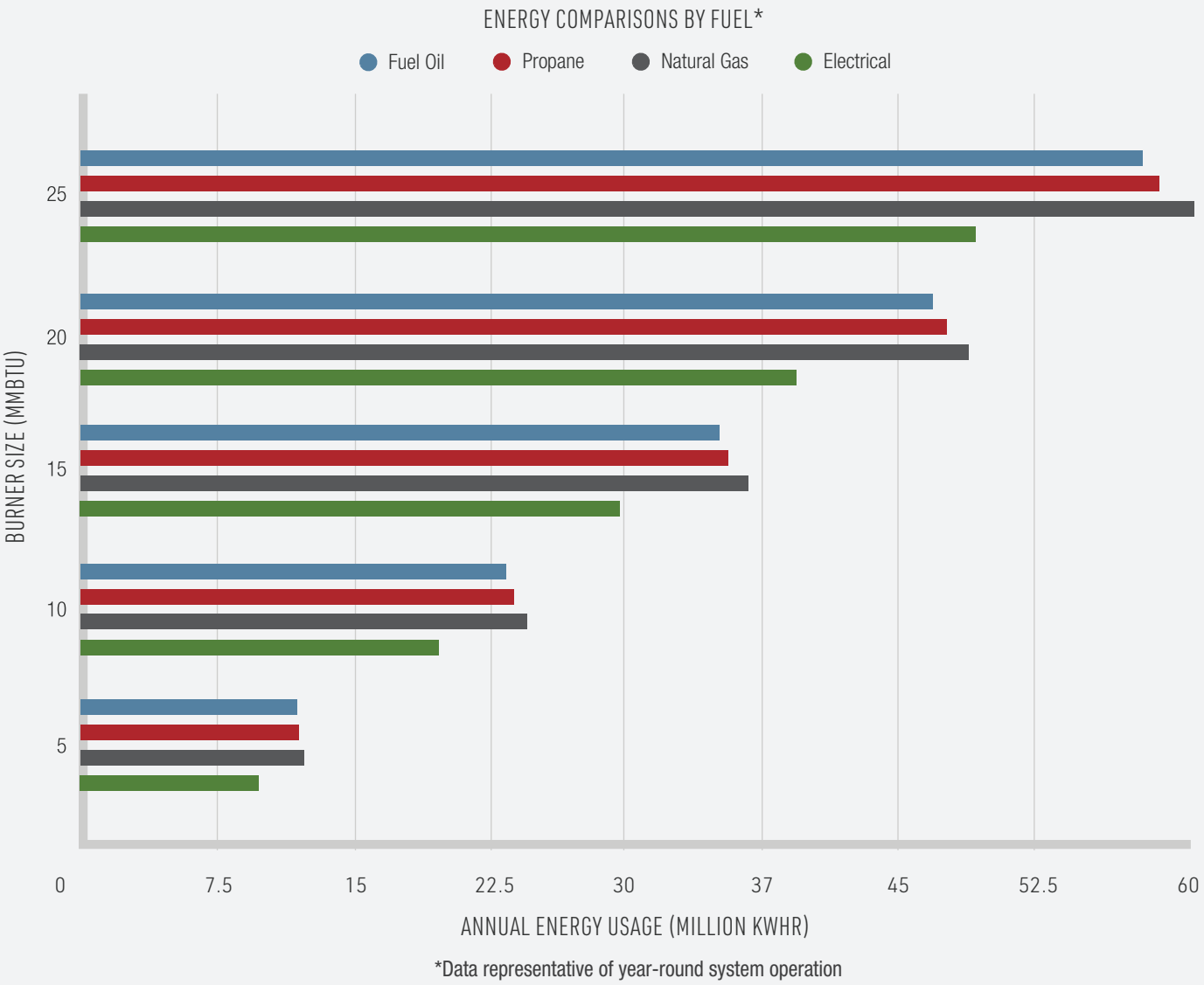
With the advice of our thermal experts, you will uncover immediate, straightforward solutions, and devise strategies for achieving your long-term sustainability goals. Small modifications, like adopting electric heat systems and optimizing boiler use, can give substantial results. These short term improvements will reduce carbon emissions and assist the transition away from fossil fuel systems, accelerating your progress towards a net zero future.

Every small adjustment is a step towards a more sustainable world.



## CARBON EMISSION REDUCTIONS

Reaching sustainability and GHG emission reduction goals requires major transitions from fossil fuel-based steam and process heating systems to cleaner sources of heat. Chromalox Electric Thermal Solutions provide a zero emission solution to eliminate your Scope 1 Direct Emissions. Utilization of renewable energy sources to power your Chromalox system can effectively negate Scope 2 emissions as well.

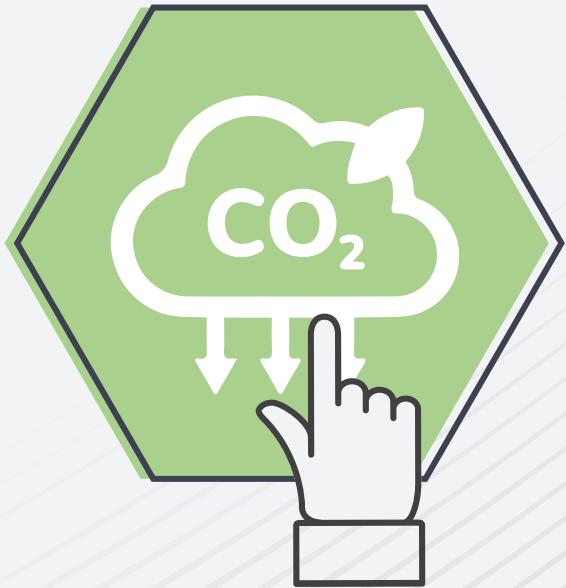


## ENERGY EFFICIENCY

Electrification of fossil fuel-based combustion equipment does not just render carbon reduction savings, but can lead to significant savings in energy usage. Electric heating systems are upwards of 99% efficient across all operating cases, unlike fossil based systems which are adversely impacted by:

- Turndown ratios
- Excess air percentage
- Fuel composition
- Boiler tube quality

Modular and scaled electric heating systems can also be placed at the load reducing complex piping systems and excessive heat losses. This further reduces unnecessary waste and maintenance costs boosting your facilities overall efficiency.

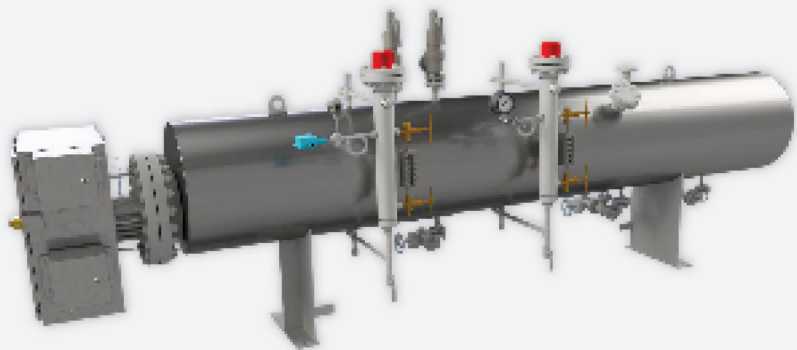


# PRODUCTS & SOLUTIONS

Our extensive portfolio of heating solutions is backed by our century of innovation and expertise in the electric heating industry to ensure that your switch from fossil fuel-based equipment to zero-emission electric heating systems is done with confidence.

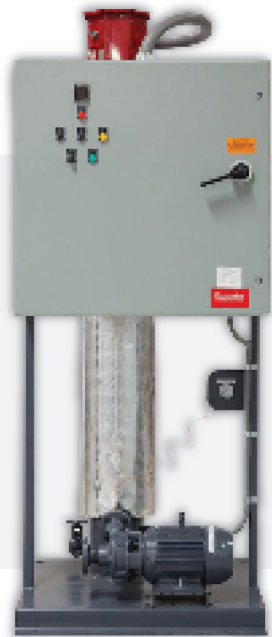
## ELECTRIC STEAM GENERATORS

- DirectConnect™ Medium Voltage Electric Steam Generators
- Low Voltage Point-of-Use Electric Steam Generators
- Manifold Systems for Redundancy or Complex Load Systems
- District Heating Systems
- Auxiliary Steam Components



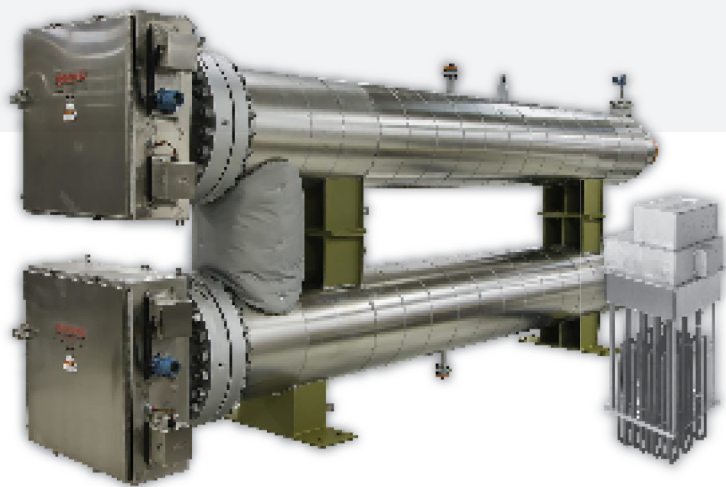
## TEMPERATURE MAINTENANCE & TRACING SYSTEMS

- Electric Heat Tracing & Control Systems
- Direct/Indirect Tank Heater
- Radiant/Convection Heaters
- Comfort Heaters



## HOT OIL & WATER HEAT TRANSFER SYSTEMS

- Modular Hot Oil & Thermal Fluid Heat Transfer Systems
- Water & Water/Glycol Packaged Systems



## ELECTRIC PROCESS HEATERS

- Liquid And Gas Circulation Heaters
- Air Duct Heating Systems

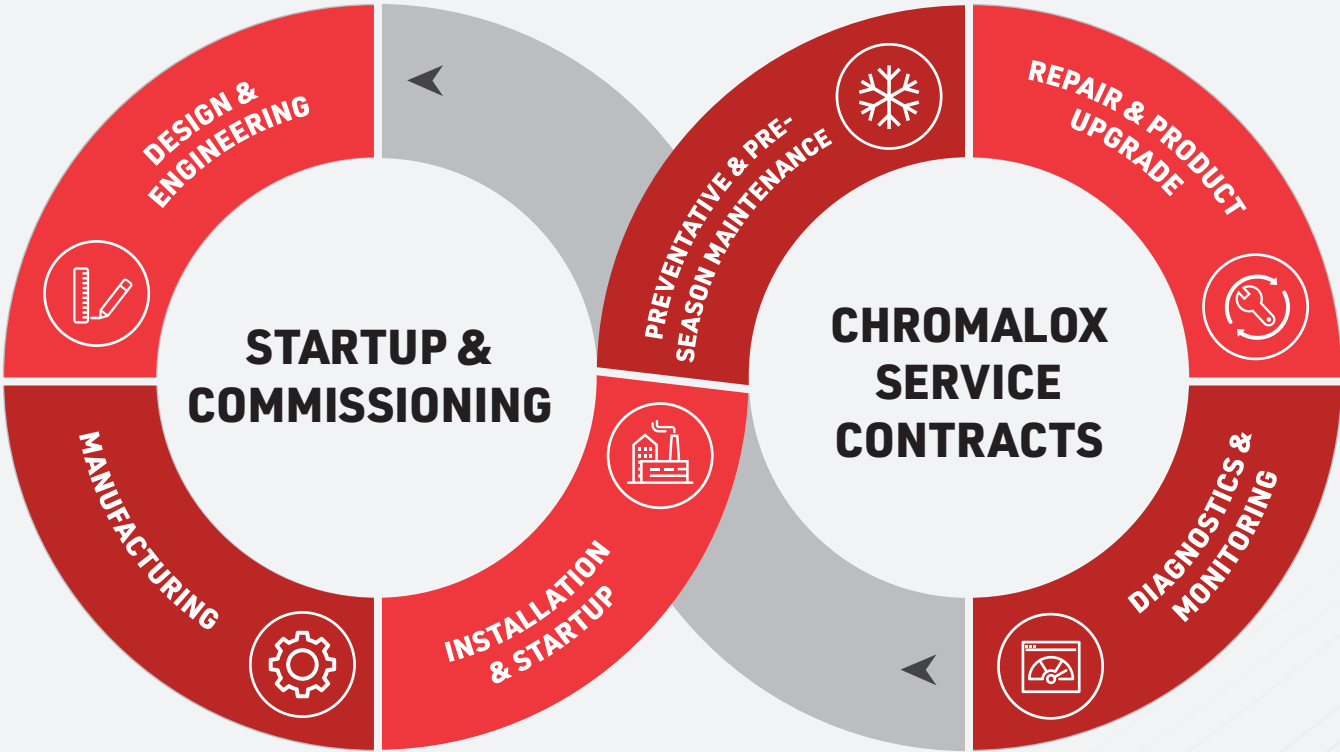
# POWER FACTOR

Facilities heavily reliant on fossil fuels for thermal loads will generally make up their larger electrical usage with motors, generators, transformers, and other inductance loads which contribute towards a low power factor and cause the electrical system to run less efficiently. Utility companies will penalize companies with low power factor through additional charges and rate spikes.

Chromalox electric resistance heaters have unity power factor, so by incorporating our large electric heaters into your sites overall power profile, you will be improving the net power factor which improves overall power efficiency and in turn reduces penalty charges. Additionally, increased load demand will put you in a better position to negotiate standard utility rates to drive down your cost of energy.

# FIELD SERVICE SUPPORT

When evaluating electric heating products for your decarbonization solutions, you may be concerned about switching to a new technology. Chromalox field services can give you peace of mind when switching to a zero emission electric solution. Our team of specialized field service technicians will check your installation, perform startup & commissioning services to get your systems online and tuned to your process, train your site personnel and more. With our comprehensive service contracts we also ensure your equipment is supported beyond just startup.



# INCENTIVES & REBATES

To support electrification and energy efficiency upgrades, power utility companies are promoting various rebate and incentive programs for qualifying equipment. Chromalox Electric Thermal Solutions offer both zero emission and improved energy efficiency over fossil fuel systems and could qualify for these programs. Our thermal experts can quantify electrical load requirements for Zero emission solutions and help support conversations for electrical infrastructure upgrades that may be needed to achieve your sustainability goals.





**SCAN THE QR CODE TO EXPLORE OUR WORLDWIDE  
LOCATIONS AND FIND YOUR LOCAL SPECIALIST:**

[www.chromalox.com](http://www.chromalox.com) | [sales@chromalox.com](mailto:sales@chromalox.com)

