



# TechnoGroupService

**TGS**  
DESIGN

**TGS**

**TGS**  
CONSTRUCTION

# ABOUT THE COMPANY

# TGS



TechnoGroupService LLP (hereinafter referred to as TGS) is an engineering group of companies that implements projects in the field of renewable energy sources using adaptive innovative solutions and maximizing domestic content.

- ✓ Extensive experience of employees as part of the industry leaders of JSC "KEGOC", JSC "Energoinform", JSC "Samruk-Energo", LLP "Samruk-Green Energy";
- ✓ Providing solutions in a short time by using our own resources and the experience of foreign companies;
- ✓ Quality assurance and fulfillment of warranty obligations by suppliers of equipment and services;
- ✓ Ensuring the best price/quality ratio;
- ✓ Participation in the construction of 10 MW Kengir Dzhezkazgan SES, 45 MW Ereimentau SES, 2 MW Kapchagai SES, 50 MW Balkhash SES, 1.2 MW Jez-Solar SES, etc.
- ✓ Measurement of wind energy potential in Pavlodar, Aktobe, Karaganda, Akmola and Mangistau regions;
- ✓ Development of its own proprietary IT program for energy forecasting of generation from renewable energy sources;
- ✓ Winner of the Presidential contest "ALTYN SAPA" in 2021;
- ✓ Members of the Kazakhstan Electric Power Association and RES.



# FIRST IN THE INDUSTRY



01

Own development IT-programs



02

Work under the PMC mechanism



03

Own fixed load-bearing metal structures for photovoltaic modules



04

Charter for the purposes of RES



05

Victory in "Altyn Sapa"!



06

New financial instrument

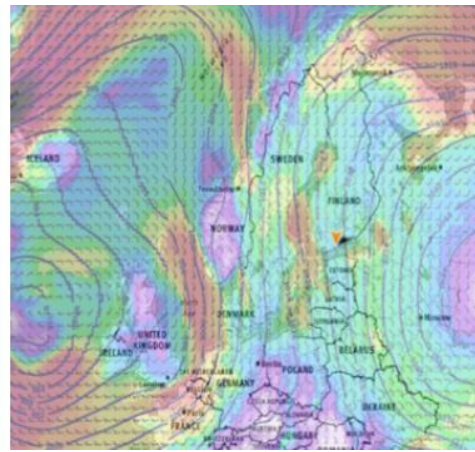


07

New projects in Central Asia



# COMPANY ACTIVITIES



## DESIGN

All design work

## WIND MONITORING

Development of annual reports with the "bankable" status

## CONSTRUCTION

CIW and production of equipment for renewable energy projects

## IT SERVICES

Forecasting electricity generation

## SERVICE

Generating units and network equipment

## CONSULTING

Justification and attraction of investments

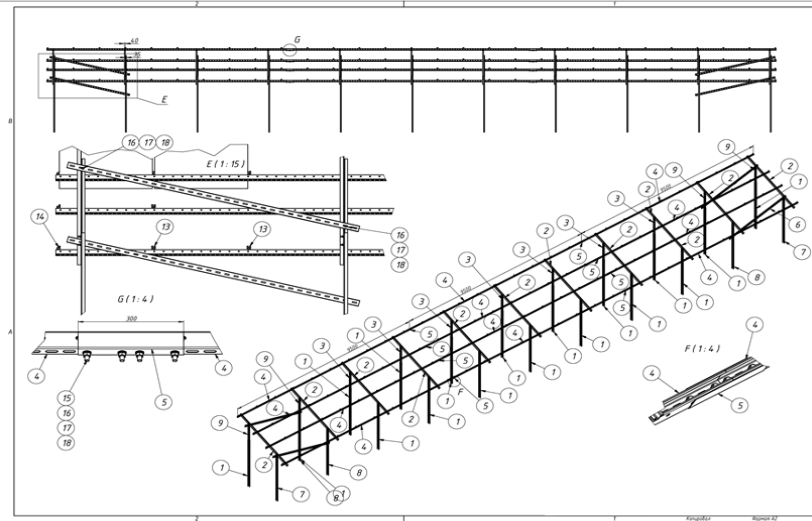
## GUARANTEED POWER SUPPLY

Provision of electricity generation

Preserving the longevity of the asset

Reduction of operating expenses

## DESIGN



- The company designs renewable energy facilities of various capacities and types, including hybrid ones;
- At the project stage, the company offers its Clients solutions to optimize capital and operating costs.
- Design and survey work;
- Preliminary design;
- Project documentation;
- Working documentation;
- Estimated documentation;
- Author's supervision.

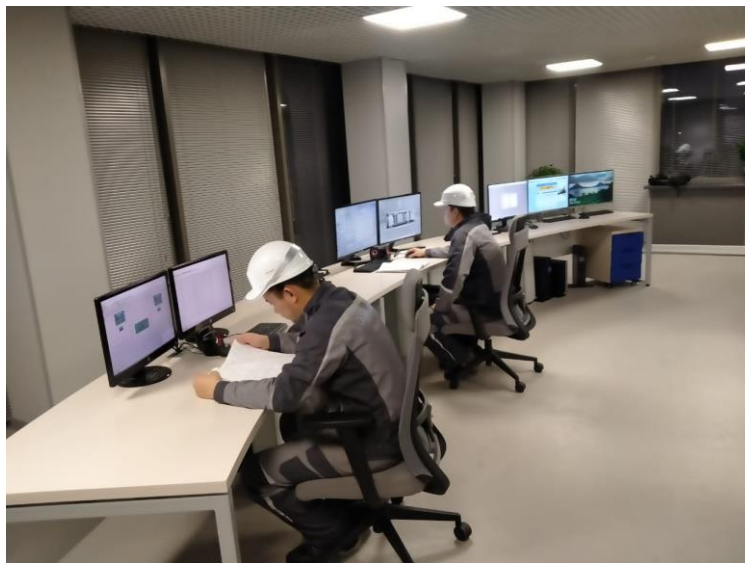
The company designed its own load-bearing metal structures for photovoltaic modules, and also organized their production in the Republic of Kazakhstan.

## CONSTRUCTION



- Site preparation
  - Construction
  - Supply of equipment
  - Installation
  - Adjustment work
  - Commissioning
  - Advance payment refund guarantee;
  - Guaranteed operational readiness of the facility;
  - Power Generation Guarantee
- Guarantees are provided in the form of insurance contracts under which the Customer/Lender is the Insured/Beneficiary.

The company successfully commissioned wind and solar stations with a capacity of 65 MW.



## SERVICE

# TGS

- Operation of technical, technological equipment of the station;
- Development of the PM schedule and its implementation;
- Carrying out operational switching;
- Development of regulatory and technical documentation.
- Providing information on the current status of the SPP on a regular basis and upon request;
- Carrying out reconciliation of generation by metering devices.

The main task of maintaining the station is to ensure planned power generation and maintain the durability of the asset.

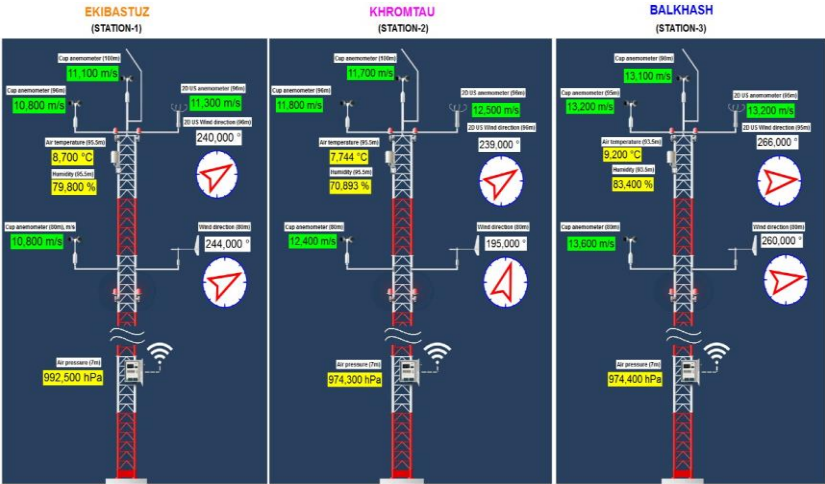
## GUARANTEED ENERGY SUPPLY

- Studying the schedule of the daily and annual load of the Buyer;
- Calculation of the optimal power and type of RES;
- Conclusion of a long-term PPA contract;
- Construction of a renewable energy facility at the expense of own and credit funds;
- Supply of electricity according to the approved schedule.
- Granting to the Buyer the rights to CO2 quotas from RES;
- No currency indexation;

The main objective of a guaranteed energy supply from RES is to provide conditions competitive with the current energy supply from traditional sources and at the same time ensure the reduction of CO2 emissions.







- Site selection, design, approval and installation of a meteorological tower;
- Ensuring the reception, storage and processing of incoming weather data;
- Providing a comparative analysis of power generation from different manufacturers of wind turbines.
- Providing services with our own high-precision equipment;
- Providing regular reports at the request of the Customer

The main task is to measure the wind according to the international standard IEC 61400-12-1 Ed.2 and submission of the Annual Report with the status of "bankable".

## IT SERVICES

- Providing software solutions for monitoring the operation of the station online;
- Forecasting of energy generation by the station for a month and a day ahead using its own software and hardware complex;
- Creation of automated systems for the technical accounting of energy resources in order to ensure their control and savings;
- Creation of automated systems for commercial accounting of electricity.

IT-systems are aimed at increasing efficiency, visualization and saving energy resources.



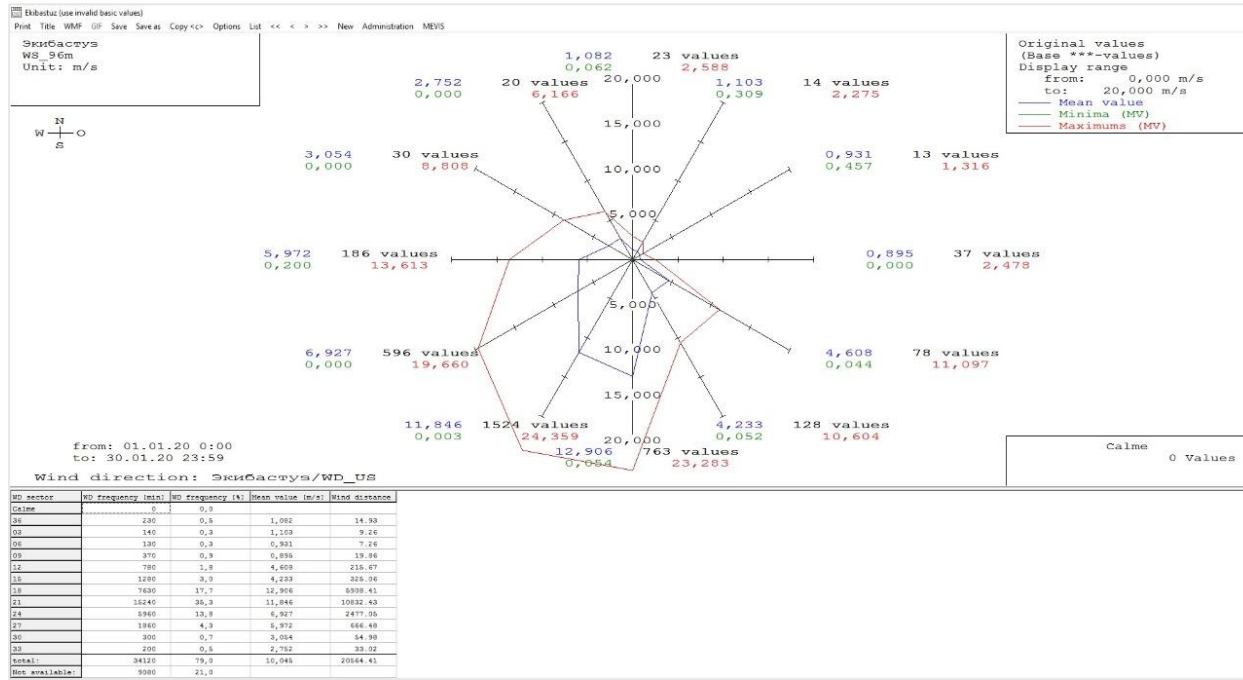
## CONSULTING

- Registration of rights to a land plot for renewable energy;
- Development of a financial model and business plan for the project;
- Development of a power distribution scheme and obtaining Technical conditions for connection;
- Obtaining tax benefits and preferences;
- Optimization of capital and operating expenses

Consulting covers all stages of the project implementation - from the preparation of the concept to the operational maintenance of the station



## Wind measurements using Meteorological masts 100 meters high

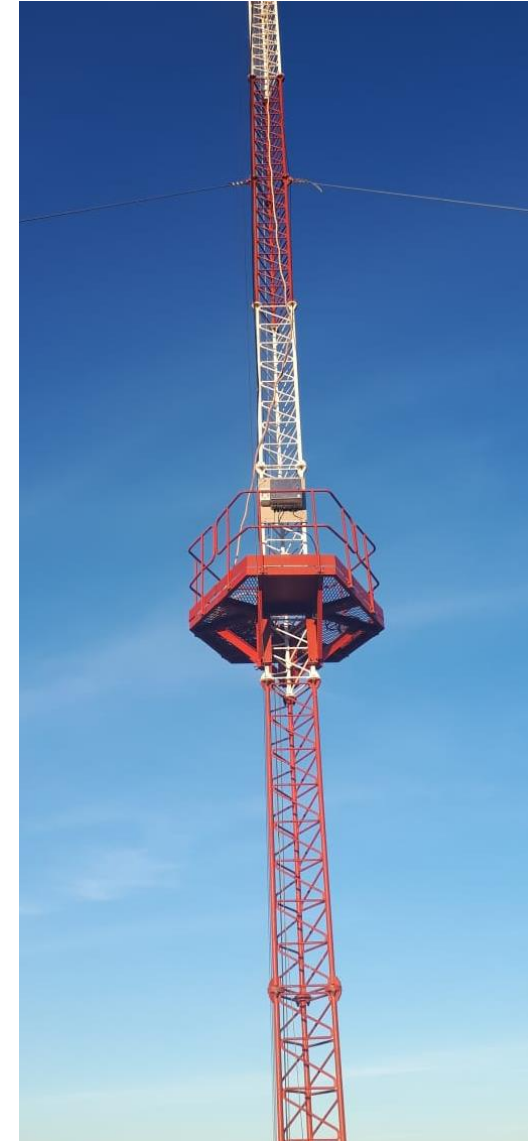
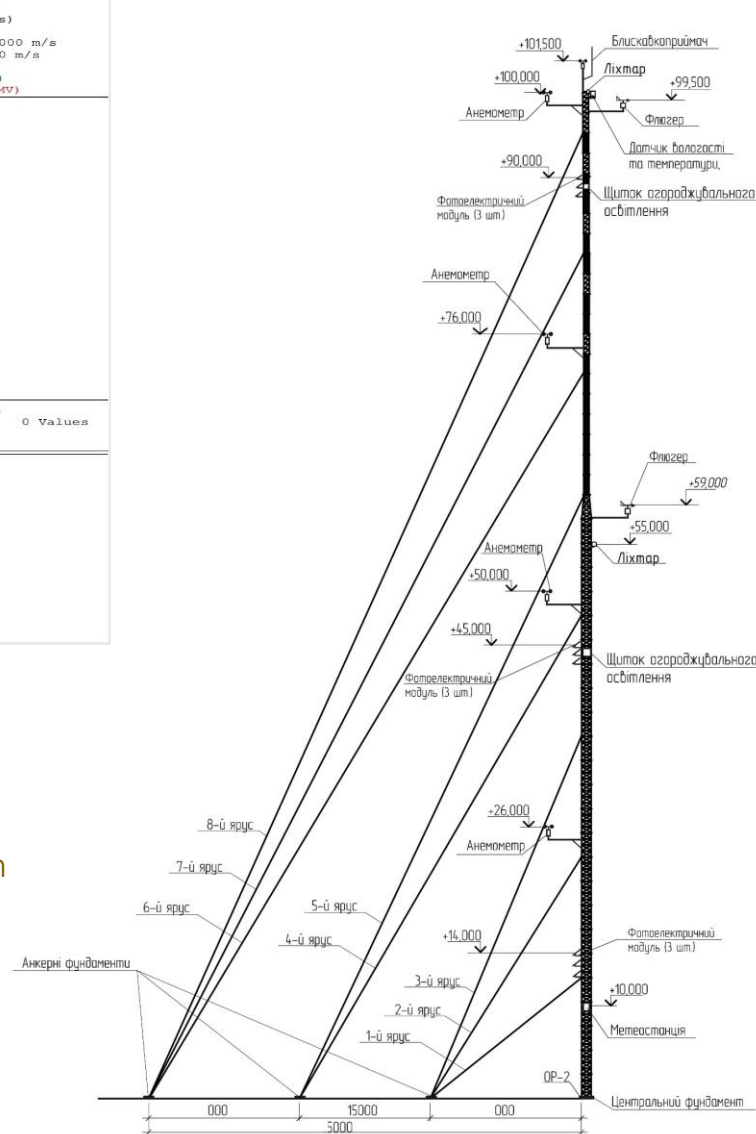


### Characteristics of the weather mast:

- Steel lattice, 100 m high;
- It is fixed on the foundation with braces from three sides;
- Operation at wind speed up to 37 m/s and temperature up to -55C;
- Equipped with main and auxiliary meteorological equipment, obstruction lights;
- Medium speed wind 8.2m/With.

<https://www.youtube.com/watch?v=tHdUsA000AA>


<https://www.youtube.com/watch?v=ipk5xrwW7lc&t=7s>







22011263



**ЛИЦЕНЗИЯ**

**16.06.2022 года** **22011263**

**Выдана** Товарищество с ограниченной ответственностью "ТГС-Проект"  
100000, Республика Казахстан, Карагандинская область, Жезказган Г.А., г. Жезказган, Промышленная зона Южная Промзона, здание № 2/2  
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**на занятие** Проектная деятельность  
(наименование лицензируемого вида деятельности в соответствии с Законом Республики Казахстан «О разрешениях и уведомлениях»)

**Особые условия** I категория  
(в соответствии со статьей 36 Закона Республики Казахстан «О разрешениях и уведомлениях»)

**Примечание** Неотчуждаемая, класс I  
(отчуждаемость, класс разрешения)




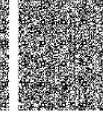
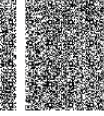
**Лицензиар** Государственное учреждение "Управление государственного архитектурно-строительного контроля Карагандинской области".  
Акымат Карагандинской области.  
(полное наименование лицензиара)

**Руководитель (уполномоченное лицо)** Слубай Тилек Кайырбекұлы  
(фамилия, имя, отчество (в случае наличия))

**Дата первичной выдачи** 31.03.2022

**Срок действия лицензии**


**Место выдачи** г.Караганда

## State license TGS-Design

Category 1 license for project activities

22004522



**ЛИЦЕНЗИЯ**

**05.03.2022 года** **22004522**

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010000, Республика Казахстан, Карагандинская область, Жезказган Г.А., г. Жезказган, Промышленная зона Южная Промзона, здание № 2/2  
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(полное наименование, местонахождение, бизнес-идентификационный номер юридического лица (в том числе иностранного юридического лица), бизнес-идентификационный номер филиала или представительства иностранного юридического лица – в случае отсутствия бизнес-идентификационного номера у юридического лица полностью фамилия, имя, отчество (в случае наличия), индивидуальный идентификационный номер физического лица)

**на занятие** Строительно-монтажные работы  
(наименование лицензируемого вида деятельности в соответствии с Законом Республики Казахстан «О разрешениях и уведомлениях»)

**Особые условия** I категория  
(в соответствии со статьей 36 Закона Республики Казахстан «О разрешениях и уведомлениях»)

**Примечание** Неотчуждаемая, класс I  
(отчуждаемость, класс разрешения)

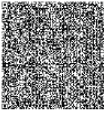
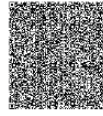
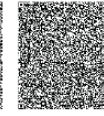
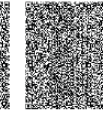
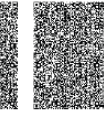
**Лицензиар** Государственное учреждение "Управление государственного архитектурно-строительного контроля Карагандинской области".  
Акымат Карагандинской области.  
(полное наименование лицензиара)

**Руководитель (уполномоченное лицо)** Камзин Кайрат Амангельдиевич  
(фамилия, имя, отчество (в случае наличия))

**Дата первичной выдачи** 15.12.2021

**Срок действия лицензии**

**Место выдачи** г.Караганда

## State license TGS-Construction

Category 1 license for construction and installation works

TechnoGroupService LLP has a specialized subdivision in the form of subsidiaries TGS-Design LLP and TGS-Construction LLP, which directly carry out all design and construction and installation work within the framework of the project.





## Victory in "Altyn Sapa"

TechnoGroupService LLP is pleased to announce the victory in the presidential competition "Altyn Sapa" in the nomination "The best enterprise providing services." The anniversary award ceremony was held in the capital on December 7, 2021.

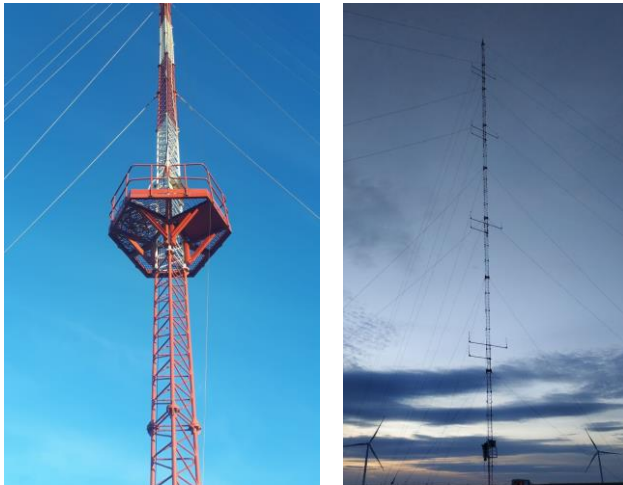
TGS is the first winner in the history of the competition, whose activities are aimed at the implementation of "green" projects.





On the territory of Kazakhstan, wind measuring masts are installed, providing an annual report on natural conditions: **Khromtau, Badamsha, Ekibastuz, Astana, Balkhash, Aktau, Zhanaozen, Kuryk, Ustyurt, etc.**

Construction and commissioning **solar power plant Kengir with a capacity of 10 MW, Zhez-Solar 1.2 MW near the city of Zhezkazgan and 100 MW - the first stage of 50 MW near the city of Balkhash, SPP 300 MW in Kyrgyzstan, CCGT 240 MW and WPP 45 MW in Kazakhstan, etc. .**



100m. weather masts, Kazakhstan



Solar power plants 50 MW and 10 MW



DEUTSCHE  
**WINDGUARD**



**Thies**  
KLIMA