

Messe News

Energy

February 2012

NEW TECHNOLOGY FIRST

23 – 27 April 2012 · Hannover · Germany

Energy



Cogeneration and Contracting

15 percent more space allocated for Distributed Generation group pavilion

See pages 2-3 for more information

“Life needs Power” Forum

Messe News Energy interview with EU Energy Commissioner Günther Oettinger

Two-page spread on pages 4 and 5

DMI – Year-round exposure for Energy exhibits

The Energy fair's stated objective is to provide seamless coverage of the entire energy sector. And thanks to Deutsche Messe's product database, it can do this not only on the five days of HANNOVER MESSE, but all year round. Our subsidiary company Deutsche Messe Interactive helps this process along by offering marketing services to Research & Technology exhibitors free of charge. These services leverage the power of our Exhibitor Content Management System (ACMS), a database where exhibitors can enter information about their technologies and products as well as details of their display stand and contact persons. Plus, as from this year, exhibitors will have access to a range of new presentation formats, such as video clips, that will enable them to communicate complex technological innovations more clearly. Our Media Service would be happy to help you create and update your ACMS profile.

Contact: +49 511 89-35550

media-service@content.hannovermesse.de

The wide world of Energy



The full range of smart energy ideas – Energy, the world's leading energy technology fair, returns in 2012 with the entire spectrum of products and solutions for an efficient, sustainable, reliable and competitive energy mix.

The energy technology market continues to grow apace. The quest is on for new solutions and products that will help the energy sector provide an efficient, sustainable, reliable and competitive energy mix. The challenges are enormous, as the world faces a growing shortage of raw materials and the urgent need to reduce emissions of carbon dioxide and other greenhouse gases. The exhibitors at this year's Energy flagship fair will offer a comprehensive overview of the entire energy industry spectrum, and present innovative technologies and services for the energy mix of the future. High-caliber supporting events will foster discussion of the critical problems facing the industry and potential solutions to deal with them.

Abundant potential from cogeneration

One option with major energy efficiency potential is the generation of power locally via cogeneration plants. The installation of decentralized cogeneration plants reduces the need for grid expansion, and delivers real savings on heating costs – of around 40 percent in comparison with the steam boilers in current use. Another key benefit is the low-

er CO₂ emissions associated with distributed generation. Current challenges in this area will be addressed in the “Life Needs Power” energy forum, which, this year, will have EU Energy Commissioner Günther Oettinger as its official patron. Here, the spotlight will be on issues such as the development of “smart grids” that significantly boost the sustainability and flexibility of electric distribution infrastructure.

Marked growth of energy technology exhibits

The energy technology exhibition area at HANNOVER MESSE 2012, in Halls 12 and 13, is booked out already in an almost unprecedented display of interest from the business sector. Leading international players showcasing their latest innovations include Elimsan, Artech, Maréchal, Eltek Valere, the SKB Group and Baiyun Electric.

For further information and registration forms, visit hannovermesse.de/en/energy

15 percent more space allocated for Distributed Generation group pavilion

Companies showcase their innovative cogeneration and contracting solutions

At HANNOVER MESSE 2012, the joint presentation by suppliers of cogeneration plants and components and contracting services (efficiency services in the energy sector) will be larger than ever before. An exhibition area of over 900 square meters (around 9,700 sq.ft) will be filled with 14 exhibits from 20 companies, offering a comprehensive display of innovative solutions. Supported by the German Cogeneration Association (B.KWK) and the ESCO Forum within the German Electrical and Electronic Manufacturers' Association (ZVEI), this year's theme pavilion will occupy 15 percent more exhibition space than last year.

Solutions for a sustainable energy future

B.KWK chairperson Berthold Müller-Urlaub sees this as a clear sign of the increased importance of HANNOVER MESSE for the industry as a whole: "Boosting distributed energy generation capacity as a means of ensuring a reliable and cost-effective energy supply for Germany has become a top priority in the context of the federal government's move towards sustainable energy policies. Exhibitors are responding to this situation with genuine innovations and solutions that meet the new requirements and expectations in the sector, such as modulated operating capability and virtual power station design concepts.

Our ability to discuss and present solutions for the transition to a sustainable energy future will significantly enhance the appeal of our theme pavilion for both exhibitors and visitors."

Stimulating discussions and debates

Along with numerous cogeneration exhibits featuring high-efficiency plant technology and examples of projects with smart contracting solutions, the theme pavilion will also feature a series of discussions and debates, giving visitors a centralized source of information on the latest developments in decentralized energy supply solutions. The pavilion's 14 cogeneration exhibits cover the entire spectrum of cogeneration plants, from micro-plants with a generation capacity of just a few kW up to plants in the 500 kW class.

Burgeoning market

Dr. Jobst Klien, chairperson of the ESCO Forum within the German Electrical and Electronic Manufacturers' Association, expects that rising energy costs in industry will continue to drive rapid growth in the market for energy efficiency services. "Contracting providers in Germany will clearly play an important part in meeting the challenges arising from the move to a sustainable ener-

gy future. Our core area of expertise is in boosting efficiency through the use of high-efficiency cogeneration technology, and also via the optimization of energy processes in industry, commerce and the real estate sector. That means we have the requisite knowl-

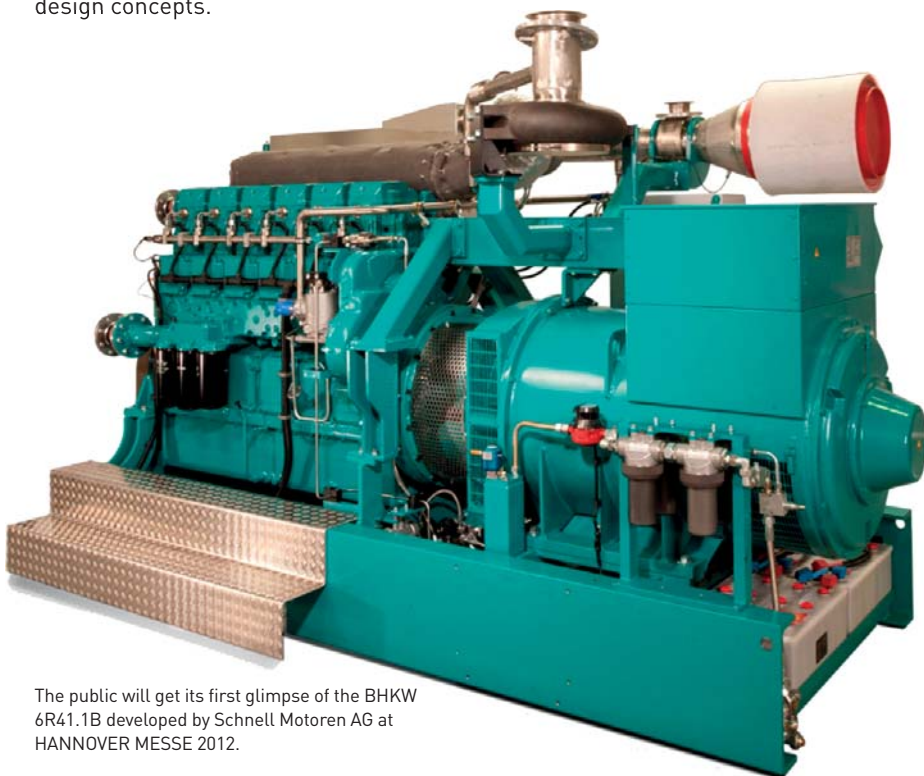


In the factory of Danish firm EC Power

edge and capacity to contribute to the security of Germany's electricity supply with intelligent demand site management and demand-based grid in-feeds. We can make our clients' operations more cost-effective, with no loss of productivity or plant availability."

Mini cogeneration plant from Denmark

Strong growth is also expected for manufacturers of cogeneration plants and components. Danish company EC Power, which describes itself as the European market leader in mini cogeneration plants in the up to 50 kW electrical output category, is using some bold marketing initiatives to boost its market share. For example it has reduced the price for its current standard cogeneration station with an electrical output of 15 kW by around seven percent. Approximately 3,000 of these modules are currently in operation. The company will use HANNOVER MESSE to launch its new XRGI 20 model, which it believes will set a new standard in the up to 20 kW electrical output class. EC Power will also extend the warranty period for both models from two to five years. EC Power founder and CEO Bjarne Bogner: "We are hoping to boost order volumes throughout Europe through a combination of quality, plant availability and extremely attractive prices. We are confident that we can further extend our position as the European market leader."



The public will get its first glimpse of the BHKW 6R41.1B developed by Schnell Motoren AG at HANNOVER MESSE 2012.

Energy from lean gases

Schnell Motoren AG is the world's leading manufacturer of ignition jet engine-driven cogeneration units for biogas plants. Schnell's ignition jet engines, based on diesel technology, are able to generate energy from lean gases with an electrical output spectrum from 40 kW to 1.6 MW. The key to the high efficiency ratings of these units lies in the special electronic injection technology developed by Schnell. The Schnell 6R41.1B CHP plant will be unveiled at HANNOVER MESSE 2012. The new plant uses a Mitsubishi engine with Schnell ignition jet technology, in a range of different configurations. A 60 kW exhaust turbine is used to generate electrical outputs of 460 to 530 kW. The unit has a 47 percent efficiency rating, setting a new standard for high-tech energy generation in the 500 kW class.

Amended Cogeneration Act comes into force in January 2012

On 14 December 2011, the German federal government endorsed the draft amendment of the German Cogeneration Act submitted by the Federal Ministry of Economics and Technology (BMWi). The amendment calls for an increase in funding support for high-efficiency cogeneration plants in order to accelerate the development of this technology. The revised law aims to raise the share of cogeneration plants in Germany's total energy generation to 25 percent by 2020, from the present level of around 15 percent. Incentives will be offered for capital investments in heating networks in particular. Thermal storage facilities will also qualify for subsidies of up to 30 percent of the investment cost. The amended legislation also makes it easier to obtain funding support for new small-scale cogeneration plants and the modernization of existing cogeneration plants. In addition, higher subsidies will be available for cogeneration plants subject to the emissions trading requirement as from 2013.

Focus on mobile energy storage

Energy Storage Center of Expertise premieres at MobiliTec 2012

eMobility is the key to retaining mobility without harming the climate. It is also an opportunity for Germany to further strengthen its position as a key industrial, business, research and technology location. The second report issued by the German National Electric Mobility Platform (NPI) in May 2011 sees the concept of "eMobility made in Germany" as standing for holistic solutions that combine climate protection and resource conservation with new added value for the German economy. High-performance and affordable batteries are a key requirement for viable electrical vehicles for everyday use. One of the key challenges in this area is the effective technology transfer of new production processes, materials and components into the industrial manufacture of near-series production batteries for electric vehicles.

Energy storage ideas

The premiere of the Energy Storage Center of Expertise at MobiliTec focuses attention on this vital element of sustainable mobility concepts. On an area of 800 square meters (8,600 sq.ft) in Hall 25, designers, researchers and manufacturers will present a vast range of innovative energy storage ideas, designs and products. The group exhibit reflects the central importance of electricity storage for electric mobility, the core theme of the MobiliTec fair. Visitors to the Energy Storage Center of Expertise will get a comprehensive overview of the production process for mobile energy storage media in the eMobility sector, ranging from the requisite raw materials, production systems for cells and modules, right through to the integration of battery packs into vehicles.

Federal eMobility incentives

The adoption of a new government program in May 2011 shows that eMobility is high on the German federal government's agenda. The program sets out the state's policy framework while leaving the development of eMobility technologies in the hands of German industry. The main funding contribution from the federal government will be in the research and development area. Increasing the number of electric vehicles on German roads will

require more powerful and more efficient batteries. One of the key aims of MobiliTec is therefore to bring electric vehicle manufacturers into contact with companies that specialize in battery technology.

"The federal government will provide support for regional initiatives to raise public awareness of all the innovation that goes into making eMobility a reality. The MobiliTec tradeshow already provides



The integration of battery packs into vehicles will be a key topic at the Energy Storage Center of Expertise.

such a showcase for industry professionals. This event shows where we stand in the technology stakes, and is an ideal forum for building the kinds of interdisciplinary networks that will be absolutely essential if we are to become the leading supplier of e-mobility technology," said MobiliTec patron Professor Henning Kagermann.



“To meet our climate goals we will need new, modernized, ‘smart’ grids.”

Messe News Energy interviews EU Energy Commissioner Günther Oettinger

The increasing demand for energy is a major challenge worldwide, including in Europe. To highlight the importance of this issue, EU Energy Commissioner Günther Oettinger agreed to be the official patron of the “Life Needs Power” energy forum at HANNOVER MESSE 2012. In this interview

Günther Oettinger comments on European energy policy and the energy efficiency of new technologies.

What do you see as the objectives of the “Life Needs Power” Forum?

A secure and sustainable energy supply is

one of the most difficult challenges facing Europe in the coming years and decades. I am therefore delighted to see that “Life Needs Power” is addressing precisely these challenges and will make a real contribution to finding practical solutions.

Getting the future energy mix right

High-caliber lectures and stimulating debates in the Renewable Energies Forum

Renewables are becoming increasingly pivotal for our energy supply. In 2011, the share of renewables in the German electricity mix exceeded 20 percent for the first time. The German Renewable Energy Federation (BEE) promotes the development of a dense network of decentralized renewable energy generation units throughout Germany.

Focus on hybrid power plants

“This will result in power generation capacity close to the point of demand in all regions, reducing the need for the long-distance transmission of large volumes of electricity. There will also be much less pressure to keep expanding grid capacity,” says BEE President Dietmar Schütz. He

notes that grid loads can also be significantly eased by the appropriate use of hybrid power plants and storage facilities. The BEE will be running a forum at the Energy show on all five days of the fair, where high-caliber experts will address topical issues across all aspects of renewables and the transition to a sustainable energy future.

Meeting targets while maintaining economic viability

The challenges facing German industry as a result of the country’s energy-sector transformation will be high on the agenda at the BEE forum. “Energy will continue to be the dominant issue,” said Thorsten Herdan, President of VDMA Power Systems. The

transition to a sustainable energy future had begun over 20 years ago and it was now a matter of continuing on this path. Energy and climate policy targets had been set, and only a concerted and determined effort towards achieving them would help to meet impending future challenges. “The primary focus now is on meeting these targets in an economically viable fashion,” he added.

By now, it should be abundantly clear that drawing distinctions between energy-intensive and non-energy intensive industries made little sense, he continued. Given their interdependency, both sides must work together to tackle the tasks at hand. Herdan sees energy-intensive sectors such as the aluminum, steel, plastics and carbon fiber

What are the EU's energy policy objectives?

We are committed to strengthening and further extending Europe's leadership role in energy technology. Europe must focus more than ever before on the sustainable production and use of energy. This is the time to invest in greater energy efficiency and the more extensive use of renewables. We see this as the most effective strategy for providing a secure supply of energy at competitive prices for us and our children. Smart grids and smart meters will also play a crucial role in using energy more efficiently.

What kind of policy framework has the EU created for achieving these goals?

Our European energy policy provides clearly defined commitments and goals for a sustainable, competitive and secure energy supply. Core objectives are a 20 percent reduction in greenhouse gas emissions, a 20 percent share of renewables in end-user energy consumption, and 20 percent energy savings and efficiency gains by 2020.

Where is it particularly important to make rapid progress?

To meet our climate targets we need new, modernized, 'smart' grids. The network we have now is characterized by long distances between generators and users, and offers limited scope for local, decentralized generation. So we have a great opportunity to develop sustainable and flexible smart grids.

industries as crucial sources of know-how for the mechanical engineering sector in the technology value chain.

Energy sector transformation a major capex program for businesses

Herdan: "For the mechanical engineering sector the move to a sustainable energy future clearly entails major capital expenditure. They have all the products, and will be able to keep supplying them, given consistent, clearly defined operating constraints. For the successful attainment of energy policy targets, both industry and society will have to accept a much stronger role for the state. The German mechanical engineering industry is committed to retaining its leading role in Europe, and wants to continue being involved in the Federal Republic's energy sector transformation."

Opportunity for Germany

Renewables are a major opportunity for

How important are advanced communication networks and intelligent control systems for coordinating electricity generators, storage facilities and users?

Infrastructure is the lifeblood of the single European energy market, and inextricably linked with security of supply. It is also fundamental for the success of our carbon reduction policy, which is, after all, based on adapting the grid to accommodate renewable and decentralized energy generation.

Energy efficiency is high on the HANNOVER MESSE 2012 agenda. Why is it so important for businesses to focus on this issue as well?

Energy efficiency is the key to a viable future. Producing the same outputs with less energy makes our energy supply more secure and sustainable. An investment in our energy system is an investment in our future. Conversely, neglecting energy supply and energy efficiency issues may have far-reaching and irreversible consequences.

Where to from here?

Energy is an essential resource for all of us - citizens and businesses alike. Affordable energy will be the key issue in coming years, for both industry and society as a whole. If we can decouple economic growth from energy consumption and successfully make the transition to a low-carbon economy, we will remain competitive internationally. This is a huge challenge and one that requires a collective European approach.

Germany as an industrial location. This too will be a key point on the Forum agenda. Other topics include employment, training and career opportunities, and the ongoing skills shortage as well as the role of businesses in Germany's energy-sector transformation.

Huge potential for wind energy

Reducing CO₂ emissions is a top priority worldwide. The key role wind energy plays in making this happen has seen it develop into a major industry in its own right. In the Renewable Energy Forum experts will report on and debate the prospects for offshore wind farms, the future of the German wind energy market and international joint ventures. Grid expansion is seen as an essential part of this, given that the German Wind Energy Association (BDEW) reports a significant increase in wind energy plant shutdowns because of grid bottlenecks, resulting in the loss of many Gigawatt

"Life Needs Power" Forum a key fixture

Life Needs Power, a unique forum for discussion and debate on opportunities, visions, innovations and technologies of key relevance to the energy sector, has been part of the Energy show for more than ten years. The platform is a joint project of Germany's BDEW, VDE and ZVEI industry associations, and will again rank as one of the big HANNOVER MESSE highlights in 2012.

With EU Energy Commissioner Günther Oettinger as its official patron, Life Needs Power will bring together key figures from the energy industry, science and politics to discuss current trends, research activities and opportunities in the energy business. Professor Jochen Kreusel, head of the working group organizing the event, describes its objectives as follows: Life Needs Power will address critical energy supply issues affecting our lives today and in the future. The panel discussions in particular will provide visitors with a concise outline of the current thinking of experts from a range of companies and institutions on the key technical and economic challenges facing the energy sector."

For further information, visit life-needs-power.de (German only)

hours of wind power. Forum topics will therefore include grid expansion in Germany and the use of the high-temperature transmission lines and underground cables as proven transmission technologies.

A whole day at the fair has been set aside for the renewable energy industry's partners: municipal power generation utilities, local authorities and energy associations, such as supply projects established by private citizens.

Renewables Party back in 2012

The ever-popular Renewables Party will kick off at 6 p.m. on Thursday 26 April, in Hall 27. As always, visitors will be treated to musical entertainment and an ample selection of refreshments.

“New area of expertise for industry”

Interview with Dr. Reinhard Maaß, CEO of the German Trade Association of Industrial Service Providers (WVIS)

The German Trade Association for Industrial Service Providers (WVIS) was founded in October 2008. Its objectives are to create a clearly defined profile for industrial services by formulating a sector-wide association policy, to establish a regular dialogue with the media and the general public, to generate interest in the many and varied activities of its members, and to provide guidance to and formulate appropriate goals for its members. The WVIS is one of the organizers of the Power Plant theme pavilion at HANNOVER MESSE 2012.

Dr. Maaß, where do you think industrial services are headed?

The service segment of German industry is continuing to grow and expand. Over the last few years traditional industrial enterprises have implemented all sorts of optimization processes to reduce costs and to strengthen their position in the world's growth markets. What's more, they no longer see themselves merely as producers, but, above all, as long-term partners to their customers.

What does that mean for service companies?

Industrial service providers have to meet a wide range of needs. In the chemical and petroleum industries, for example, one job in five is now based in external service entities. The same clearly defined division of labor can be seen in large companies in the power plant, energy and environmental technology sectors, and also in the automotive industry. According to sector survey results, WVIS member companies generate almost 45 percent of their sales in this area.

How will this trend play out in the long term?

Many services are also closely tied to specific industrial products. Service providers will increasingly become upstream suppliers to industry, and product-related services will play an ever more important part in the marketing of industrial products, plant and machinery.

Will these companies be able to remain competitive?

The services sector represents a new specialization area for industry, which will be highly exportable. Emerging economies such as China and India may be able to copy our technologies, but they still lack a deep understanding of the finer points. That means that at some stage in the future they



Dr. Reinhard Maaß,
CEO
German Trade Association for
Industrial Service Providers
(WVIS)

will need our service capability to remain competitive with their plant and machinery base.

The fact that German industry sources only a comparatively small proportion of its service requirements from international competitors confirms the excellent capability of German industrial service providers and highlights the importance of a strong industrial sector for the development of a competitive domestic service base.

What are the implications for the job market?

The industrial services sector is haunted by the same skills shortage that is impeding growth in German industry across the board. The increasing emphasis on services will be reflected in a concurrent change in the structure of the German workforce – from an industrial to a services focus. This means employees who have lost their positions in traditional manufacturing have the opportunity to take up new responsibilities in the industrial services sector.

This shift allows existing know-how to be put to the best possible use. However, it also

requires companies to close knowledge gaps through interdisciplinary knowledge exchange processes and broad-based professional development programs, and to train new experts.

That means additional learning for new recruits, and even more so for skilled workers and specialists, who will need to be retrained for their new industrial services roles. The challenge is to hone the existing knowledge base to quickly and efficiently create a whole new sector that is sustainable.

How does WVIS support its membership?

One of the association's top priorities is to optimize professional development programs in the industrial services sector, to define appropriate training approaches, and to promote the new sector in the public arena. To encourage the participation of young engineers, skilled workers and future managers, we have therefore set up the “WVIS Academy” as a virtual network.

Together with our member firms, we also run campaigns to boost awareness of the diverse jobs and opportunities that exist in the industrial services sector, for both new recruits and skilled industry workers who may be interested in retraining in this field. At HANNOVER MESSE 2012, our association as a central coordination entity will target a range of communication activities at school pupils and young trainees.



Energy generation with combined-cycle power plants

The Power Plant pavilion will showcase state-of-the-art energy generation technologies. Exhibitors will present innovative components and complete solutions for electricity and heat generation. For example, solar thermal power stations can be used for the cost-effective generation of electricity from direct solar irradiation. The International Energy Agency (IEA) believes that this technology could play a pivotal role for the global electricity supply in the longer term future. The combined heat and power production offered by cogeneration plants also harbors enormous potential for conserving raw materials and reducing CO₂ emissions.

Keynote themes at the Power Plant pavilion include power plant construction, and components, infrastructure and services for the generation sector. The pavilion partners are the EnergieRegion.NRW cluster, the Association of German Steam Boiler, Pressure Vessel and Piping Manufacturers (FDBR), the Rhein Ruhr Power cluster, the Power Systems Trade Association within the German Engineering Federation (VDMA) and the German Trade Association for Industrial Service Providers (WVIS).

Servicing and maintenance are core functions of the increasingly important industrial services sector.



Airbus introduces fuel cell technology

The German Aerospace Center at the Hydrogen + Fuel Cell pavilion

One of the stand-out innovations at the 18th Hydrogen + Fuel Cell pavilion in Hall 27 will be the display by the German Aerospace Center (DLR) of a fuel cell-powered nose wheel on a DLR-Airbus A320.

Fuel savings

An airliner fitted with a fuel cell-powered nose wheel can taxi to the end of the runway without emitting any pollutants and without using its engines. "At Frankfurt Airport, for example, this reduced emissions by up to 19 percent and cut noise levels to virtually zero during taxiing maneuvers," said the responsible Project Manager from the DLR Institute of Technical Thermodynamics in Stuttgart, Dr. Josef Kallo.

The DLR is continuing to work on detailed models for the calculation of savings at airports. "The potential savings at Frankfurt Airport from the use of electrically-driven nose wheels for aircraft in the A320 category are around 44 metric tons of kerosene per day," says Thorsten Mühlhausen from the DLR Institute of Flight Guidance.

Fuel cell power for ground maneuvers

The fuel cell system installed in the aircraft delivers enough electrical energy to move the 47-ton aircraft across the airfield. The system drives two electric motors for this purpose. The fuel cell

provides significantly higher efficiency ratings than an internal combustion engine coupled to a generator. The aircraft has a hydrogen tank, containing enough gas for one operating day.

Easier on the engines

For an aircraft operating on short-haul routes with up to seven take-offs daily,



ground maneuvering with an electrically-powered nose wheel means that the engine operating times can be cut by up to two hours a day. This in turn means longer maintenance intervals.

A world of ideas from 150 exhibitors

A total of 150 exhibitors from 25 countries will be showcasing their ideas at the Hydrogen + Fuel Cell pavilion. Hydrogen and fuel cells will clearly be a key element of our future energy system. Fuel cell vehicles are already being successfully tested on the road, and point to a future market with extraordinary growth opportunities.

RENEX 2011 sets new standards

RENEX 2011 in Istanbul revealed some stunning new developments in the renewables sector. Leading exhibitors used the event as a platform to showcase a wide range of products and services and present their latest advances. The four-day event was attended by a total of 13,823 trade visitors. 133 companies, 59 percent of which came from outside Turkey, presented their exhibits on an area of 4,150 square meters (44,670 sq.ft). The outstanding success of the fair can be attributed to the robust event concept: the fair was designed as a meeting point between industry professionals and manufacturers and investors looking to extend their contact networks. RENEX 2012 will be held from 8 to 11 November at the CNR Istanbul Expo Center.

Your contact for further information: Christian Wegmann; +49 511 89-31158, christian.wegmann@messe.de

New markets worldwide

Global Business & Markets: INVESTMENT LOUNGE and accompanying events foster international business expansion

The Global Business & Markets showcase in the Energy Hall 13 at HANNOVER MESSE has everything companies need to successfully internationalize their business, from development assistance exhibits, high-caliber events and forums, free expert advice through to quality networking opportunities. With its program of top-level events featuring political representatives from target markets, workshops for specific target groups and open discussion forums on special topics, the Global Business & Markets platform offers HANNOVER MESSE visitors and exhibitors concise market information with a practical focus, and a unique environment that was specifically designed to help them build their networks and forge new contacts.

Following its successful debut in 2011, the INVESTMENT LOUNGE at the heart of Global Business & Markets will once again be the place where capital meets technology and where experts provide free advice on inter-

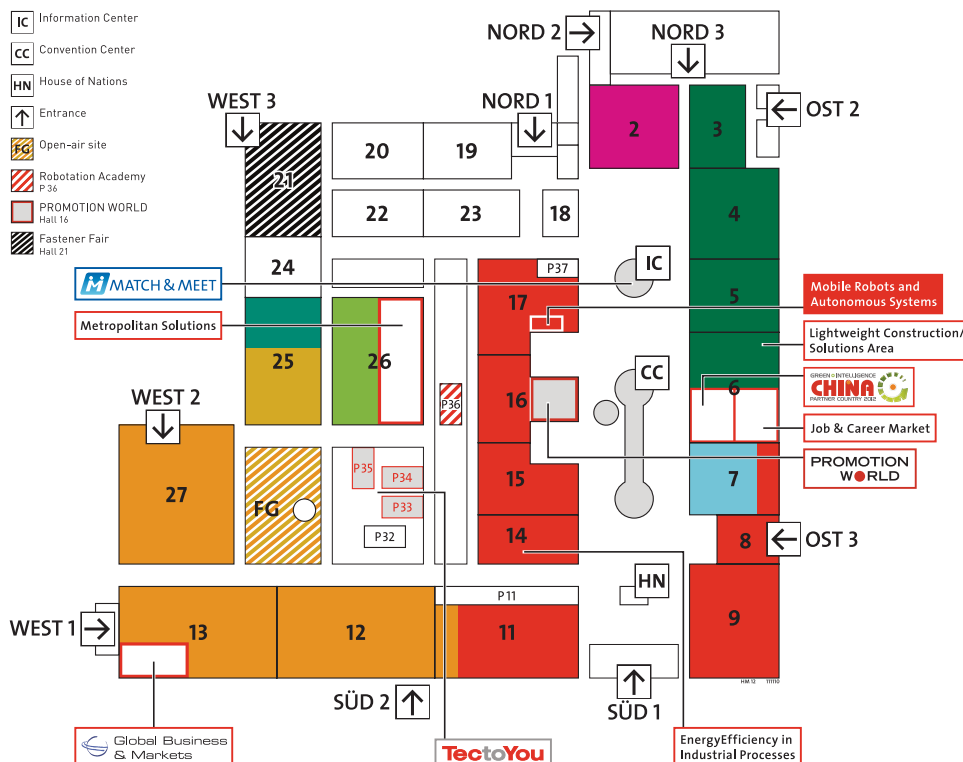
national project, investment and sales financing options. The INVESTMENT LOUNGE is the place to go for businesses from all sectors seeking guidance and new ideas, development assistance for their innovations, international cluster partners, suitable global locations, and equity finance partners.

Further information: hannovermesse.de/en/gbm



Map of the Exhibition Grounds

- Industrial Automation**
Halls 7-9, 11, 14-17
- MobiliTec**
Hall 25, FG
- Industrial Supply**
Halls 3-6
- IndustrialGreenTec**
Hall 26
- Energy**
Halls 11-13, 27, FG
- Digital Factory**
Hall 7
- CoilTechnica**
Hall 25
- Research & Technology**
Hall 2



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Imprint

Published by Deutsche Messe
Messegelände, 30521 Hannover, Germany
Hubertus von Monschaw (responsible)
Content & design:
media consulting hannover GmbH & Co. KG
Translation: Down Under Translation, New Zealand
Photos: Deutsche Messe, Schnell Motoren AG, EC Power, DLR
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