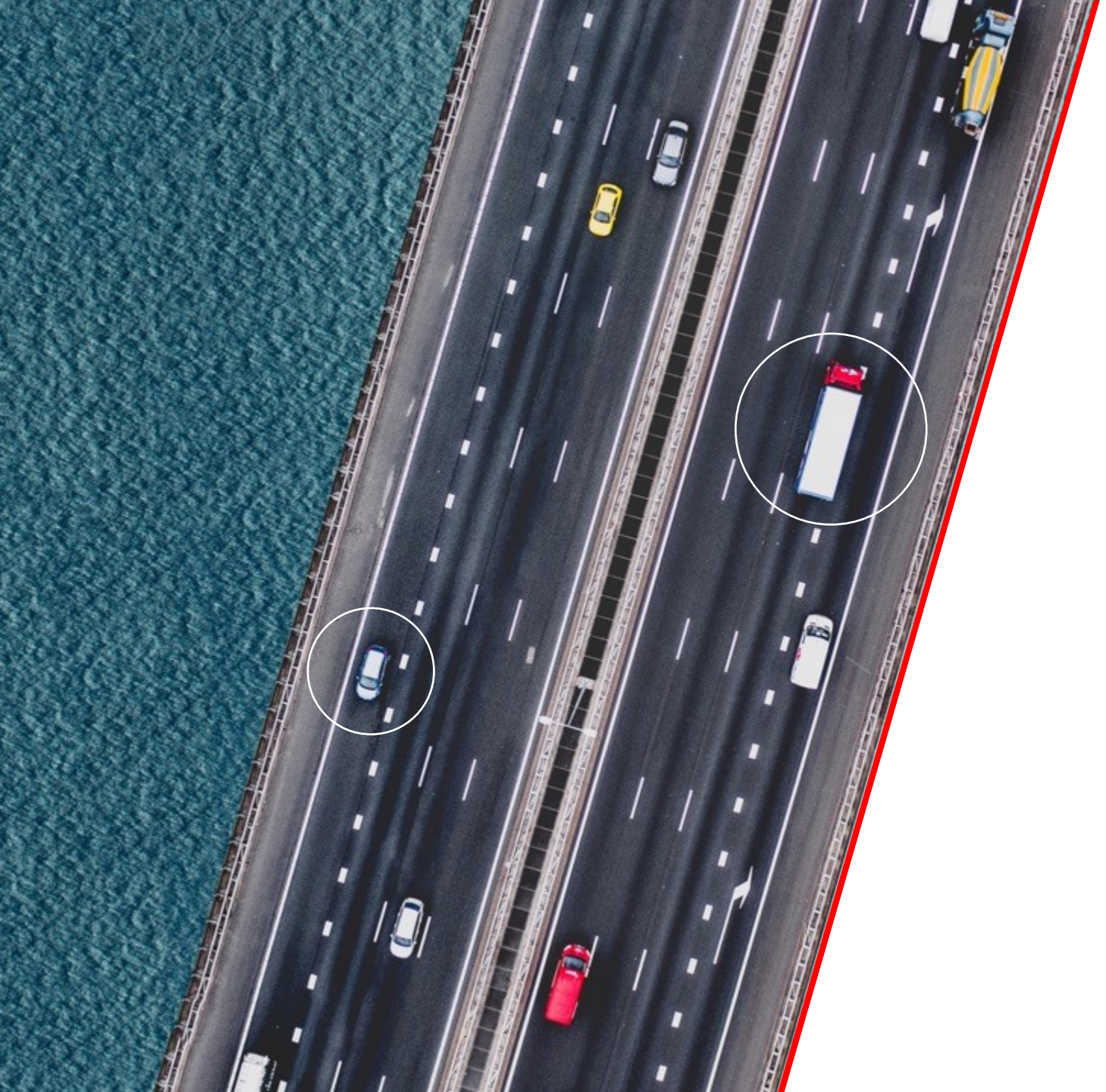


R&D Building services – Jan2026

Bridgestone EMEA Tech Center
Energy & Environment Management System
ISO50001

BRIDGESTONE
Solutions for your journey

Gianluca Staiano

Agenda

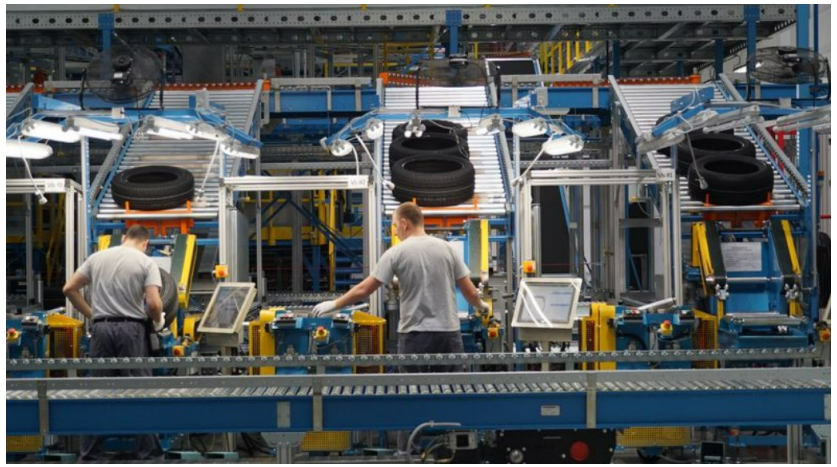
- Bridgestone EMEA Technical center
- Monitoring
- Energy Efficiency - main projects
- Future - New Buildings

Bridgestone EMEA Tech Center

Bridgestone EMEA Technical center has been ISO 50001 and 14001 certified since 2011.

Main activities:

- Tire design
- Tire manufacturing
- Indoor Testing
- Outdoor testing
- Chemical and physical laboratory testing



Bridgestone EMEA Tech Center

8 Medium Voltage Electric Substations (20 kV – 400 V)

32 Medium Voltage switchboards

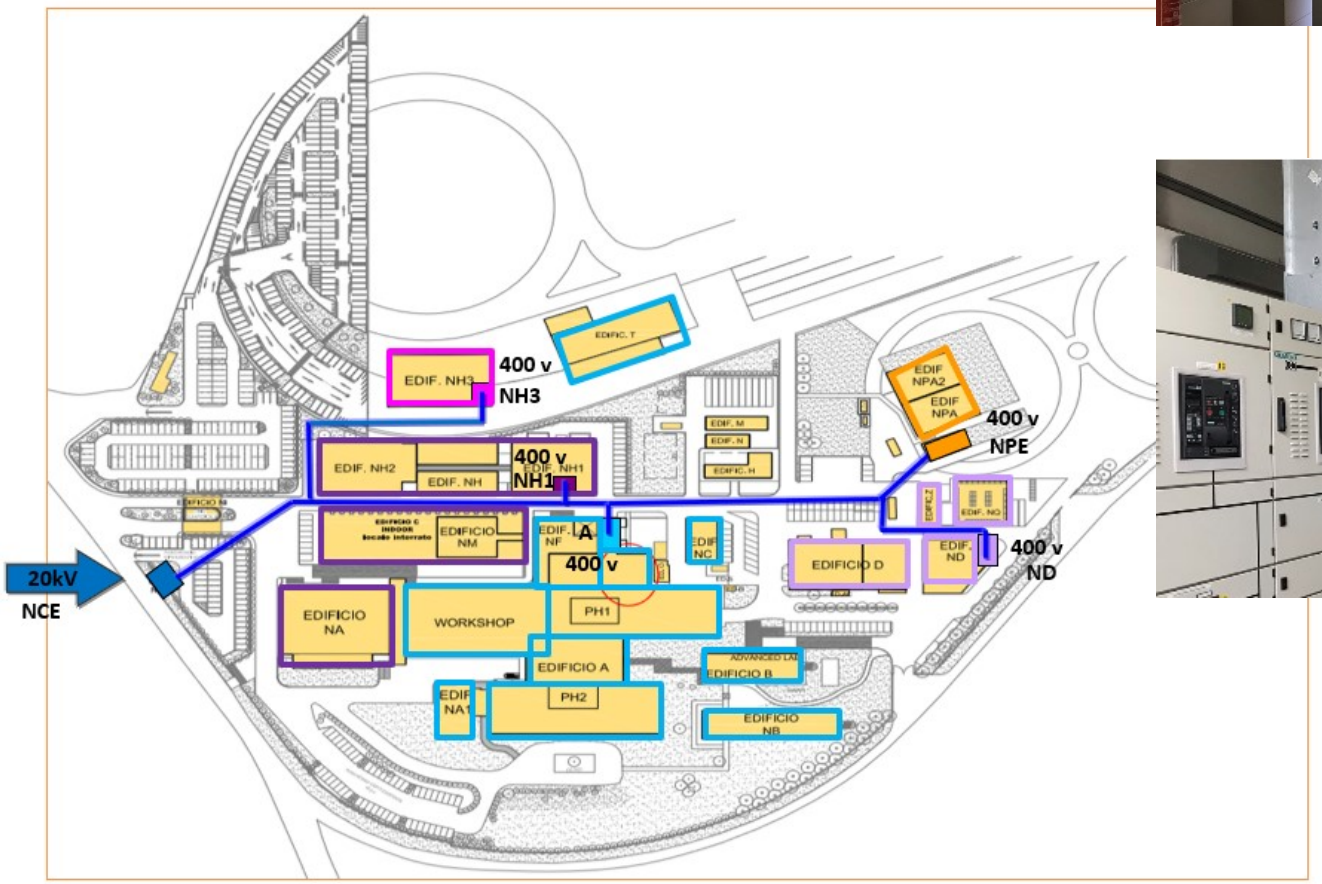
12 Electric transformers MV/LV (20 kV – 400 V)

12 Power factor correction panels

3 Emergency Electric Generators

205 Low Voltage electric Switchboards

11 UPS



Bridgestone EMEA Tech Center

2 Natural gas Steam generators

3 Natural gas Pressure reducing cabins

4 Electric steam generators

3 hot water production Boilers

21 Chiller

10 Hydraulic substations with 180 pumps

4 compressed air stations

3 vacuum stations

2 Osmotic Water Plant

2 Softned Water Plant

42 Industrial air conditioner

40 air Extractors

26 AHU Civil Air Conditioning

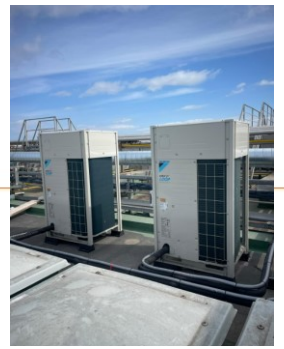
34 AHU Industrial Air Conditioning (test indoor)

13 Evaporative Towers

7 Dust Collector

178 Fancoil

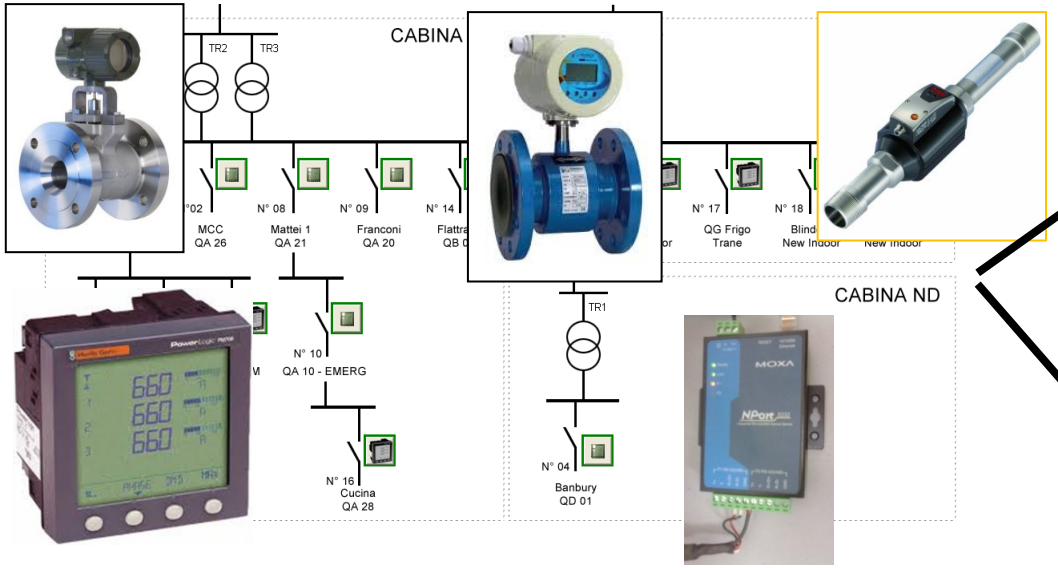
1 Wastewater treatment plant



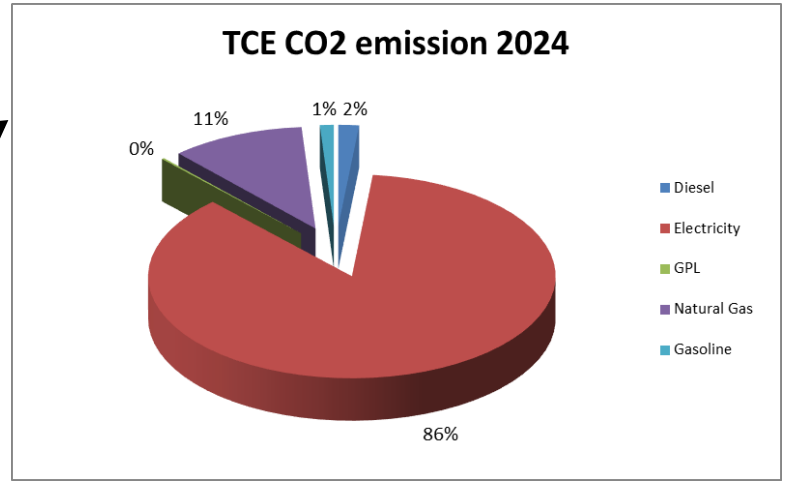
Monitoring – Energy Main Offenders

Energy Sentinel System by Energy Team:

156 electric meters installed in TCE, EUPG and EEC to monitoring 97% electric consumption.
21 water meters, 4 natural gas meters, 3 air compressed meters, 4 cooling energy meters and 3 steam meters installed in TCE.



BRIDGESTONE EUROPE NV/SA Italian Branch	Sistema di Gestione Energia, Ambiente, Salute e sicurezza		ANALISI DI SIGNIFICATIVITA' DEGLI ASPETTI ENERGETICI		Registro EHS 1500 R-01
Aspetto energetico	incidenza sui consumi	margine di	significatività	KPI	monitoraggio
Consumi di energia elettrica per la produzione di mescola	7,6% delle emissioni di CO2 - elevata	Possibilità di ridurre il consumo del 10% in 5 anni - bassa	Media	kWh/kg CPD	mensile
Consumi di energia elettrica per la produzione di pneumatici e sealant	7,9% delle emissioni di CO2 - elevata	Possibilità di ridurre il consumo del 10% in 5 anni - bassa	Media	kWh/GT	mensile
Consumi di energia elettrica per il testing degli pneumatici sperimentali	17,5 % delle emissioni di CO2 - elevata	Possibilità di ridurre il consumo del 10% in 5 anni - elevato	Elevata	kWh/km	mensile
Consumi di energia elettrica per la produzione di aria compressa	3,7% delle emissioni di CO2 - media	Possibilità di ridurre il consumo del 10% in 5 anni - media	Media	kWh/mc aria	mensile
Consumi di energia elettrica per la produzione di acqua refrigerata	8,1% delle emissioni di CO2 - elevata	Possibilità di ridurre il consumo del 10% in 5 anni - bassa	Media	kWhe/HWhf	mensile
Consumi di energia elettrica per la gestione delle sotto centrali	8,6 % delle emissioni di CO2 - elevata	Possibilità di ridurre il consumo del 10% in 5 anni - bassa	Media	kwh	mensile



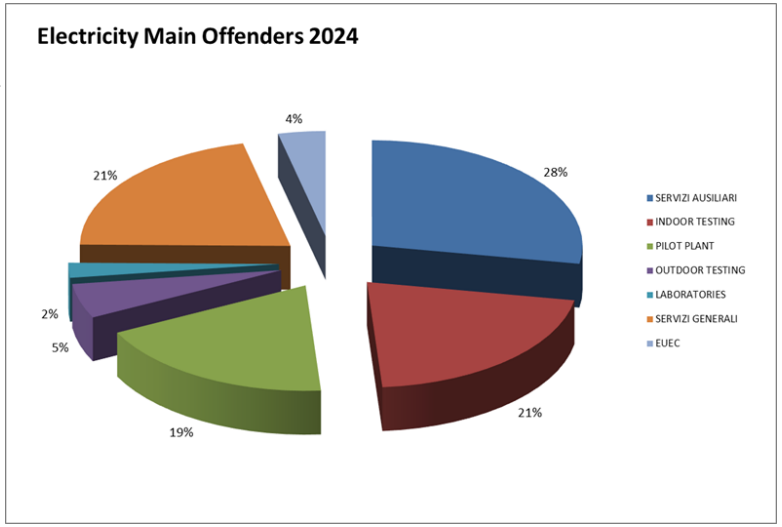
By Energy source

86% Electricity

11% Natural gas

2,6% Diesel/Gasoline

0,4% LPG



By Department

28% Utilities

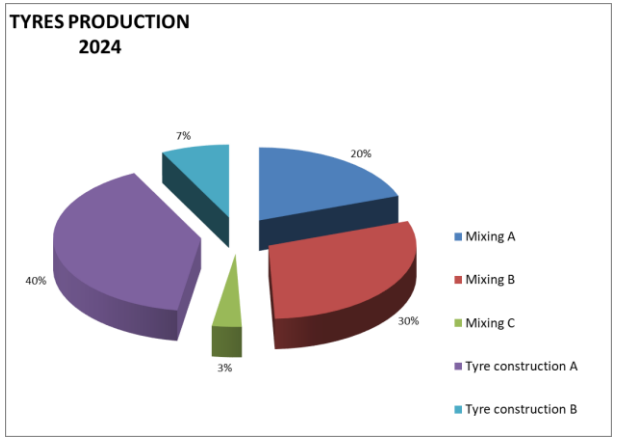
26% Testing

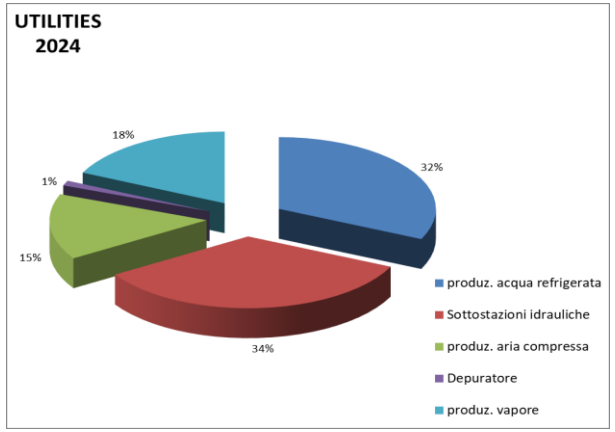
19% Tyre production

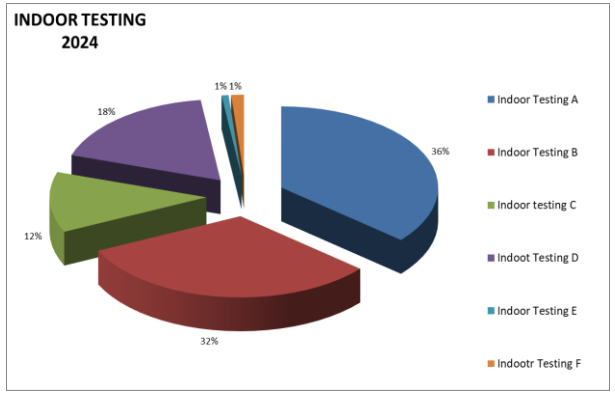
21% Common services

6% Laboratories

Electricity - Departments details

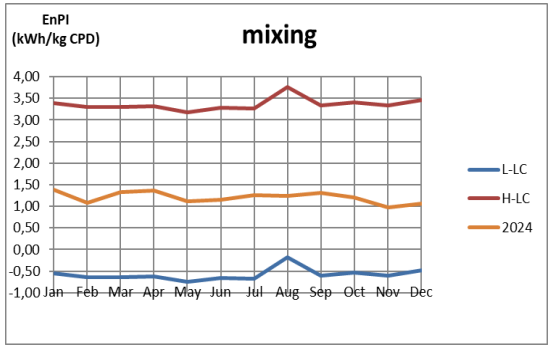


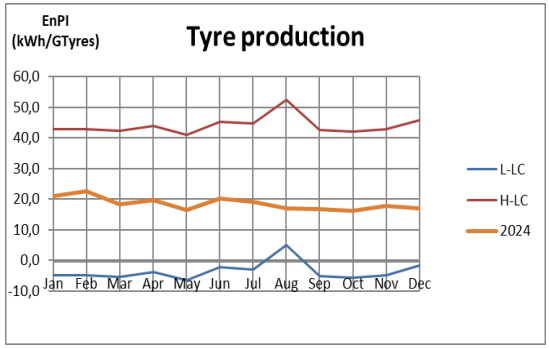


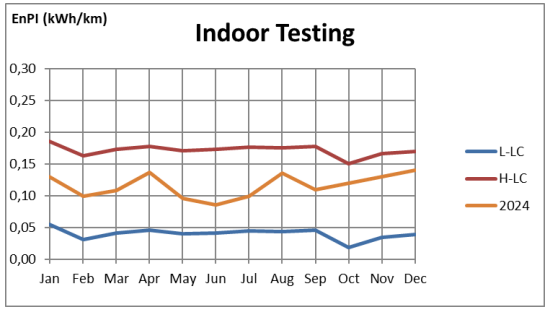


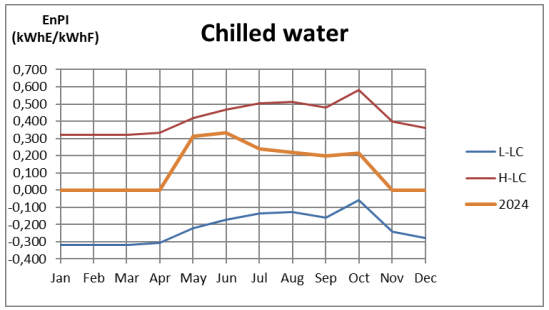
Main EnPI:

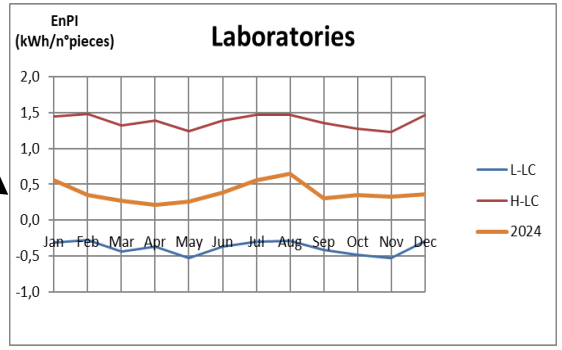
- Tyre production
- Indoor Testing
- Laboratories
- Utilities







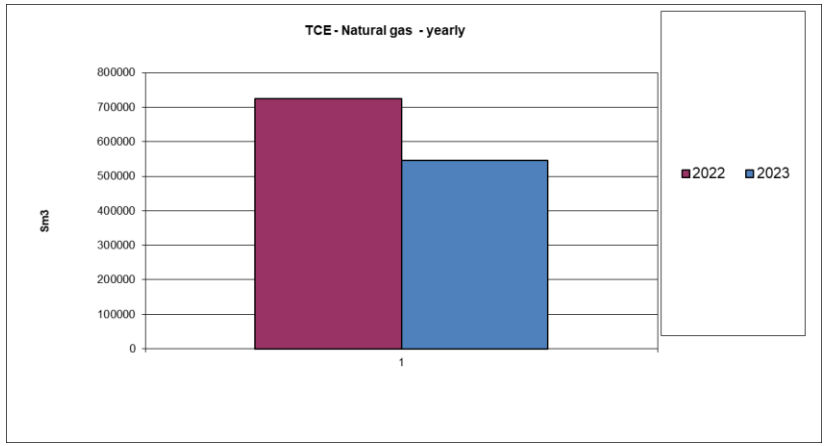




Energy Efficiency main projects - Steam trap

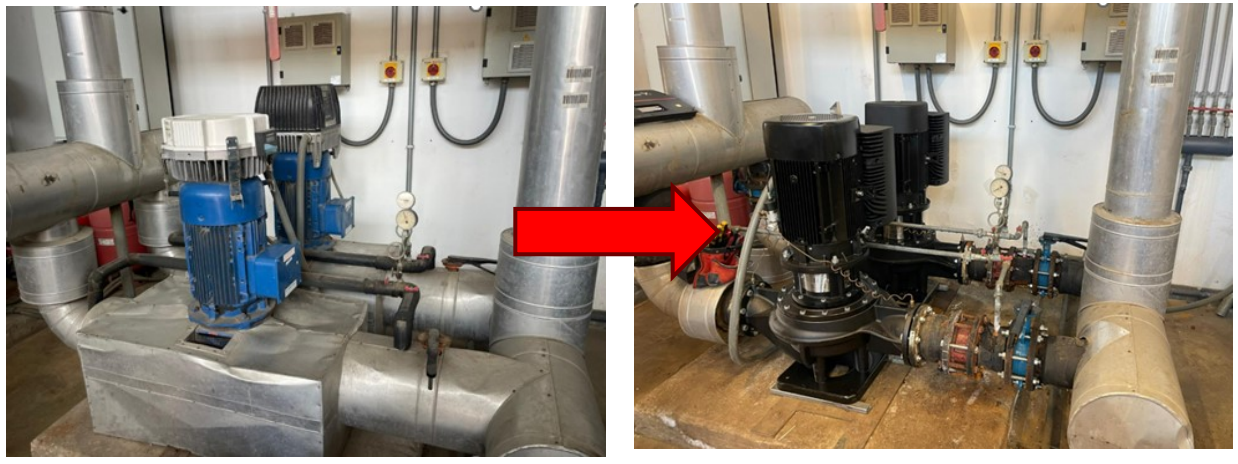
Steam trap:

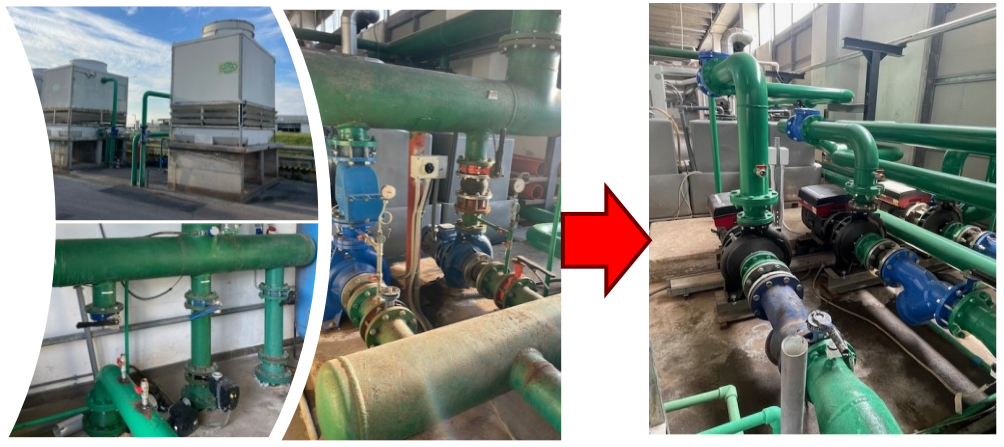
- Replacement stem trap following thermographic and ultrasonic investigation
- .Reduction of 25% of natural gas consumed for steam production



Energy Efficiency main projects - Idraulic substations

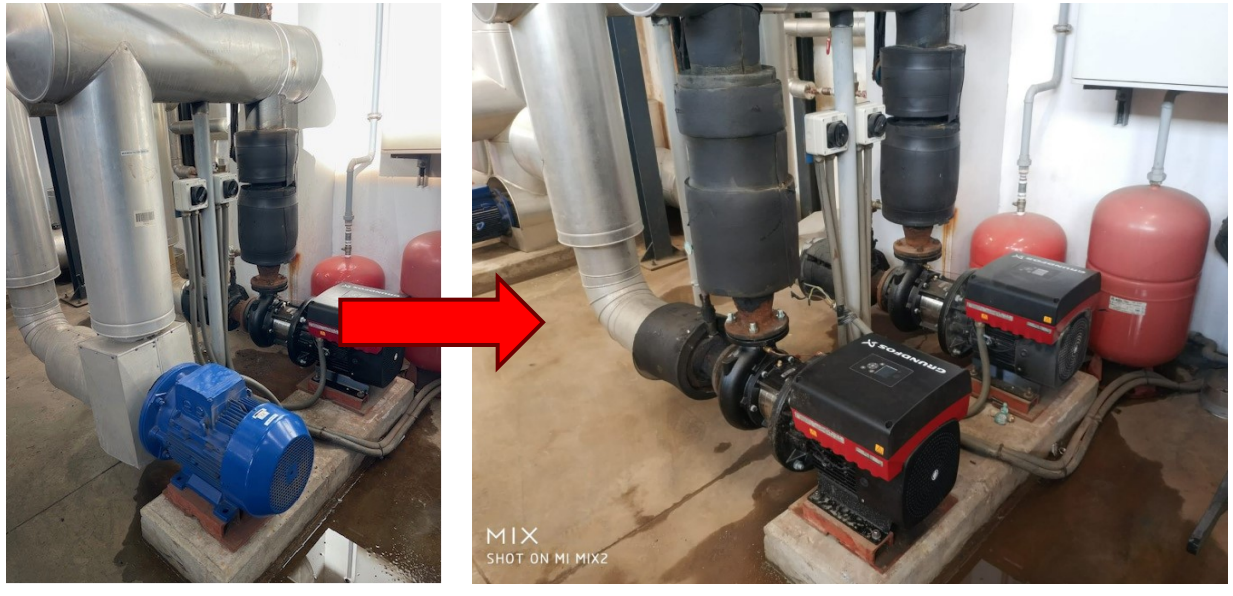
Pompe refrigerata Building B/NA





ANNUAL: SAVING 210 MWh

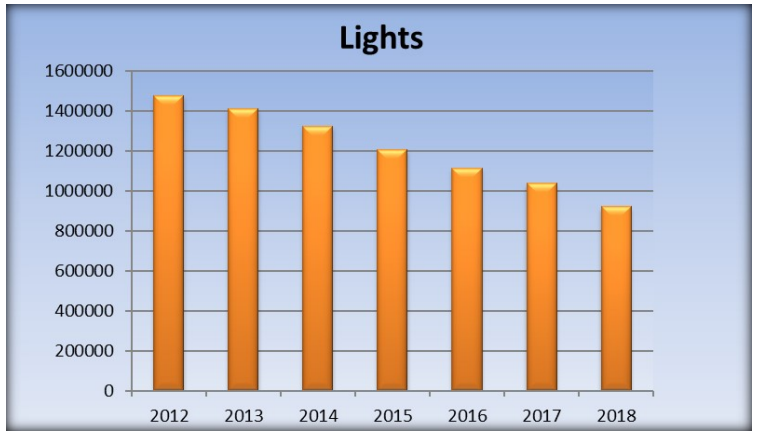
Pompe refrigerata building NH/NH2

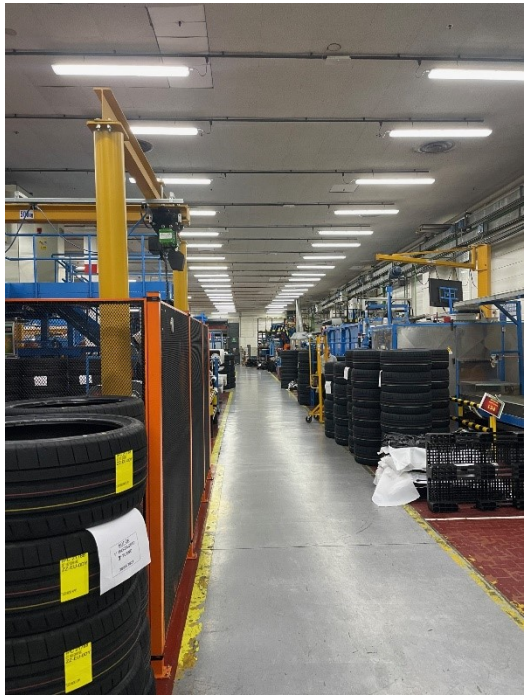


Energy Efficiency main projects - Lights

Since 2012, 80% of neon lamps have been replaced with LEDs.

Electricity for lighting has been reduced by 37%



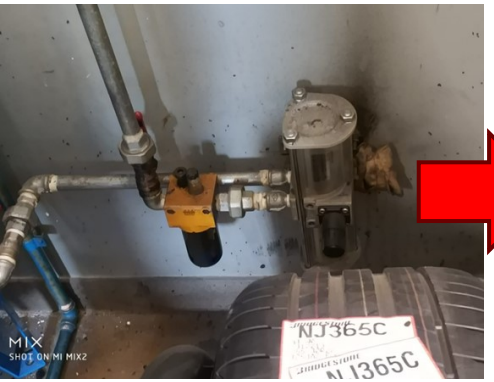


Energy Efficiency main projects - Air compressors

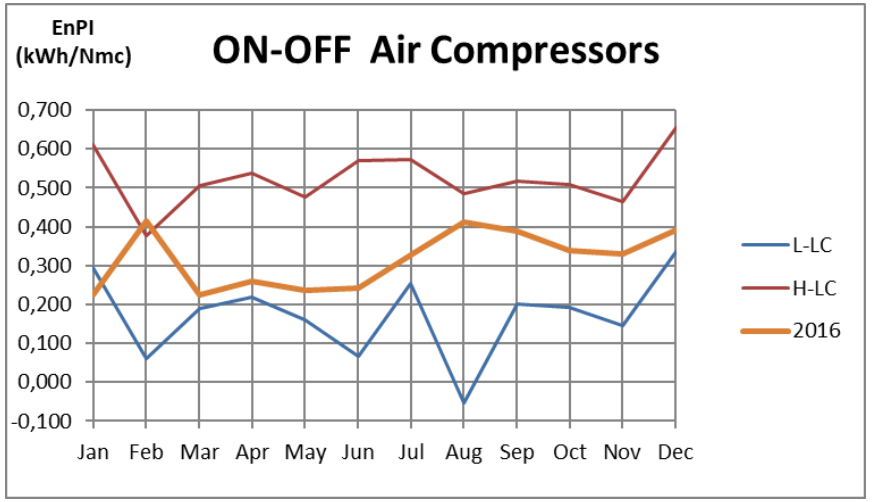
Compressed air production:

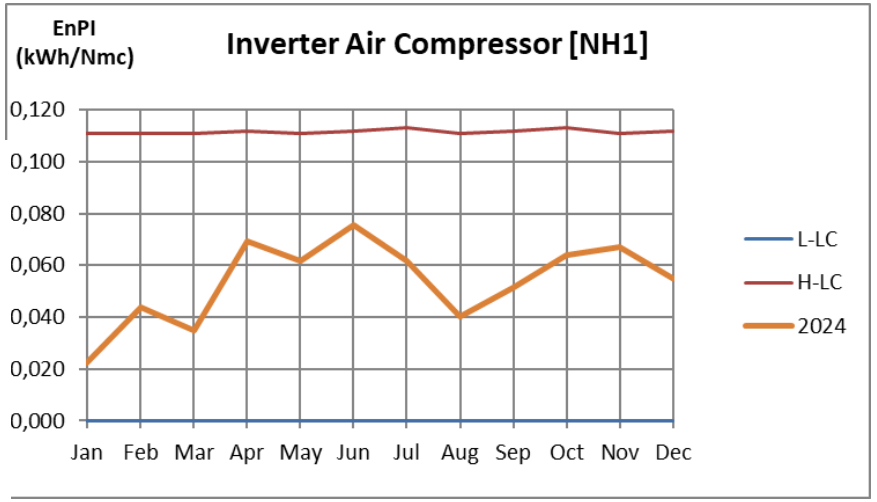
- ON/OFF Compressors replaced with 2 inverter compressors size 110 kW.
- Electricity for air compressed production has been reduced by 30%

Monitoring compressed air leaks with ultrasound and repairs during shutdown

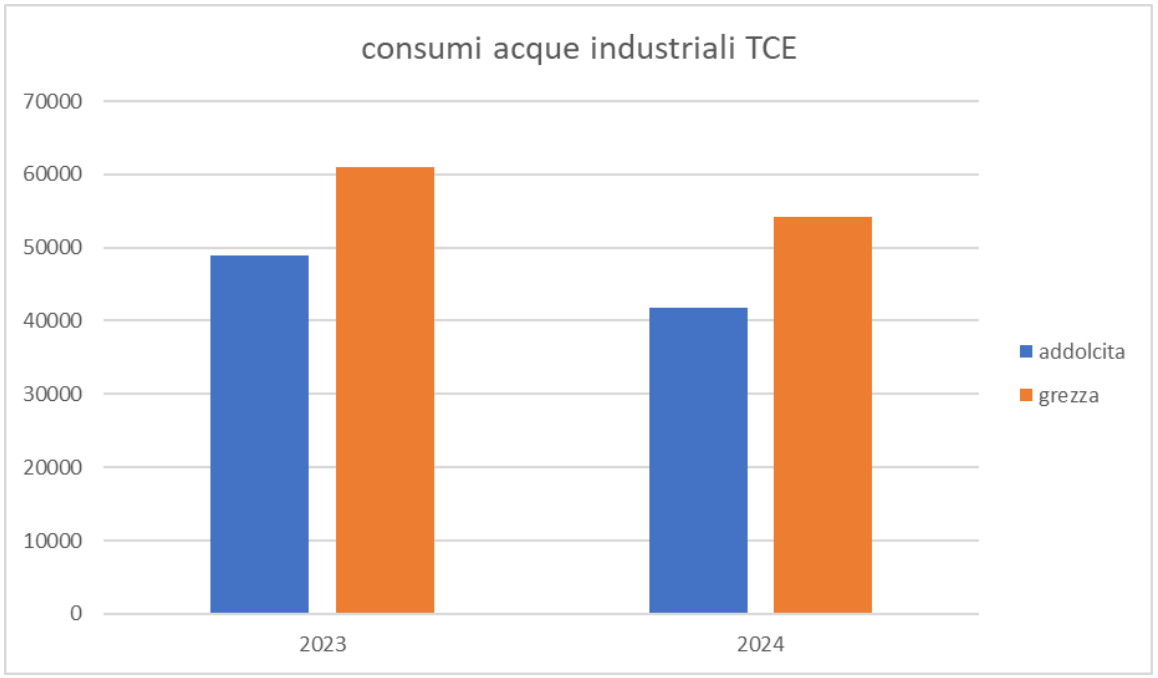


SAVING ANNUALE:
72 MWh





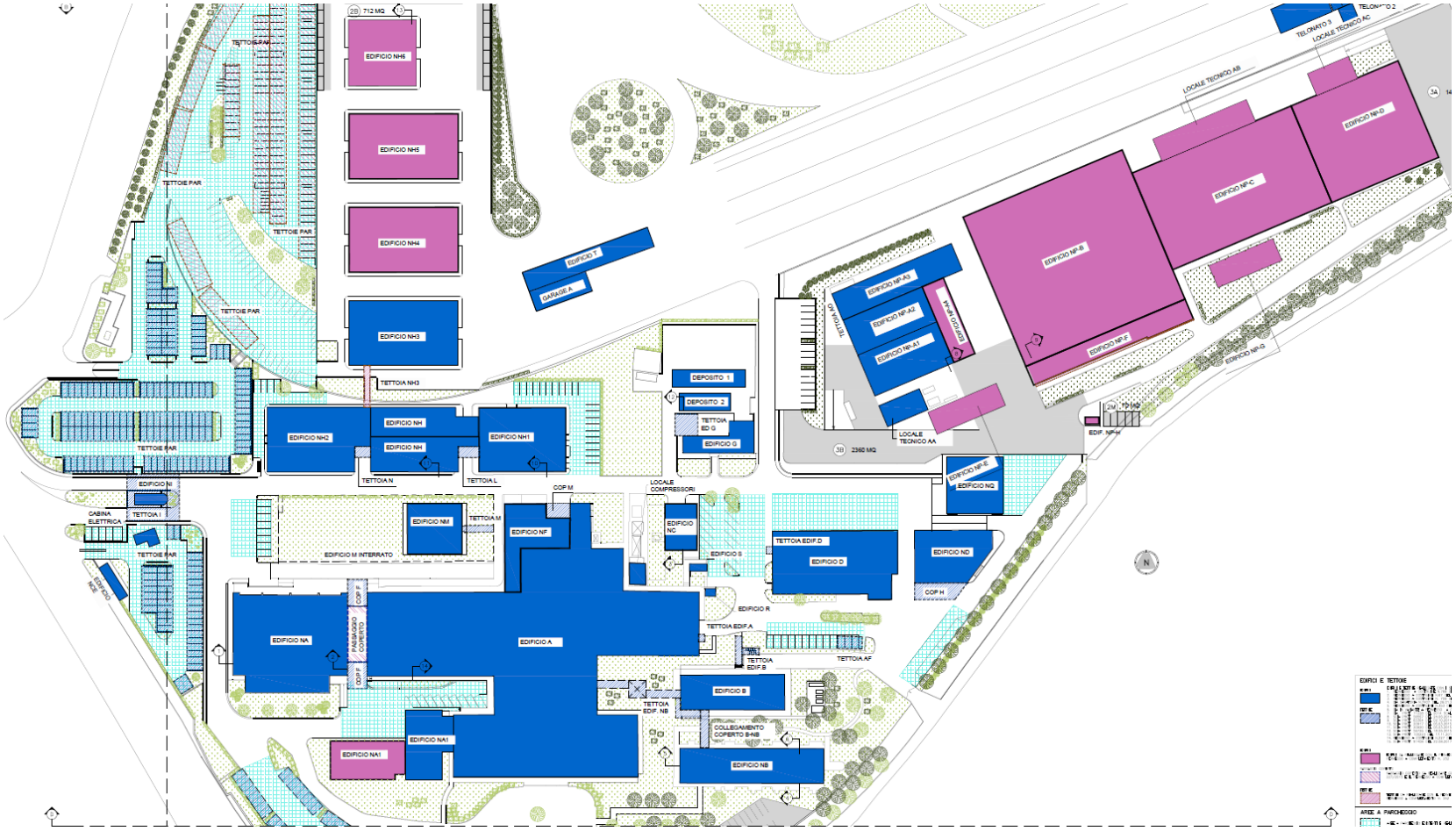
Water consumption – ISO 14001

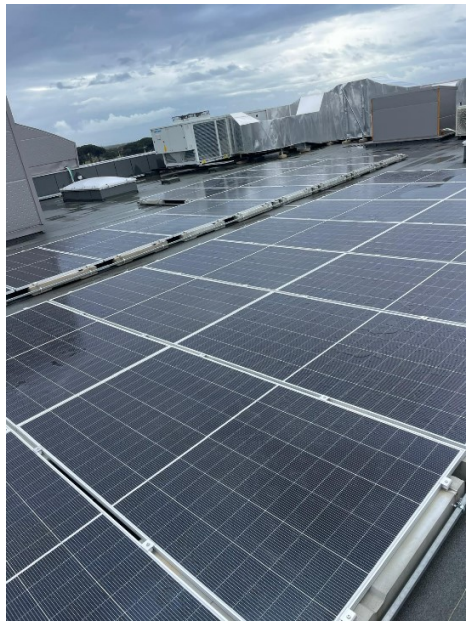


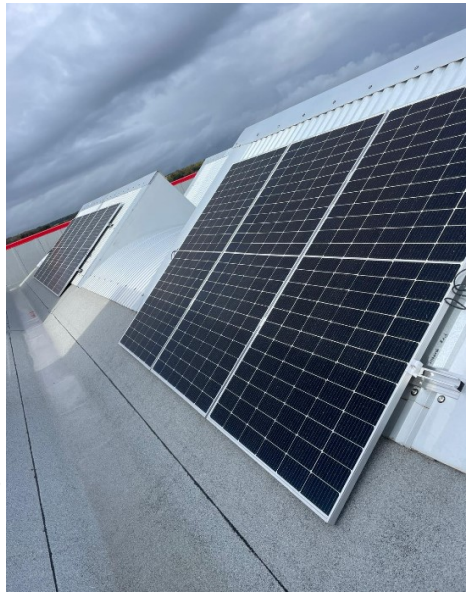
- 14% reduction in softened water consumption 2024 vs 2023 (41830 vs 48930 mc)
- 11% reduction in well water consumption 2024 vs 2023 (54210 vs 61000 mc)

  SAVING 13890 mc of water, equivalent to 6 Olympic swimming pools

Energy Efficiency - New Buildings







- From 2024 to 2026, 6 new buildings, Steam plant, Compressed air station.
- These new buildings have installed high efficiency systems (LED lighting, PV systems 500 kW, High efficiency motors)
- Annual production of approximately 4.5% of TCE electric consumptions, from the photovoltaic systems serving new buildings

Energy Efficiency - New Buildings

Hot water recovery system from the press department to preheat the water entering the boiler for the production of hot water for the operators' showers