

# **WPHGroup in General**

## **Germany & Turkey Connecting partners as a whole!**

The WPHGroup keeps excellent contacts on all levels in Germany and Turkey and is in intensive relationship with business partners around the world, too.

Recently the WPHGroup has put a special focus to South-East Europe and Arabic Countries too.

The WPH Group is official expert for Turkey for the Chamber of Commerce and Industry of Hannover - Hildesheim and consultant for IPA Niedersachsen (Investment Promotion Agency of the Federal State of Lower Saxony). Recently the WPHGroup was awarded to be accredited consultant of NBank and KfW of Germany, representative of the economic development department of the City of Hannover, as well as of Turrsef of Turkey.

The range of services and activities of the WPHGroup 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 base on Renewable Energies
- License and Project Trade

## **Economic Consulting**

The WPHGroup 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 services and supports offered by the WPHGroup:

- 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 WPHGroup is prepared to answer individual customer requests too.

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

## **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 WPHGroup attends to.

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

### **The WPHGroup 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
- Installation of complete systems with local partners
- Procurement and sale of licenses

### **The WPHGroup system competence**

The WPH Group and its partner 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 public network or stored in additional electric buffer storage.

The WPHGroup 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
- Combined systems
- Hydro-Power-Plants
- Systems based on Natural Gas

### **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 compare 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 southward.

These systems achieve already 90% of the maximum power shortly after sunrise and keep it by all means till sunset.

The WPHGroup is proud to offer tracking systems up to 4 KWp.

### **Electric Buffer Storage**

The environmentally friendly buffer storage increases the efficiency of the selfproduced 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.

### **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 WPHGroup 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 WPHGroup 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 WPHGroup and the local partners coordinate HPP projects in Turkey and various countries in south-east Europe.

It is long since the WPHGroup is specialized in the advisory service and support of investments and realizations of HPP projects.

Projects of different sizes can be managed.

The WPHGroup is able to arrange strategic partnerships between investors and project developers / owners.

### **LED Lights**

The WPHGroup takes a responsible position with regard to an

environmentally 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 WPHGroup experts will be happy to select the choice for your application.

### **Photovoltaic foil for facade applications**

Nearly all facades and roof shapes can be used for power generation without special photovoltaic foil. On one hand it is very light on the other hand very efficient.

## **Project development**

The WPHGroup 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 WPHGroup 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.