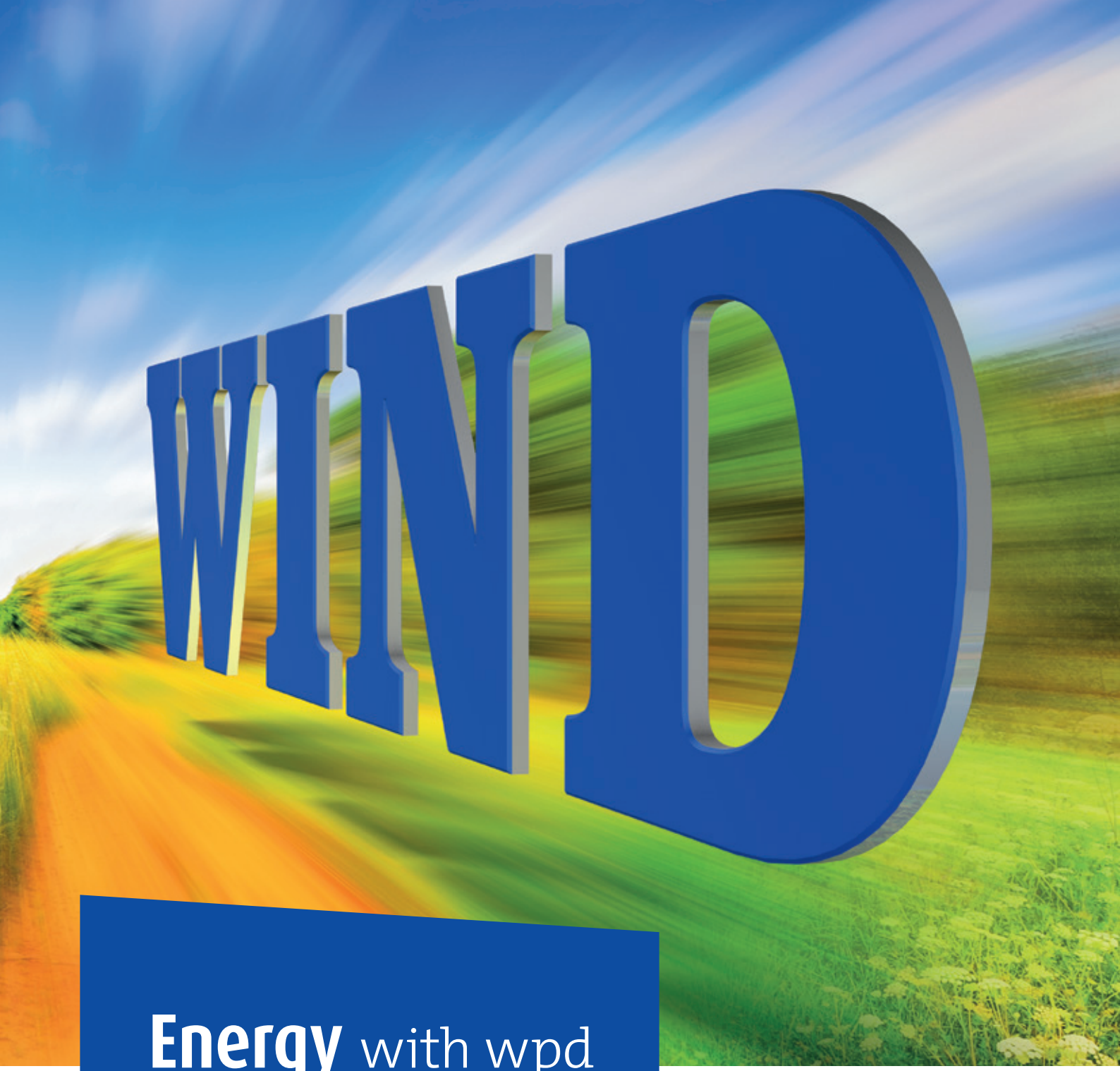


Energy with wpd

wpd

think energy


WIND
SOLAR

Development, financing, construction and operation of wind and solar energy projects

Our expert team is working on the energy turnaround

Finite raw materials, climate change and the question of self-sufficiency in the supply of energy make renewable energies the central component of the energy mix. wpd has been working specifically on implementing this strategy since 1996, and is building new wind power plants in Europe, on the American and the Asian continent.

We have played a determining role in helping to shape the wind industry since its early beginnings and we strive to be proactive in meeting the challenges of the future.

For us, implementing sustainable projects is based on building partnerships on an equal footing as well as on fairness and continuity; the urgent need for decarbonization, but also the political will and social support for the transformation of energy supply are the factors which spur us on. We owe the success of our fast-growing, medium-sized company predominantly to the great commitment, many years of experience and high level of expertise of our staff. Welcome to wpd!

Dr. Gernot Blanke
CEO

Dr. Hartmut Brösamle
COO

Björn Nullmeyer
CFO

Our team in 28 countries

at 71 locations

Germany
Bremen
Berlin
Bietigheim-Bissingen
Dresden
Düsseldorf
Hamburg
Hanover
Kassel
Leipzig
Mainz
Münster
Munich
Osnabrück
Potsdam
Regensburg
Rostock
Schleswig
Würzburg

Belgium
Liège

Bulgaria
Varna

Croatia
Dubrovnik

Finland
Espoo
Uolu

France
Bordeaux
Boulogne-Billancourt
Cholet
Dijon
Lille
Limoges
Lyon
Nancy
Nantes
Paris
Tours

Greece
Athens

Iceland
Reykjavik

Italy
Bari
Cagliari
Rome

Luxembourg

North Macedonia
Skopje

Poland
Gdańsk
Poznań

Romania
Bucharest
Cluj
Iasi

Spain
Valladolid

Sweden
Stockholm
Storuman

Switzerland
Zurich

Ukraine
Czernowitz

Canada
Calgary
Toronto
Victoria

Chile
Punta Arenas
Santiago de Chile

Colombia
Bogota

USA
Houston, Texas
Mission Viejo, CA
Portland, OR

Indonesia
Jakarta

Japan
Tokyo

Mongolia
Ulaanbaatar

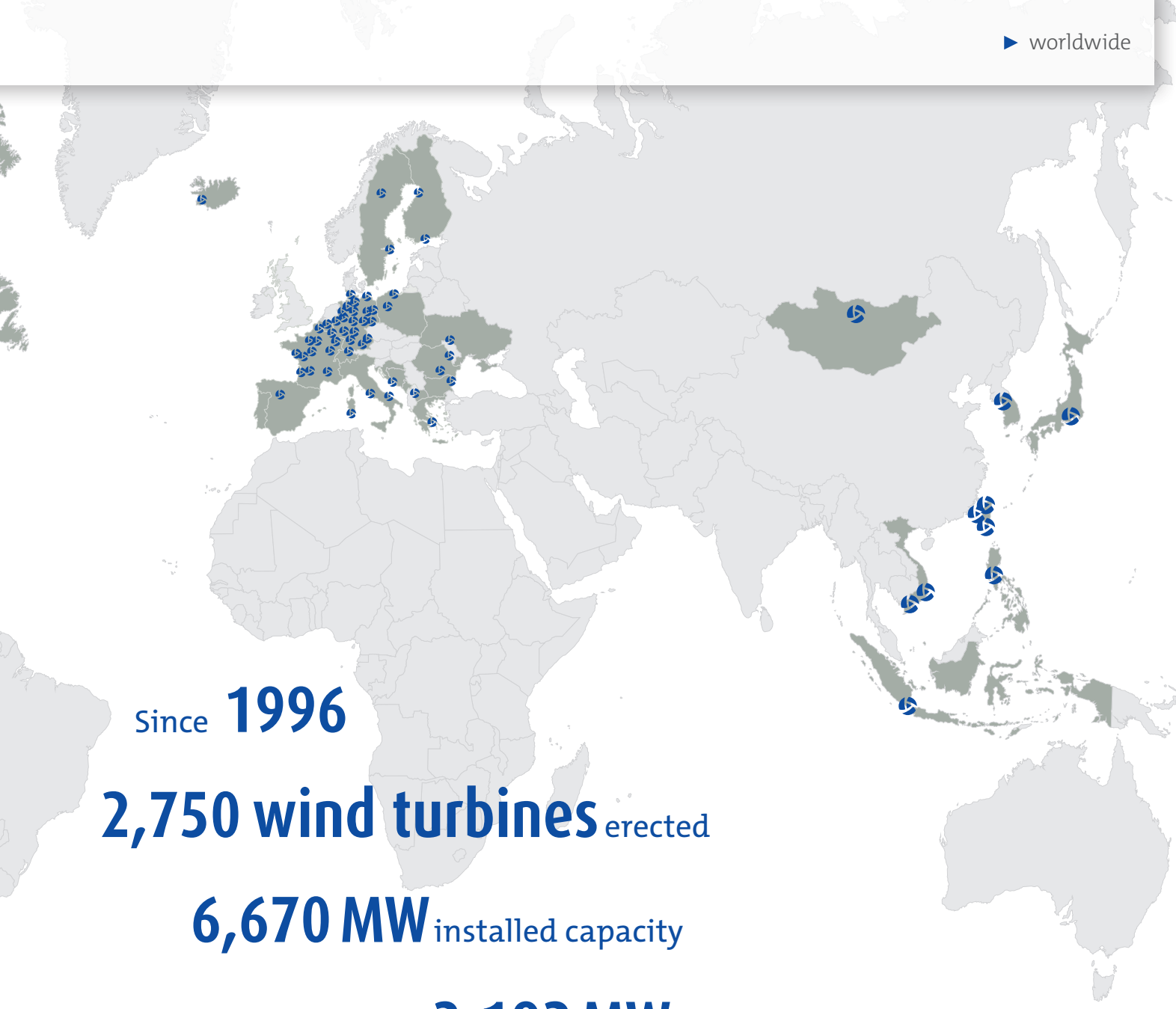
Philippines
Manila

South Korea
Seoul

Taiwan
Taichung
Taipei
Yunlin

Vietnam
Ho Chi Min City
Kon Tum

wpd employees from our office in Bremen



Since **1996**

2,750 wind turbines erected

6,670 MW installed capacity

3,192 MW own capacity

The wpd group

Some
4,000 employees
worldwide

Today, the wpd group employs some 4,000 staff who are driving the expansion of wind and solar energy around the world and who offer a complete value-added chain in this field. The company`s head office has been located in Bremen since wpd was set up in 1996.

1,210 employees
Development and operation

wpd

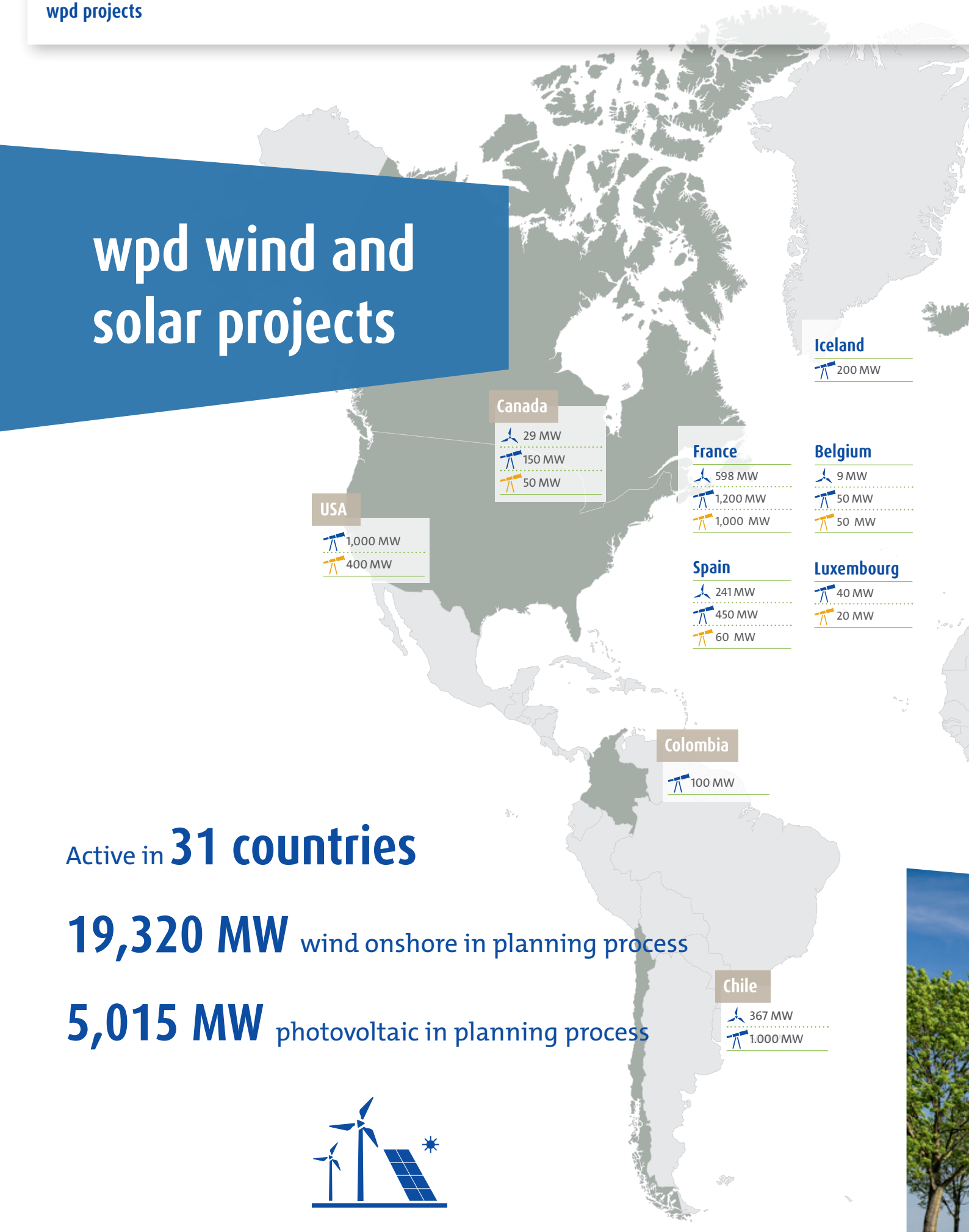
579 employees
Commercial management and technical operational management

wpd windmanager

2,183 employees
Maintenance and service

Deutsche Windtechnik

wpd wind and solar projects



Active in **31 countries**

19,320 MW wind onshore in planning process

5,015 MW photovoltaic in planning process

Sweden
124 MW
1,300 MW

Finland
485 MW
1,200 MW

Mongolia
100 MW

Japan
250 MW

Bosnia-Herzegovina
750 MW

Montenegro
100 MW

Bulgaria
300 MW

North Macedonia
400 MW

South Korea
225 MW

Germany
3,506 MW
6,000 MW
18 MW
2,375 MW

Croatia
92 MW
200 MW

Poland
123 MW
300 MW
200 MW

Taiwan
510 MW
275 MW
18 MW
50 MW

Greece
600 MW
215 MW

Vietnam
410 MW

Romania
750 MW
350 MW

Italy
1,000 MW
100 MW

Ukraine
150 MW

Indonesia
390 MW
65 MW

Philippines
430 MW
80 MW

Key

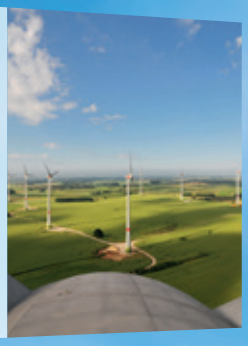
- Wind projects onshore installed
- Wind projects onshore in planning process
- Solar projects installed
- Solar projects in planning process

Status: 12.2023

Benefit from our expertise

1 | Site evaluation

Our engineers identify the best locations for wind farms, taking into account technical and commercial parameters but also conservation concerns and the wishes of the local communities.



2 | Secured under private law

Suitable locations are secured by means of purchase or lease agreements with the property owners.

3 | Determining the potential of the wind

We conduct our own high-quality wind measurements in order to determine the exact potential of the wind and to calculate the potential yield professionally.

4 | Technical planning / Micro-siting

Specialists work out the best possible configuration of the wind farm drawing on a variety of parameters.

5 | Approval process

We conduct all the surveys, produce the necessary documentation and accompany the entire process until final approval.

6 | Planning for connection to grid

Working with the operator of the grid, our electrical engineers draw up the best concept for connecting to the grid.

7 | Finance

We draw up solid financing concepts for the wind farm in conjunction with leading banks.

8 | Construction

Our construction engineers provide support in all phases of the construction process, thereby guaranteeing that the wind farm will be built reliably.

9 | Commissioning

Our electrical engineers ensure that the wind farm is safely connected to the power grid.

10 | Management and operation of the plant

We ensure the best possible technical and commercial operation of the turbines throughout the entire lifetime of the wind farm.

11 | Marketing electricity

We develop innovative concepts in order to act as an independent producer of wind power on the market.

1996

wpd GmbH founded by
Dr. Klaus Meier and Dr. Gernot Blanke

1997

Realisation of the first wind farm:
Olzheimer Berg

2000

wpd offshore GmbH founded

More than 100 turbines and over
100 megawatts on the grid

2001

wpd AG set up

Over 200 turbines and around
240 megawatts in operation

2005

wpd enters the world of international project financing with a
50 megawatts project in Taiwan

Wind turbines with more than 1,000 MW are installed by wpd

2006

wpd acquires EnerSys GmbH; this leads to acceleration of international project development; Managing Director of EnerSys, Dr. Hartmut Brösamle, is appointed to the Board of wpd AG

2011

Stadtwerke München takes a 33 percent stake in wpd europe GmbH; the international onshore activities in Europe and Canada are consolidated in this wpd subsidiary

2014

wpd commissions its first two projects in Canada, and also starts construction of a major project in Finland

2015

Company's own portfolio of wind farms crosses the 1,000 megawatts mark

2016

Tender contract awarded for 350 megawatts for onshore wind farm in Chile

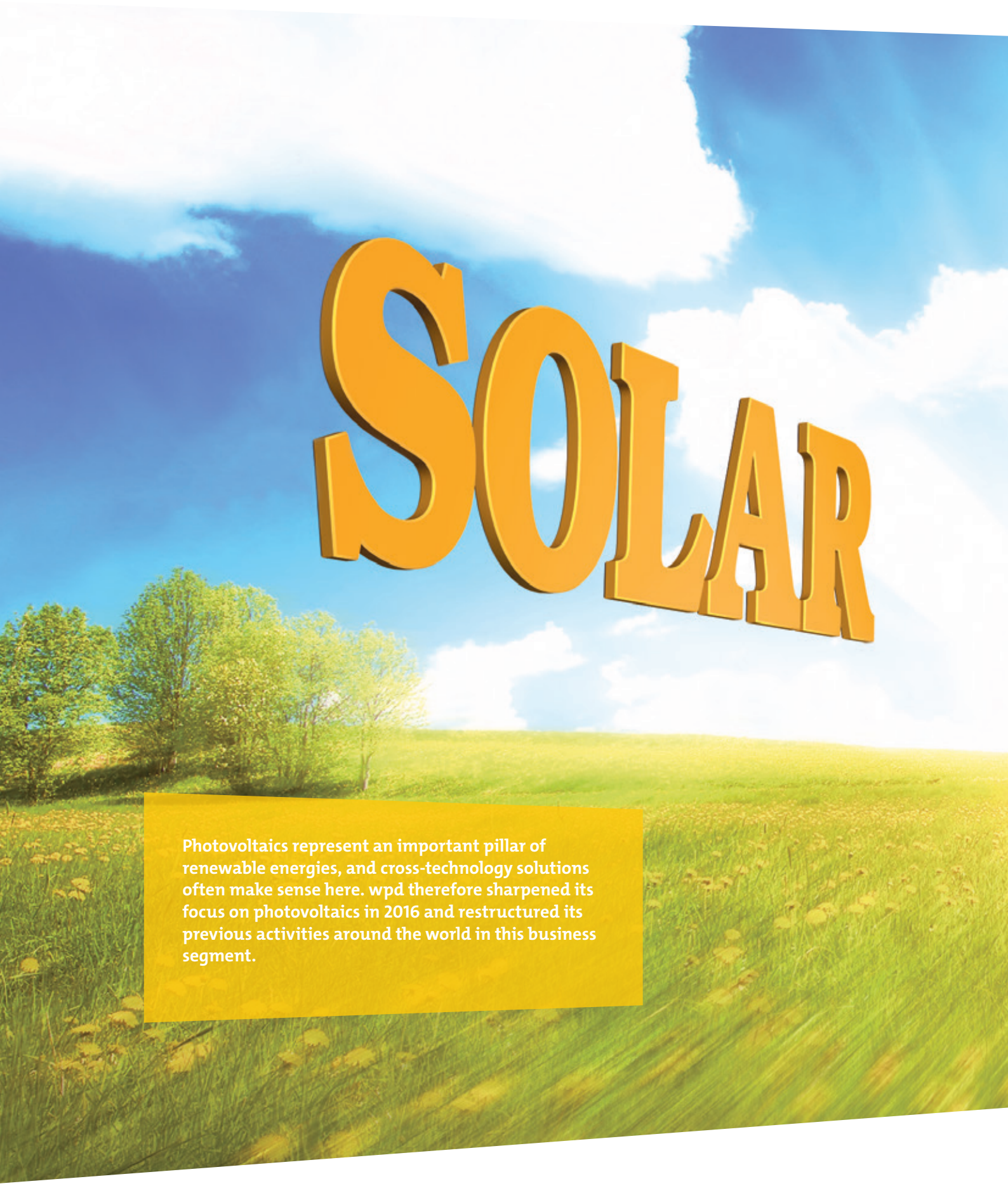
2019

Björn Nullmeyer becomes new member of wpd´s Management Board

wpd is establishing itself as a partner for PPAs in Finland and Sweden

2020

Expansion of activities in Asia with new sites in Vietnam and Mongolia

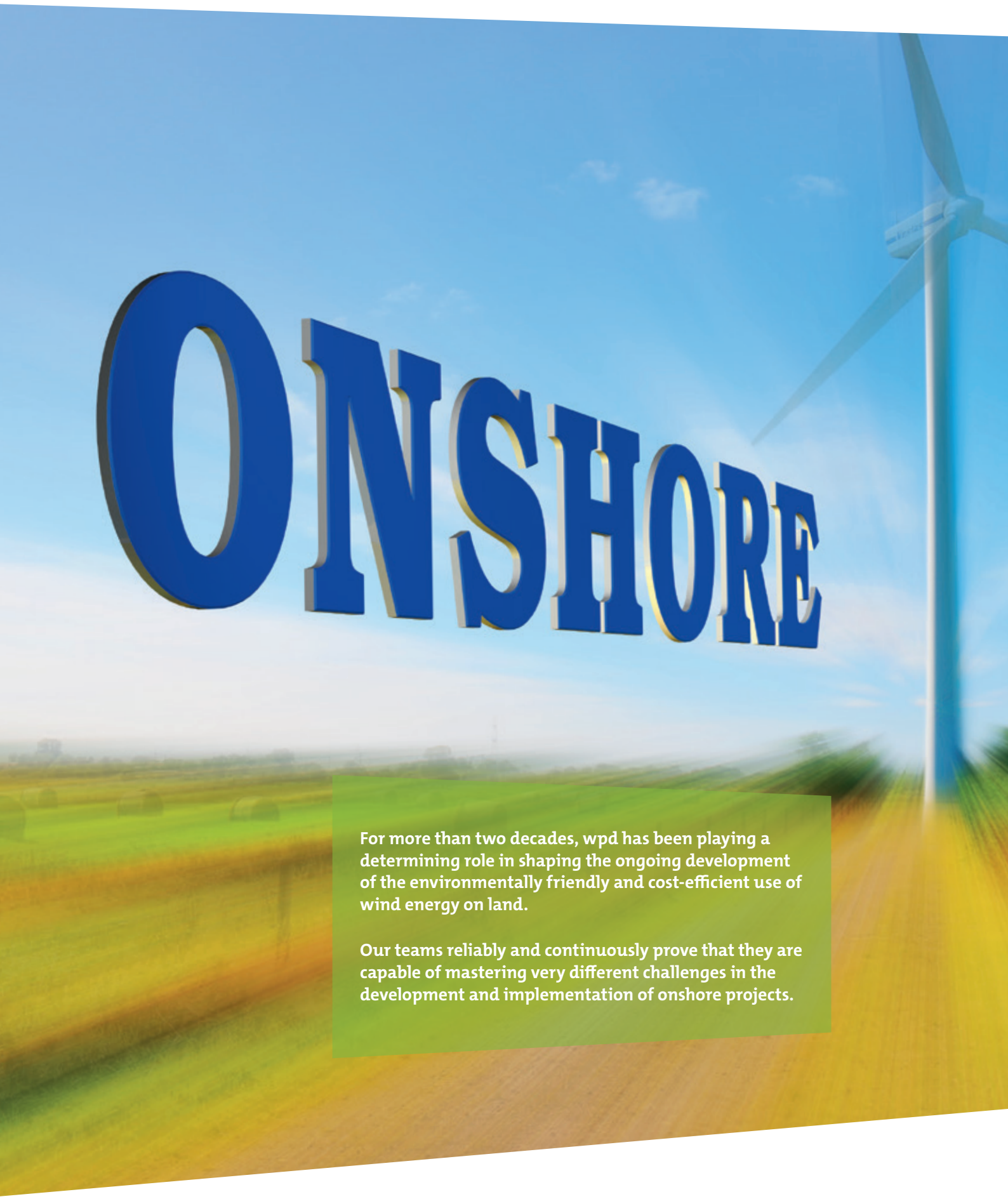


Photovoltaics represent an important pillar of renewable energies, and cross-technology solutions often make sense here. wpd therefore sharpened its focus on photovoltaics in 2016 and restructured its previous activities around the world in this business segment.

wpd rounds off portfolio with photovoltaics

With solar energy, our focus is on so-called utility scale solar projects. Large-scale, free-standing solar power stations make a major contribution to reliability of supply and affordable renewable electricity. wpd delivers everything from a single source. We provide the finance and connection to the grid, coordinate expert reports and studies, plan the design of the park, purchase the components and manage the construction. wpd has already successfully implemented its first projects, e.g. in Taiwan where it realised PV roof-top projects in industrial parks.

Building on this success, we are currently working on expanding the project pipeline and reinforcing local teams in our priority regions of Europe, North America and in parts of Asia.



For more than two decades, wpd has been playing a determining role in shaping the ongoing development of the environmentally friendly and cost-efficient use of wind energy on land.

Our teams reliably and continuously prove that they are capable of mastering very different challenges in the development and implementation of onshore projects.

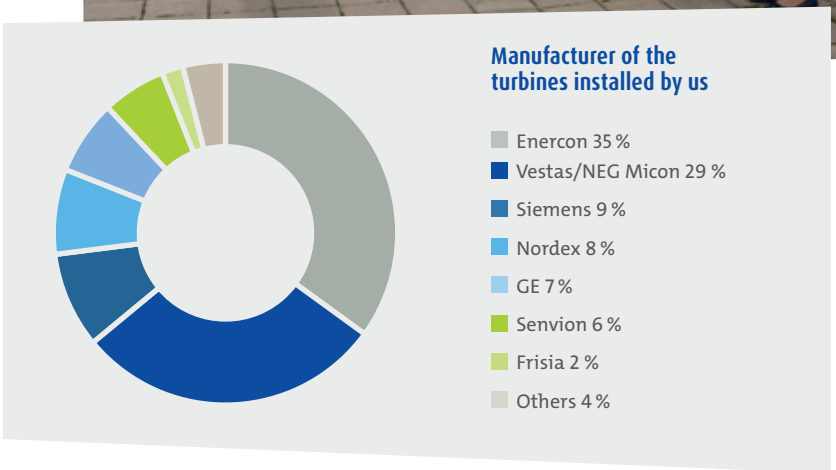
A major success in more than two decades

In 1996 the two founders stood alone – today 1.150 employees at wpd work in the onshore wind energy division. Of these, around 670 work in the German market and 480 in international markets – and we are currently developing onshore projects primarily in Europe but also in America and Asia.

All these employees represent a total of about 2,750 wind turbines so far with a total worldwide installed power of around 6,620 megawatts. Ahead of them lie projects amounting to a further 19,320 megawatts – a challenge that all those involved approach with high motivation and the conviction that they will master it just as successfully as the others before.

The individual teams, sometimes working with partners, take reliable care of all phases of the projects – from the first evaluations of the location, wind measurements, the approvals process, finance, turbine purchase through to the construction and sustainable operation of the wind farm.

Staff from the wpd team in Finland



Farnstädt

Fact sheet

Number of turbines:
16

Type:
Vestas V-90

Rated power:
32 MW

Location:
Saxony-Anhalt

Commissioned:
2007

Many interests – one wind farm

wpd set up three 1.5 megawatts turbines in Farnstädt in 2004 in cooperation with a private operator, and took over the design for a further 16 from a small planning office. The planning process for this project took years until it was finally commissioned. During this period, in-house experts determined the best configuration for the turbines and the farm, signed numerous licensing contracts, oversaw a very demanding approval process and built a transformer substation.

A key task in this project was to find solutions that suited all those involved: property owners, the local community, approval authorities, energy suppliers and the operators of the neighbouring wind farm. wpd mastered this assignment; the turbines have been in operation since October 2007.

Wilstedt

Fact sheet

Number of turbines: 9

Type: Enercon E-82

Rated power: 18 MW

Location: Lower Saxony

Commissioned: 2008

„Work has been going on to expand this farm since 2013, and our new group of owners also opted for wpd as their partner. We really appreciate working with them on an equal footing!“

Hermann Cordes, farmer and chairman of the group of owners for the wind farm extension in Wilstedt/Lower Saxony.

Dalwitz

Staying power leads to success

When wpd staged a major opening ceremony in the Dalwitz wind farm with 250 guests in September 2014, all those involved could look back on a long time of project development. Some seven years had passed since wpd first established contact with the administrative office of Gnoien, the community of Walkendorf and the owners of the land until that opening ceremony. Turbine sites had to be relocated and readjusted several times due to protected species, military air safety and inconsistent subsoil. After a long winter, work began on road-building and deep foundations in the spring of 2013. The first eight turbines were then commissioned in quick succession at the end of 2013. There are now nine Enercon E-101 models with a rated power of three megawatts each producing environmentally friendly electricity on the site.

The calculated annual output will be 70,000 to 80,000 megawatt hours which corresponds to the rough power requirements of around 20,000 average households.

Fact sheet

Number of turbines: 9

Type: Enercon E-101

Rated power:
27 MW

Location:
Mecklenburg-Western Pomerania

Commissioned: 2013 / 2014

Fahrenwalde

Swift journey through time

The 26 megawatts Fahrenwalde project can be described as a collaboration project with challenges. What made this project different from a planning perspective for wpd was the speedy implementation target set: approval was only issued in March 2012 but the aim was to commission all the turbines in the same year.

It was all the more impressive that by the end of 2012 ten Enercon E-82 models and one Enercon E-101 had been installed. The wpd team also experienced a hitherto rare surprise when constructing the transformer substation: several finds from various periods of human history from the Bronze Age to the Slavic period made it necessary to conduct archaeological recovery work and interrupted construction – but in the end all the turbines were commissioned on time.

Fact sheet

Number of turbines: 11

Type: Enercon E-82 and E-101

Rated power: 26 MW

Location: Mecklenburg-Western Pomerania

Commissioned: 2012

Wehren

Fact sheet

Number of turbines: 6

Type: Enercon E-70

Rated power: 13.8 MW

Location: Schleswig-Holstein

Commissioned: 2009 / 2011

Less is more: Repowering in Wehren

The Wehren wind farm is one of wpd's first repowering projects. The previous eight Enercon wind energy turbines of type E-40 which were installed in 1998 were replaced with six E-70 turbines. The first five turbines were commissioned in August 2009 and the last one went into operation in January 2011. The installed power at the location was multiplied from four megawatts to 13.8 megawatts, and the annual energy output rose to over 23 million kilowatt hours. A nice example of the sense that repowering makes: several turbines using old technology and of a previous power class are replaced by fewer, but more modern systems – and the energy yield is multiplied several times over at the same time.

Leipzig

A project pointing the way to the future

The Leipzig wind farm generates wind energy directly for the industry, in this case for the car manufacturer BMW. Special circumstances specific to the location such as the need to incorporate the facility into the already existing infrastructure and to take account of processes in the plant, represented particular challenges. Here, too, wpd delivered tailor-made planning.

The direct integration of wind turbines into industrial estates with one or more consumers offers opportunities in terms of relieving the grid, and for the companies concerned, it represents a visible connection with the ecological production of electricity. The four Nordex N-100 wind turbines each with a rotor diameter of 100 m supply the energy generated directly to BMW's own plant grid. Among other purposes, it is used to produce the i3 and i8 electric and hybrid vehicles. With a gross energy yield of around 28 gigawatt hours per year, the wind farm saves over 21,000 tons of CO_2 emissions.

Fact sheet

Number of turbines: 4

Type: Nordex N-100

Rated power: 10 MW

Location: Saxony

Commissioned: 2013

Montagne-Gaillard

Fact sheet

Number of turbines: 8

Type: Enercon E-82

Rated power: 18.4 MW

Location: Picardy / France

Commissioned: 2013 / 2014

Local involvement

The Montagne-Gaillard wind farm is located between Amiens and Saint-Quentin in an area marked by the communities of Épehy and Villers-Faucon, and it stands on high ground with excellent wind resources. It consists of eight wind turbines with a total rated power of 18.4 megawatts which are able to produce around 40 million kilowatt hours per year.

The turbine towers are among the first to be made by the manufacturer Enercon in its prefabricated concrete tower plant in Longueuil-Sainte-Marie which is some 100 kilometres away. Many local companies were also involved in the construction of the wind farm providing various types of work. The facility was finally commissioned in May 2014, and in July wpd held a large opening ceremony with almost 300 guests.

Ponikve

Fact sheet

Number of turbines: 16

Type: Enercon E-70

Rated power: 36.8 MW

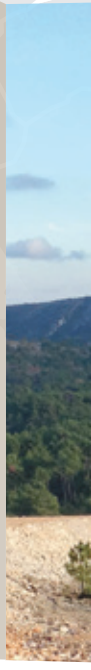
Location: Peninsula of Peljeac / Croatia

Commissioned: 2012

High power on the Adriatic

wpd is one of the pioneers in the Croatian wind energy market and commissioned its first wind farm near the Adriatic coast in 2006. The second followed in 2009 and the Ponikve wind farm is now the third and so far the most powerful wpd wind farm in Croatia. It lies 60 kilometres north-west of Dubrovnik on the peninsula of Pelješac and it can supply around 17,000 households with environmentally friendly energy.

Staff in wpd's construction department experienced this project as one of their most exciting as they had to contend with large amounts of rock on the mountainous ridge which had to be dynamited and shaped correctly. Despite the occurrence of poisonous snakes, storms, sleet and heavy snowfalls as well as having to construct a self-owned transformer substation, wpd completed the wind farm ahead of schedule.



Springwood and Whittington

„With projects of this complexity, it's a question of experience, knowledge of the country and implementation skill – and at the end it's the environment that benefits. This is what wpd stands for and we have relied on them as our partner for many years."

Mirko Sedlacek, KfW IPEX-Bank,
Team Head Power, Renewables and Water

Premiere in North America

After a planning and approvals phase lasting several years, wpd took a major step forward at the end of 2013 by starting construction of the Springwood and Whittington wind farms in the province of Ontario in Canada – the first sods were turned in creating the infrastructure for a total of seven Senvion MM-92 wind turbines.

In spite of a spell of Arctic temperatures, the date for commissioning the farm was met and the turbines have been running since the end of 2014. The implementation of the first two projects in Canada represents a major success for local staff and an important milestone for the wpd group as a whole, as these are the first projects which we have ever realised in North America.

Fact sheet

Number of turbines: 4 and 3

Type: Senvion MM-92

Rated power: 8.2 and 6.15 MW

Location: Ontario / Canada

Commissioned: 2014

Tohkoja

Fact sheet

Number of turbines: 22

Type: Vestas V-117

Rated power: 72.6 MW

Location: Finland

Commissioned: 2016

Wind farm defies icy conditions

With the acquisition of project rights for the Tohkoja wind farm, wpd secured its third wind farm in Finland in 2014. We had to build in a lot of time for construction as the long winters only afforded short windows for erecting the turbines with the result that they had to be completed in stages. Finland's frequently icy weather also played its part in the choice of turbines. All the rotor blades are equipped with heating and can thus be safely operated even at sub-zero temperatures.

Guanyin

Hand in hand with nature

wpd has been active in Taiwan since 2005, and in 2016 it took over the planning office infraVest Energy Co. Ltd. which now trades under the name wpd Taiwan energy Co. Ltd. In spite of extreme geographical and climatic conditions such as typhoons in the summer and regular earthquakes, wpd and infraVest have successfully implemented numerous projects.

One of the first projects is the Guanyin onshore farm on the northern coast which was realised by infraVest in collaboration with wpd. 19 turbines were commissioned between 2009 and 2011. Earlier, the planners had worked with the State "forest bureau" for environmental matters to develop a concept to compensate for the area occupied by the site. The Taiwanese team had selected varieties of bushes and trees planted in a nearby technology park – for every tree felled, one and a half new ones were planted and wpd Taiwan continues to look after them. And we don't just take care of the trees: the Guanyin onshore wind farm has also become the new home to a colony of little terns. To protect the birds, a nearby road is closed every year during the nesting season.

Fact sheet

Number of turbines: 19

Type: Enercon E-70

Rated power: 43.7 MW

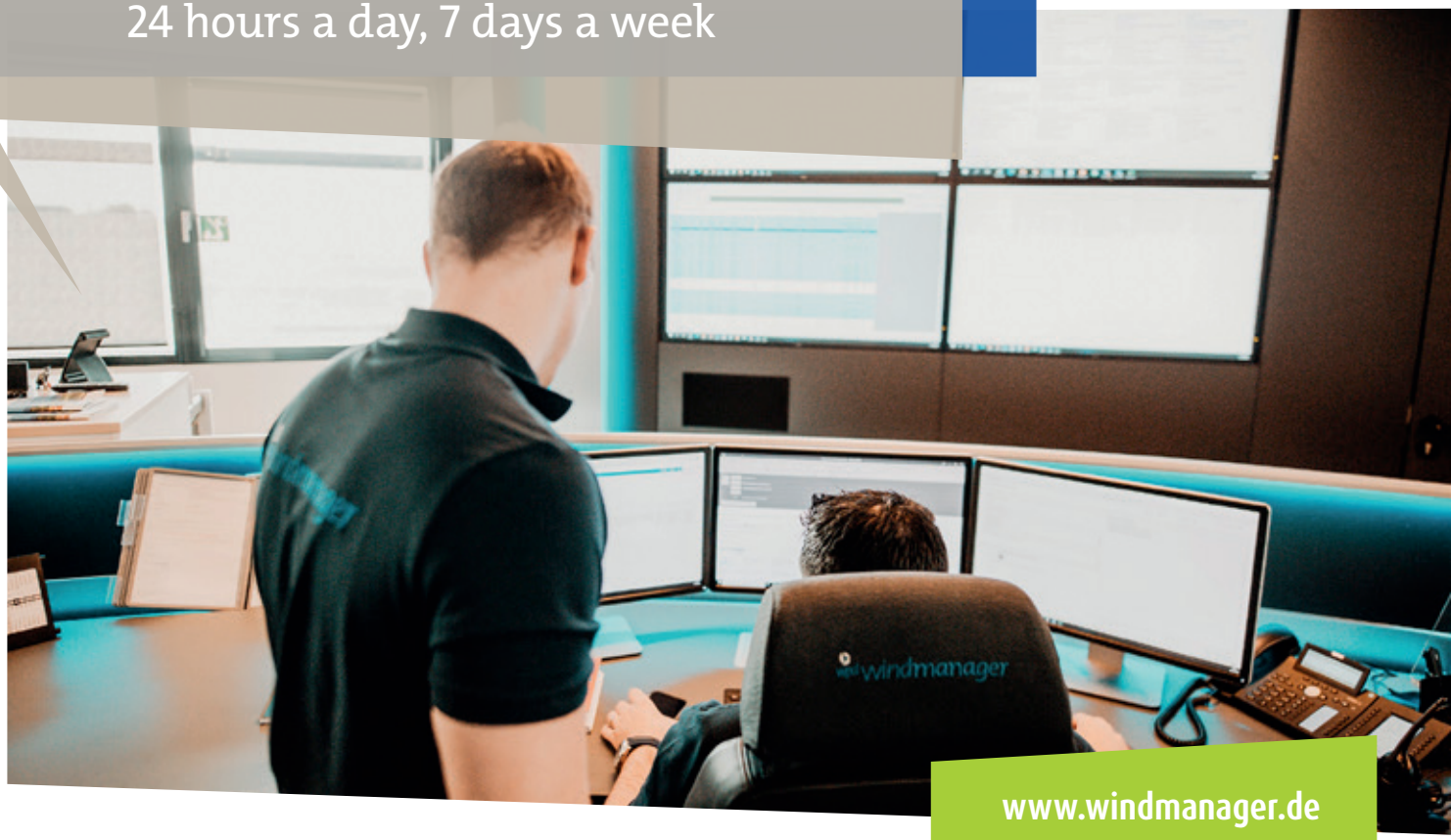
Location: Taiwan

Commissioned: 2009 - 2011

wpd windmanager

Efficient wind farm management

24 hours a day, 7 days a week



www.windmanager.de

Since 1998, our sister company, wpd windmanager, has been taking on all the tasks in connection with the commercial and technical management, primarily of wind farms but also of solar parks. wpd windmanager is the market leader in wind farm management in Germany. Thorough knowledge of the market and many years of experience with wind energy, ensure that farms under its management run at their ideal level. Customers include fund companies, national and international investment groups as well as institutional investors. In addition to Germany, wpd windmanager is active in Croatia, Finland, France, Poland, Spain, Sweden, Chile and Taiwan.

You can find a detailed overview of all services, references and locations on the website.

„Protecting our climate represents one of the greatest challenges of the coming years.

It is a matter of importance to us that we complement our successful commitment in the wind sector by also supporting non-commercial projects from other fields and thus making our own small contribution towards the preservation of our planet."

Dr. Hartmut Brösamle, COO

Revitalization of a marshy moor that was drained in the past

Protecting climate and nature sustainably

CSR projects offset 100% of our CO_2 emissions

Climate and resource protection is what drives us. That's why we are particularly committed to this. By expanding wind and solar energy, of course, but also by taking a responsible approach to our day-to-day work. For example, we try to avoid air and car travel as much as possible, provide company bicycles, and are increasingly focusing on electromobility. For example, numerous charging options for e-cars have been integrated at our sites for this purpose.

For some time now, we at wpd have been offsetting 100% of the emissions generated by our work. To do this, we work together with the German non-profit organization atmosfair. For our offices, business trips, flights, employee commuting and the work of our IT department, 3,800 tons of CO_2 were offset in each of the past two years 2020 and 2021.

Together with atmosfair, we were able to support the construction and maintenance of several hundred small biogas plants in Nepal. Each plant saves approximately 3 tons of CO_2 per year and also counteracts the deforestation of local forests. From September 2022, in addition to the construction of new biogas plants, we will also support a local waste management project in the region.

We also support other sustainable and meaningful projects, such as reforestation in Guatemala, the replacement of petroleum with solar lamps in Pakistan and the rewetting of a moor in Mecklenburg-Western Pomerania.

We regularly receive positive feedback from these projects. In Guatemala, about 2 hectares of land are reforested annually with about 3,000 tree seedlings. In Pakistan, solar lamps financed by wpd save a lot of CO_2 and relieve families financially. And with the restoration of the marshy moor in the so-called Lenoren Forest, a valuable contribution is being made to the landscape's water balance and to climate and nature protection.

Small building blocks that we consider meaningful and important.

wpd is committed to the construction of small-scale biogas plants in Nepal and to reforestation measures in Guatemala (below)

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