

# PROJECT DEVELOPMENT RENEWABLE ENERGY

**GERMANY & TURKEY** 

**CONNECTING PARTNERS AS A WHOLE!** 

# WPH GROUP IN GENERAL

The WPH Group keeps excellent contacts on all levels in Germany and Turkey and is in intensive relationship with business partners around the world. Recently the WPH Group has put a special focus to South-East Europe and Arabic Countries too.

The WPH Group is an official expert for Turkey for the Chamber of Commerce and Industry of Hannover. Recently the WPH Group was awarded to be accredited consultant of N-Bank and KFW of Germany, representative of the economic development department of the City of Hannover, as well as for Turrsef of Turkey.

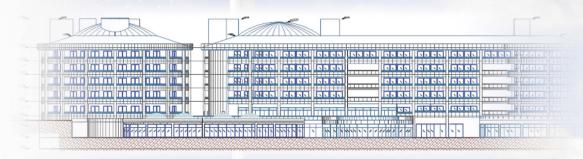


The range of services and activities of the WPH Group and it's local partners comprises:

- Foreign Trade Consulting
- Business Development Consulting
- Project Development and Studies
- Project- and Business-Financing
- International Construction Projects
- Assistance and Management of Projects based on Renewable Energies
- License and Project Trade

# PROJECT DEVELOPMENT

The WPH Group is a competent partner with regard to development and management of 'Green Energy' projects. Customers will easily benefit from the long experience with businesses in Turkey and adjacent countries.



Services can be provided from the procurement and sale of a license up to a complete turnkey project.

In detail the WPH Group is pleased to offer:

- Procurement of properties on lease base (49 years)
- Communication with local authorities
- Handling of all necessary requests
- Support to get local aid money and grants
- Design and installation of complete systems with local partners
- Procurement and sale of licenses

We would be happy to convince you of our competences, international experiences and comprehensive project management support.

Please have a look at the reference page showing a selection of already installed systems which are operating to the complete satisfaction of our customers.

## BUSINESS SEGMENT RENEWABLE ENERGY

For a fairly long time the support and management of renewable energy projects have got an extraordinary standing in the affairs the WPH Group attends to.

This includes the generation of 'Green Energy' as well as an environmentally conscious consumption.



## The WPH Group system competence

The WPH Group and its partners offer state-of-the-art systems based on solar and wind energy. These systems can be designed very efficiently in Turkey and adjacent states due to the high sun radiation down there and the long coast areas at the Mediterranean and Black Sea.

The generated electrical power can be used for private and for industrial purposes. Energy not being used for one 's own end can be fed into the public network or stored in additional electric buffer storage.

The WPH Group offers systems of different levels matching the customer requests:

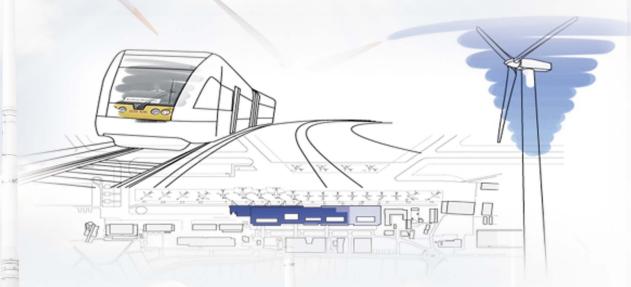
- Solar systems to generate electrical power
- Solar systems to generate electrical power and hot water
- Solar systems for parking areas and face of buildings
- Wind power systems
- Electric buffer storage
- Water supply systems
- Combined systems
- Hydro-Power-Plants
- Systems based on Natural Gas



Electric storage

# **ECONOMIC CONSULTING**

The WPH Group has a long experience with regard to economic consulting not only in the Turkish market. The company is benefiting from the long history of the prominent position which has been already established in the German market and South-East Europe.



Subsequently a selection of services and supports offered by the WPH Group:

- Market research and analysis of local conditions
- Market development or cooperation
- Selection and qualification of suppliers
- Preparation of joint ventures and investments
- Personnel recruitment
- Acquirement and Investment in real estate
- Settlement of enterprises

The WPH Group is prepared to answer individual customer's requests, too.

Your idea and our know-how - that's how business has to be implemented!

## BUSINESS SEGMENT RENEWABLE ENERGY

#### Hot tap water generation

This solar system is designed for electrical power and hot tap water generation to be used for different applications too. Such a hybrid system makes the available roof area to bring a profit of extraordinary amount compared to well-known photovoltaic systems.





#### **Tracking systems**

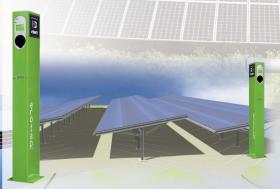
Tracking systems adjust the photovoltaic modules to the position of the sun in order to get a maximum of yield. An additional profit of more than 35% can be achieved compared to fix-systems being installed southwards. These systems already achieve 90% of the maximum power shortly after sunrise and keep it by all means until sunset. The WPH Group is proud to offer tracking systems up to 4 KWp.

#### **Electric Buffer Storage**

The environmentally friendly buffer storage increases the efficiency of the self-produced electrical power as the power which isn't consumed in the daytime can be used at night (e.g. tools of permanent operation) or when no electrical power is produced by sun and/or wind. The combined systems operate with a state-of-the-art control box permanently monitoring and optimizing the generation of energy, consumption, storage or additional purchase. The system minimizes the additional power purchase or switches immediately to 'Off-Grid Operation' in case of a black out.



In 'Off-Grid Operation' the system operates independently from the public power grid. Power black outs can easily be overcome. In addition it is a contribution to a decentralized power supply.



**The WPH Group** is proud to offer buffer storages with a minimum capacity of 5KWh.

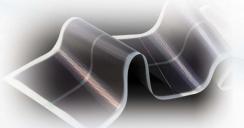
Due to the modular design it can be extended up to a capacity of several MWh.

This system can be extended with a charging station of electrical cars. It can be combined with solar carports.

# BUSINESS SEGMENT RENEWABLE ENERGY

## Photovoltaic foil for facade applications

Nearly all facades and roof shapes can be used for power generation with our special photovoltaic foil. On one hand it is very light on the other hand very efficient.



#### Water supply systems

'Off-Grid Solutions' can also be used for drinking water pumping and treatment. These solutions are ideal at locations where no power network is available.

The WPH Group provides pump systems starting from a single-family home up to industrial applications e. g. a market garden.

It can be combined efficiently with solar greenhouses.



#### Wind power systems

Small wind power systems increase the locally generated power. They are very efficient especially at exposed locations without affecting the environment with large rotor blades. Due to an optimized control unit and especially shaped rotor blades small wind power systems affect a respectable economy in energy cost with minor wind intensity, yet.

The WPH Group is proud to offer state-of-the-art wind power systems up to 50 KW.

Larger wind turbines up to a power of 5 MW can be delivered on request.

## **Hydro-Power-Plants**

The WPH Group and the local partners coordinate HPP projects in Turkey and various countries in South-East Europe. It is long since the WPH Group is specialized in the advisory service and support of investments and realizations of HPP projects. Projects of different sizes can be managed. The WPH Group is able to arrange strategic partnerships between investors and project developers respectively owners.



#### **LED Lights**

The WPH Group takes a responsible position with regard to an environmentally friendly energy policy. Therefore low power consuming LED lights have been added into the product portfolio. These state-of-the-art LED lights provide a very powerful light for private usage as well as for offices, industrial applications or street lights.

The WPH Group experts will be happy to select the right choice for your application



















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