# 56ESA

### **About us**





#### Global Energy Services Alliance (GESA)

GESA is a joint venture between two companies, **Baseload** and **Pro-Per**, with the aim of providing the Energy and Power Generation sectors a one-stop-shop for all their service needs.

We provide services around the globe with our extensive expertise on **gas**, **thermal and hydro powerplants**; world class competencies in gas, steam, hydro turbines, high-level maintenance and repair capabilities in generators.



## Global Energy Services Alliance (GESA)

Manpower, Outreach, and Facilities



**40+**Countries Served



**8** Regional Offices

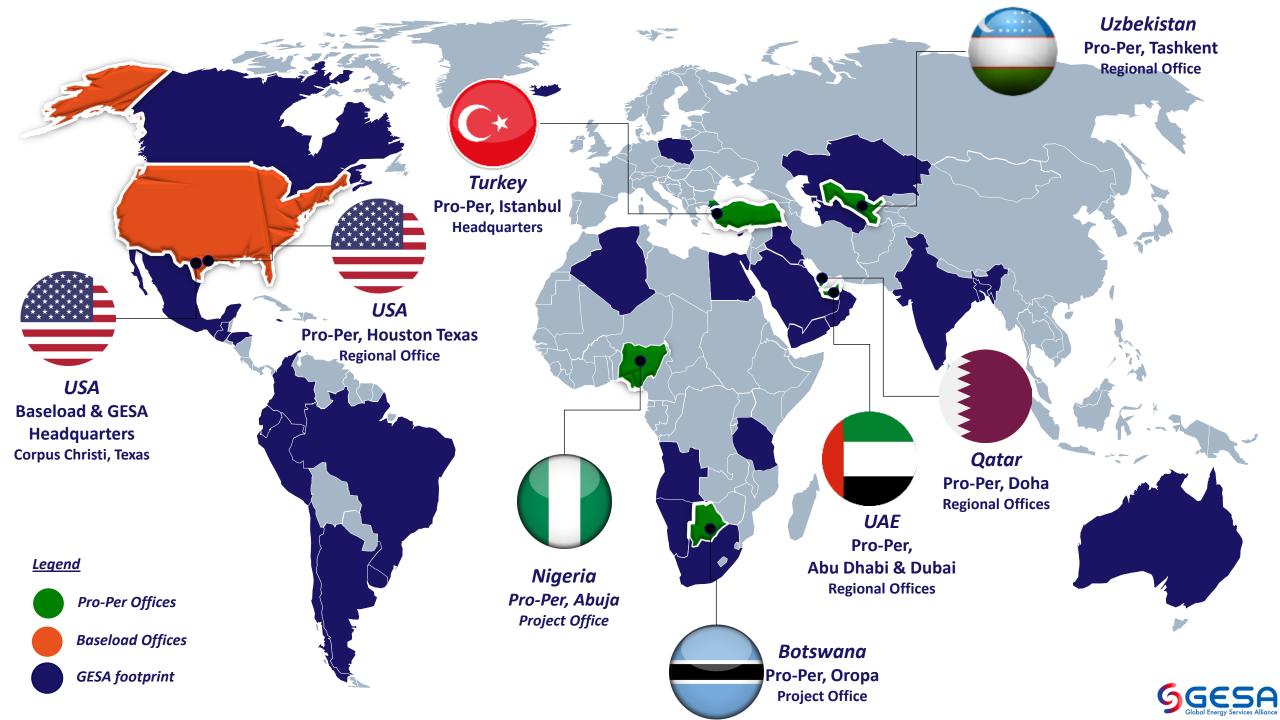


**Z Service Workshops** 



**600+**Experts & Professionals





### Health, Safety, Environment Policy

GESA is committed to achieving environmental excellence and protecting the health and safety of our employees wherever we operate.

This means complying with all applicable environmental, health and safety laws, as well as continuing to assess the impact of our operations on the communities where we do business and the potential risks to our customers of the products and services we provide.

#### **Occupational Accident and Near-Miss Notification Statistics**

|                      | 2018      | 2019      | 2020       | 2021       | 2022       |
|----------------------|-----------|-----------|------------|------------|------------|
| Number of Employees  | 215       | 365       | 350        | 216        | 319        |
| <b>Working Hours</b> | 307.327,5 | 323.747,5 | 214.977,50 | 281.116,50 | 374.918,00 |
| Lost Working Day     | 16        | 58        | 0,5        | 0          | 0          |
| Near-Miss            | 78        | 54        | 7          | 3          | 5          |





#### Certification

ISO 9001:2015

**Quality management systems** 



Standard ISO 9001:2015

Certificate Registr. No. 01 100 103964

Certificate Holder:



PROFESYONEL PERSONEL HİZMETLERİ TİC.A.Ş.

Gayrettepe Mh. Yıldız Posta Cad. D Plaza No:52 Kat:7 Daire:49 34349-Beşiktaş / İstanbul

Scope: Installation, commissioning & start-up, operation, maintenance

activities and technical personnel supply for power plants

Proof has been furnished by means of an audit that the

requirements of ISO 9001:2015 are met.

The certificate is valid from 2022-07-07 until 2025-07-06.

First certification 2010

2023-07-03

TÜV Rheinland Cert GmbH Am Grauen Stein · 51105 Köln

Validity:





#### ISO 45001:2018

Occupational health and safety management systems



ISO 9001:2015

**Quality management systems** 





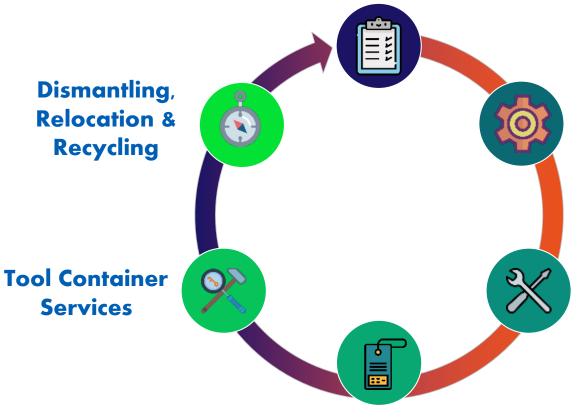






### **Our Core Services**

Installation & Commissioning



## Spare Parts & Equipment Sale

#### **Plant Operation**

- Aeroderivative Turbines
- Heavy Duty Gas Turbines
- Reciprocating Engines
- Hydroelectric Power Plants
- Power Generators

#### **Plant Maintenance**

- Aeroderivative Turbines
- Heavy Duty Gas Turbines
- Reciprocating Engines
- Hydroelectric Power Plants
- Power Generators



### **Installation & Commissioning**

## Mechanical Installation

- Gas Turbines
- GT Generators
- GT Auxiliary Systems
- Compressors
- Steam Turbines
- ST Generators
- Combined Cycle
   Auxiliary Systems

## Electrical Installation

- Grounding
- Scada & Control Systems
- Cubicle & Panel Installation
- Cable Trays
- Cabling (MV, LV and Signal)
- Interior and Exterior Lighting
- Fire Detection
- Fiber Optic

#### Commissioning

- Flushing
- Point to Point Checks
- Field Functionality Tests
- Calibration
- Hot & Cold
   Commissioning
- Start Up and First Fire
- Performance Test
- Reliability Test
- Acceptance Test
- Resident Onsite Support
- Warranty Engineering



## **Operations & Maintenance**











Click on icons for more details ...



## **Aeroderivative Gas Turbines**

**Operations & Maintenance** 



#### **Aeroderivative Gas Turbines**

#### **Our Services**

**Plant Operation** 

Borescope Inspection (BSI)

**Troubleshooting** 

**Turbine Removal** 

Top case

Semi Annual / Annual Inspection

**Turbine Installation** 

Hot Section Exchange(HSE)

**Tool Container Rental** 

**Turbine Exchange** 

Rehabilitation

**Alignment** 

**Bushing Replacement** 

**Installation & Startup** 

**Combustor Exchange** 



#### **Aeroderivative Gas Turbines**

#### **Supported Turbines**



- LM2500/+/G4
- TM2500
- LM6000
- LMS100



- SGT-A35
  - SGT-A05



- FT4
- FT8



- RB211
- Trent 60



A Caterpillar Company

- Mars
- Titan
- Taurus
- Centaur



## Heavy Duty Gas Turbines

**Operations & Maintenance** 



#### **Heavy Duty Gas Turbines**

**Our Services** 

**Plant Operation** 

**Alignment** 

**Troubleshooting** 

**Turbine Assembly** 

**Borescope Inspection** 

**NDT** 

**Turbine Disassembly** 

Hot Gas Path Inspection

Rehabilitation

**Turbine Replacement** 

Combustion Chamber Inspection

**Assembly & Startup** 

**Test & Calibration** 

Combustion Chamber Replacement

Periodical Minor and Major Maintenance

Turbine Dry Ice and Sandblasting

**Spare Parts Supply** 

**Tool Container Rental** 



## Heavy Duty Gas Turbines Supported Turbines



#### **Frame Series**

- 9HA, 9F, 9E
- 7HA, 7F, 7E
- 6F, 6B
- GT13E2



#### **SGT Series**

- SGT5-9000HL/8000H
- SGT5-4000/2000E
- SGT6-9000HL/8000H
- SGT6-5000F/2000E



#### **GT & AE Series**

- GT36-S5, GT36-S6
- GT26
- AE94.3A, AE94.2
- AE64.3A



#### **MGT & THM Series**

- MGT6000-2S
- MGT6000-1S
- THM1304



## Steam Turbines

**Operations & Maintenance** 



## Steam Turbines Our Services

Installation

**Commissioning** 

**Plant Operation** 

**Minor Maintenance** 

**Major Maintenance** 

**Unplanned Maintenance** 

**Dismantling** 

Relocation

**Troubleshooting** 

**Rotor Overhaul** 

**Turbine Overhaul** 

Control System Upgrade

Turbine Efficiency
Evaluation

Turbine Spare Part Supply



## **Steam Turbines Supported Turbines**



General Electric







Harbin Turbine



**HCTC** 



## **Hydroelectric Power Plants**

**Operations & Maintenance** 



## **Hydroelectric Power Plants**

#### **Installation & Commissioning**

• # of Projects: 27 plants/59 units

• Installed capacity: 228MWs

#### **O&M** References

• # of Projects: 9 plants/21 units

• Installed capacity: 57.71MW

Production: ~200 million kWh/year



**Pelton** 



Kaplan



**Francis** 

Turbine manufacturers we have worked with:















### **Solar Power Plants**

**Design with Installation & Commissioning** 

#### References

- # of Projects: 19 plants
- Installed capacity: 32MW
- Production: ~33 million kWh/year
- 4.5MW of Hybrid (Solar & Hydro)



**Panel** 



**Inverter** 



**Substation** 



Steel Construction



## Power Generators

**Operations & Maintenance** 



## Power Generators Our Services

#### 1. Rotor Out

#### 2. Field:

- Rings Off Inspection,
- Rewind and,
- Repair

#### 3. Stator:

- Wedge Tightness test & replace,
- Hi Pot and El-Cid Test,
- Rewinds & Repair

## 4. Retaining Ring Removal & Reassembly:

- Induction Heating
- 5. Removing & Cleaning Coils



## **Power Generators Supported Generators**



















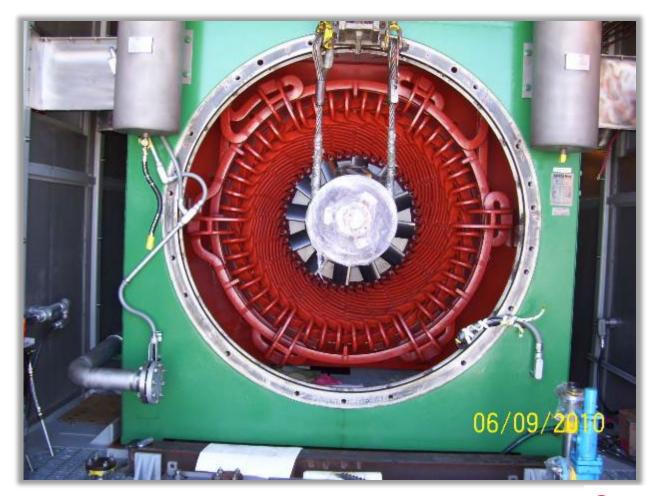
## **Power Generators Automatic Voltage Regulators**

#### **Automatic Voltage Regulators:**

- 1. GE (EX2100, EX2100e)
- 2. BRUSH (A30, A32)
- 3. Others...

#### **AVR Services:**

- 1. Inspection
- 2. Calibration
- 3. Programming
- 4. Card Repair





### **Spare Parts & Equipment supply**

GESA provides spare equipment, spare parts, and all necessary consumables required in your power plant.

With our extensive network of vendors, we supply both **OEM and non-OEM** parts as well as refurbished parts as required.





### **Tooling Capabilities**

- Gas Turbine Package installation, removing and relocation

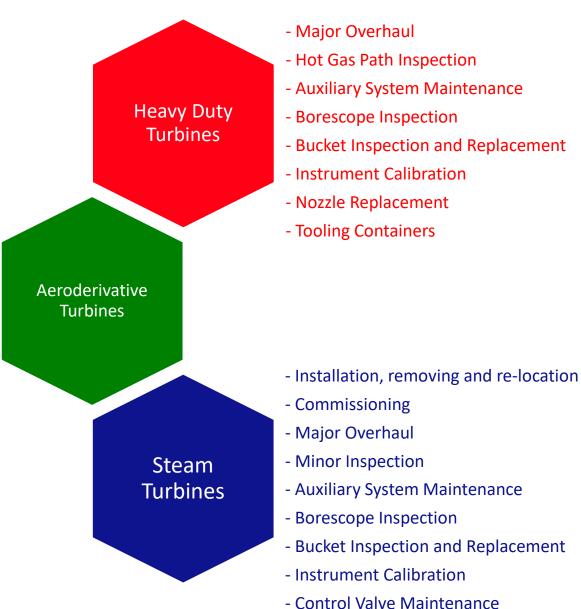
- Gas Turbine Commissioning Activities

- Gas Turbine L1/L2 Maintenance (HPC, Hot Section, Combustor)

- Gas Turbine Exchange (Lift Fixtures, Maintenance Dollies)

- Gas Turbine Alignment

- Gas Turbine Borescope Inspection
- Gas Turbine Instrument calibration
- LM Series Gas Turbine Oil flushing
- LM Series Gas Turbine Emission Measurement and performance Control
- LM Series Gas Turbine Generator Protection Relay Control





## Dismantling, Relocation & Recycling

**Assessment of Decommissioned Power Plants** 

**Dismantling the Power Plant Equipment** 

**Selling Equipment and Spare Parts** 

**Recycling the Rest of the Equipment** 



## Project References



#### **Project References – Installation & Commissioning**



Mexicali, Baja California, Mexico

Owner: Prodemex

**Service Type:** Installation & Commissioning

**Project Scope:** Mechanical & Electrical

Installation & Commissioning

Works of Power Plant

Capacity: 135MW

**Equipment:** 3 x TM2500 Gen4

2 x TM2500 Gen6

**Project Date:** 2022



Tecate, Baja California, Mexico

Owner: Saavi Energia

**Service Type:** Installation & Commissioning

**Project Scope:** Mechanical & Electrical

**Installation & Commissioning** 

Works of Power Plant

Capacity: 105MW

**Equipment:** 3 x TM2500 Gen8

**Project Date:** 2022



Silivri, Istanbul, Turkiye

Owner: Botaş

**Service Type:** Installation & Commissioning

**Project Scope:** Mechanical & Electrical Installation &

Commissioning Works of Compressor

Island of Kuzey Marmara Natural Gas

Storage Extension Project

Capacity: 4.6 billion Sm3

**Equipment:** 5 x Siemens SGT-400

**Project Date:** 2022 (ongoing)



#### **Project References – Installation & Commissioning**







#### **AKÇA HEPP**

Owner: HydroTU

**Service Type:** Installation &

Commissioning

**Project Scope:** Mechanical supervision,

installation and commissioning

Capacity: 6,3 MW

**Equipment:** Horizontal Francis

Project Date: 2021

#### **Turkiye to Uzbekistan**

Owner: Aksa Energy

**Service Type:** Relocation

**Project Scope:** Relocation of Aksa Antalya

power plant to Tashkent

Uzbekistan

Capacity: 240 MW

**Equipment:** 3 x LM6000 PC

1 x LM6000 PD

2 x 8-11 MC 9

**Project Date:** 2020 - 2021

#### Aba, Abia State Nigeria

Owner: KS Energy / Geometric

Power

**Service Type:** Re-commissioning /

Rehabilitation

**Project Scope:** Re-commissioning /

Rehabilitation of Power

Plant

**Equipment:** 3 x LM6000 PD

**Project Date:** 2022 - Ongoing



#### **KS Energy Power Africa**

#### **Power Plant Operation & Maintenance**



#### **BUA/OBU** (Nigeria) power plant

Generated power in 2021; 254.262 MWh
Generated power in 2022; 134.915 MWh
Total generated MW since COD; 1634 078 MWh

#### **Orapa Power Plant**

Generated power in 2021; 63.188 MWh
Generated power in 2022; 3.336 MWh
Total generated MW since COD; 362 563 MWh

#### **Bua Sokoto Cement**

Generated power in 2021; 10.212 MWh
Generated power in 2022; 107.987 MWh

Total generated MW since COD; 118 199 MWh



#### **Project References – Aeroderivative Turbines**







#### **Qatar – Baker Hughes**

Owner: Qatar Gas

**Service Type:** Maintenance

**Project Scope:** Hot Section Exchange

Capacity: 50 MW

**Equipment:** 2 x LM2500

**Project Date:** 2021 (Completed)

#### Oman – Baker Hughes

Owner: BP Khazzan

**Service Type:** Maintenance

**Project Scope:** Engine Exchange (removing and

installing the gas turbine in an enclosure) of a LM2500 Gas

Turbine.

Capacity: 25 MW

**Equipment:** LM2500

**Project Date:** 2021 (Completed)

#### **Umlulu – Baker Hughes**

Owner: Umlulu

**Service Type:** Operation and Maintenance

Support

**Project Scope:** O&M

Capacity: 140 MW

**Equipment:** 4 x LM2500

**Project Date:** 2021 (Completed)



#### **Project References – Aeroderivative Turbines**







#### **Turkiye – Baker Hughes**

Owner: Tanap

**Service Type:** Maintenance

**Project Scope:** Residence Engineering

Capacity: 21 MW

**Equipment:** LM2500

**Project Date:** 2022 (Completed)

#### **Dubai, UAE – Baker Hughes**

Owner: DUGAS

**Service Type:** Maintenance

**Project Scope:** Borescope Inspection

Capacity: 21 MW

**Equipment:** LM2500

**Project Date:** 2022 (Completed)

#### Abu Dhabi, UAE – Baker Hughes

Owner: ZADCO

**Service Type:** Maintenance

**Project Scope:** Engine exchange

Capacity: 50 MW

**Equipment:** LM6000

**Project Date:** 2022 (Completed)



#### **Project References – Heavy Duty Turbines**





Owner: Tupras

**Service Type:** Maintenance

**Project Scope:** Provide manpower and

tool container support for major inspection of GE Frame 6B Frame

turbines

Capacity: 40 MW

**Equipment:** GE Frame 6B

**Project Date:** 2021 (Completed)



#### **Baymina Energy**

Owner: Palmet Energy

**Service Type:** TFA Support

**Project Scope:** GE Frame 9FA Unit Hot

Gas Path Upgrade Inspection Services including tool container

provision.

Capacity: 250 MW

**Equipment:** GE Frame 9FA

**Project Date:** 2022



**Angola - Chromalloy** 

Owner: Chromalloy

**Service Type:** Manpower and Tooling

Support

**Project** Borescope Inspection of GE

**Scope:** Frame 6B Heavy Duty Gas

Turbine

Capacity: 40 MW

**Equipment:** GE Frame 6B

**Project Date:** 2021 (Completed)



#### **Project References – Hydroelectric Turbines**









| Ka | rasu | HF | <b>PPs</b> |
|----|------|----|------------|
|    |      |    |            |

**Service Type:** Operation &

Maintenance

Capacity: 2 x 2,05 MW

2 x 1,60 MW

3 x 3,64 MW

2 x 2,43 MW

2 x 2,25 MW

**Equipment:** Horizontal Francis,

Vertical Kaplan,

**Vertical Francis** 

**Project Date:** Since 2020

#### **Defne HEPP**

**Service Type:** Operation &

Maintenance

Capacity: 3 x 2,41 MW

**Equipment:** Horizontal

Francis

**Project Date:** Since 2010

#### Pirinçli HEPP

**Service Type:** Operation &

Maintenance

Capacity: 2 x 9,3 MW

**Equipment:** Vertical Kaplan

**Project Date:** Since 2020

#### **Celtikdere & Cevizlidere HEPP**

Service Type: Operation & Maintenance

**Capacity:** 2 x 1,15 MW 3 x 1,10 MW

**Equipment:**Horizontal Francis

**Project Date:** Since 2013



#### **Project References – Steam Turbines**





#### **ENERJISA**

Owner: ENERJISA

**Service Type:** Maintenance

**Project Scope:** Major Maintenance

Capacity: 156 MW

**Equipment:** Siemens SST-900 with

HP50 Barrel type

**Project Date:** 2022 (Completed)

#### **AB Holding**

Owner: AB Holding

**Service Type:** Maintenance

**Project Scope:** Major Maintenance

Capacity: 165 MW

**Equipment:** Doosan SKODA

Project Date: 2022



#### **Project References – Dismantling**







#### Turkiye, Antalya – AKSA

**Scope:** Dismantling

**Equipment:** Combined Cycle Power Plant

(CCPP)

**Project Date:** 2020

#### Turkiye, Bursa – ENTEK Energy

**Scope:** Dismantling & Recycling

**Equipment:** GE LM2500+

**Project Date:** 2018 – 2019

#### Turkiye, Ankara – Ayen Ostim

Scope: Dismantling & Recycling

**Equipment:** GE LM2500+

Project Date: 2018





3609 County Road 55A

Corpus Christi ,Texas 78406

United States of America

#### Pro-Per HQ Istanbul, Turkey



#### Baseload HQ Texas, USA



