KARPOWERSHIP
Energy Flagship of Karadeniz Holding

ONE OF THE LEADING HOLDING COMPANIES
• Established in 1948
• 2,200+ employees
• Global reach
• Active in various industries: Energy, Finance, Real Estate, Tourism

INTEGRATED ELECTRICITY GENERATION AND TRADE COMPANY
• Developer of Powership concept
• Current installed capacity domestic and international in excess of 3,000 MW
• First electricity exporter in Turkey

IN-HOUSE EXPERIENCE AND KNOW-HOW
In-house experience and capabilities;
• Design and Construction
• Operation and Maintenance
• Fuel Management
• Site Preparation
• Contract Management
DOMESTIC MARKET

General Information

• Generation capacity: 454 MW
  264 MW in operation
  190 MW under construction
• The first private wholesale company and cross border electricity trader
• 24 MW of the geothermal electricity generation is operational
• 10 MW of solar power plant is under construction
• 140 MW of geothermal power plant is under construction
• Domestic generation portfolio includes:
  • Natural Gas
  • Heavy Fuel Oil
  • Geothermal
  • Solar
• Received the following awards from Istanbul exporters associations:
  • First place 2006, 2010
  • Second place 2008
  • Third place 2007, 2009, 2014
INTERNATIONAL MARKET POWERSHIP
WHAT IS POWERSHIP?

• A floating power plant, either self propelled or barge mounted

• Can operate on both Natural Gas/LNG and Heavy Fuel Oil

• Has the lowest cost of electricity and highest efficiency

• Delivered in 90 - 180 days ready to generate electricity
INTERNATIONAL MARKET

Powership Fleet: 2,700 MW completed

5,300 MW under construction

Our Fleet

• Karpowership designed and constructed its "Powership" project in order to establish the world's first floating power plant fleet

• The project “Power of Friendship” serves to fulfil the urgent electricity needs of all countries in the world in the most cost competitive manner

• 13 Powerships 2,700 MW completed

• Operating the Powership Fleet across Middle East, Asia, Africa and the Mediterranean

• 5,300 MW in the construction pipeline as new Powerships with capacities ranging between 30-620 MW ready to be deployed every 2-3 months
POWERSHIP
All Purpose Energy Supply

POWERSHIP SOLUTION
INTERMEDIATE
SHORT / MEDIUM / LONG TERM

Capacity: 30-620 MW
Contract Term: 1-25 years
Delivery: 3-6 months
Fuel: HFO / NG / LNG

Capacity: 10-100 MW
Contract Term: 6 months - 1 year
Delivery: 3-4 months
Fuel: Diesel

Capacity: 500-1500 MW
Contract Term: 10-25 years
Delivery: 36-60 months
Fuel: Hydro / Coal / NG / LNG
### INTERNATIONAL MARKET
Powership One-Stop Solution Partner

<table>
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<tr>
<th>FAST TRACK</th>
<th>HIGH EFFICIENCY</th>
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<tbody>
<tr>
<td>• 30-400 MW delivered within days</td>
<td>• Delivering highest efficiency</td>
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<tr>
<td>• No major site preparation required</td>
<td>• Utilizing Dual Fuel engine technology</td>
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<td>• No completion or construction risk</td>
<td>• Suitable for base load and peak shaving</td>
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<td>• Delivered ready for power production</td>
<td>• Significant savings per kWh</td>
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### ECONOMICAL
- Primary fuel is the low cost low Sulphure HFO instead of more expensive Diesel
- Lowest cost of delivered mobile power
- Multi fuel flexibility (NG/LNG/HFO)
- Immediate impact for sustainable growth
- Guaranteed availability and efficiency

### INTEGRATED
- Delivered Ready to Operate – Plug & Play
- On-board HV substation
- Direct grid connection
- On-board fuel storage
- On board accommodation
- No land infrastructure
WE ARE CURRENTLY CONTRACTED TO SUPPLY
AND HAVE BEEN GENERATING

15% OF LEBANON
13% OF GHANA
10% OF ZAMBIA
30% OF NORTH SULAWESI, INDONESIA
55% OF EAST NUSA TENGGARA, INDONESIA
80% OF AMBON, INDONESIA
10% OF MEDAN, INDONESIA
*15% OF SOUTHERN IRAQ (2007 – 2016)

OF TOTAL ELECTRICITY DEMAND
POWERSHIP CLASSES

KHAN CLASS

>300MW

SHARK CLASS*

100-300MW

SEAL CLASS*

30-100MW

WHALE CLASS*

>300MW

ORKA CLASS

100-300MW

MERMAID CLASS

30-100MW

*Regas facility on board
Country: TBD
Client: TBD
Capacity: 216 MW
Class: Shark
Country: Lebanon

Client: Electricite du Liban

Capacity: 203 MW

Class: Orka
Country: Ghana
Client: Electricity Company of Ghana
Capacity: 235 MW
Class: Orka
Country: Indonesia
Client: PT PLN
Capacity: 125 MW
Class: Shark
Country: Indonesia
Client: PT PLN
Capacity: 125 MW
Class: Shark
Country: Ghana
Client: Electricity Company of Ghana
Capacity: 470 MW
Class: Khan
Country: Indonesia
Client: PT PLN
Capacity: 470 MW
Class: Khan
KARPOWERSHIP AROUND THE WORLD

OFİSLER / OFFICES

ACCRA
AMSTERDAM
ANKARA
BASRA
BEIRUT
BUENOS AIRES

Dubai
ISTANBUL
JAKARTA
JOHANNESBURG
LONDON
MALTA

NAPUTO
Nicosia
SINGAPORE
YANGON
WINONDÆK

PROJE SAHALARI / PROJECT SITES

AMBON
AMURANG
JIEH
KUPANG
LOMBOK
MEDAN
NACALA
TEMA
ZOUK
POWERSHIPS AROUND THE WORLD

LEBANON
- Orhan Bey 203 MW
- Fatmagül Sultan 203 MW

GHANA
- Ayşegül Sultan 235 MW
- Osman Khan 470 MW

UNITED KINGDOM
- Expected COD 2018

MOZAMBIQUE/ZAMBIA
- İrem Sultan 112 MW

INDONESIA
- Zeynep Sultan 125 MW
- Gökhan Bey 125 MW
- Onur Sultan 470 MW
- Yasin Bey 125 MW

GHANA
- İrem Sultan 112 MW

UNITED KINGDOM
- Metin Bey 125 MW
Powerships will be deployed in several different locations within Ports and will be supplying electricity to the Ports and their private wire network customers for a period of 5 to 10 years for up to 200MW. Where feasible, the projects may have grid connection to play in the capacity and ancillary services market in the UK. Being close to the demand centre, Powerships will avoid high transmission costs and reduce the invoice for the customers. Expected COD is in 2018.

Our Sites

1. **Port of Tyne**: 40 MW Seal Class, Natural Gas Operation, Private Wire Network Customers, Potential grid connection

2. **Port of Tilbury**: 40 - 80 MW Powership, Natural Gas Operation, Private Wire Network Customers, Potential grid connection

3. **Isle of Grain**: 120 - 640 MW Powership, Natural Gas Operation, Direct national Grid Connection
PROJECTS IN MIDDLE EAST: IRAQ AND LEBANON

Project Iraq (past project)

Karpowership had a 410 MW of Powership contract with Iraq, supplying electricity between 2010 and 2016.

Iraq holds a unique position for the Power of Friendship Project. Iraq is the first country where Karpowership deployed a Powership, the first country to order additional Powerships after Karpowership’s satisfactory performance, and also, Iraq became the first country to extend its contract terms after initial term was successfully completed.

Project Lebanon

In 2012, Karpowership was awarded a contract by the Lebanese Electricity Utility (EDL) to provide 2 Powerships totaling 270 MW of base load generation capacity.

Capacity of existing Powerships were increased on-site upon additional demand for electricity from the off-taker. In 2016 the contract capacity was increased to 370 MW of reliable power from the Powerships for another 2 years.
Indonesia is Karpowership’s first project in South East Asia. Karpowership has been awarded a 540 MW tender by the state utility PT PLN (Persero) to supply electricity in 5 different islands of the Indonesian Archipelago for 5 years. The first Powership of the Project has arrived to North Sulawesi, Manado and started operations in January 2016. The second started operations in December 2016 in Kupang. The third started operations in April 2017 in Ambon. The fourth started operations in June 2017 in Medan. Additional one Powership will start operation within the 4th quarter of 2017. In total our installed capacity will reach more than 1000 MW in Indonesia.
Project Zambia

Zambia is Karpowership’s first cross-border project. In November 2015, Karpowership was awarded to supply electricity to land-locked Zambia via cross-border interconnection lines through Mozambique and Zimbabwe. This economically critical electricity is delivered working in partnership with Mozambique’s and Zambia’s national utilities, Electricidade de Mozambique (EdM) and ZESCO.

The Powership started delivering electricity in March 2016, within four months from contract signing. The contract is to initially supply 100 MW of base load power.
The first project in Africa
In 2014 Karpowership Ghana Company Limited signed a Power Purchase Agreement with the Electricity Company of Ghana Limited to supply 450MW Powership.
In November 2015, the first Powership with an installed capacity of 235MW arrived in Ghana.
The Powership begun operations in December same year operating from the Tema Fishing Harbor.
Since then the Powership has been supplying consistent reliable and affordable electricity.
In August 2017 Karpowership deployed an installed capacity 470MW Powership to Ghana.
The Powership which is the world’s largest Powership begun operations in October from the Tema Fishing Harbor.
Powership project engaged both local and expatriate workforce.
The Powership project has provided employment for about 200 people in Ghana.
ENVIRONMENT AND PEOPLE

Corporate Social Responsibility & Sustainable Development

Community Involvement

Environmental Action

Economic Growth
Environment, Health and Safety

- Enframed with a corporate level EHS policy, all IFC Performance Standards, Guidelines and industrial best practices are implemented in all of our operations.
- Put onto two pillars as Occupational Health & Safety Management and Environmental & Social Management, each system includes job specific procedures starting from greenfield project till decommissioning phase.
- Regular EHS inspections and monitoring are conducted by identifying the risks and implement appropriate control measures to ensure continuous improvement in EHS management.
- Stakeholder engagement plans and tailor-made grievance mechanism are conducted inline with IFC and destination country requirements.
INTEGRATED MANAGEMENT SYSTEM CERTIFICATION

ISO 9001:2015 Quality Management

ISO 14001:2015 Environmental Management

OHSAS 18001:2007 H&S Management

IFC Certification
Karpowership engages in Corporate Social Responsibility projects in communities it operates.

As part of our CSR strategy, regular stakeholder engagements are held in order to ascertain the views of stakeholders regarding our operations.

Again the stakeholder engagements also informs us about CSR projects to embark on.

Stakeholder Engagements

• Regular engagements with stakeholders
• This is done to get stakeholders acquainted with the operations of the Powership
• It is also a mechanism to ascertain any concerns with regards to our operations
• To ascertain views regarding implementation of CSR projects

2017 and 2016

Three stakeholder meetings held

• Fishmongers association
• Fishermen association
• All operational stakeholders
OUR CORPORATE SOCIAL RESPONSIBILITY PROJECTS

CSR projects are focused on these areas

• Education
• Community support
• Environmental sustainability

Education
• Provision of ultra modern computer laboratory for the Manhean Anglican JHS
• Distribution of 2,000 school backpacks and stationary to the students in the community
• Annual bursary for brilliant but needy students in the community
• Provision of water tanks to community schools

Community Support
• Distribution of Fishing nets and Wire Mesh to Fishermen and Fishmongers
• Distribution of resource materials to the Manhean Police station
• Annual donations to the Muslim community regarding Ramadan Eid-Al Adha
• Donations to the SOS orphanage, Homowo festival

Environmental sustainability
• Regular clean up exercise with the community