Off-Grid Power Conference
and PV Business & Country Workshops
Programme
At the *Intersolar Europe* Trade Fair 2017

Off-Grid Power Partners:

- BSW
- Alliance for Rural Electrification
- inter solar
- Federal Ministry for Economic Cooperation and Development
BSW offers business opportunities

With high-efficient solar technology, Off-Grid power is one silver bullet for electrifying rural areas and alleviating poverty. At Intersolar Europe, you can learn about the latest trends on future markets, technological solutions and smart applications and technology in the Off-Grid sector. The German Solar Association (BSW-Solar) and its partners Alliance for Rural Electrification (ARE) and Intersolar Europe invite you to this year’s Off-Grid Power Conference on 31st May and 1st June 2017 in Munich. The conference is the opportunity for manufacturers, system integrators and project developers to meet high-ranking delegations, policy makers, investors and the international press by taking part in the Off-Grid Power Conference.

The Off-Grid Power Conference 2017 is supported by the German Federal Ministry for Economic Cooperation and Development (BMZ) and will take place in exhibition conference rooms B.11 & B.12 (second floor above Hall B1) in a 2-day program.

In addition to the Off-Grid Power Conference 2017, BSW-Solar offers various workshops and country sessions during the trade show. These Side-Events will deliver firsthand information on Mexico, Morocco, India, Pakistan, Afghanistan, Turkey and South Africa and offers matchmaking opportunities with the delegation members and companies. Those workshops and sessions will take place either in rooms B.11 & B.12 (second floor above Hall B1) or in the International Congress Center Munich (ICM).

Programme Overview

May 31

10:30 - 11:00: Opening Session, Hall B1, Room B.11
11:00 - 12:30: Session 1 - Off-Grid Hybrid PV, Hall B1, Room B.11
12:30 - 14:00: Session 2 - Minigrid, Microgrids & Storage, Hall B1, Room B.11
14:00 - 15:30: Session 3 - Off-Grid Solutions for Industries, Telecommunications and Infrastructure, Hall B1, Room B.11
16:00 - 17:30: Session 4 - Investment & Risk Management in Off-Grid Solar, Hall B1, Room B.11
17:00 - 18:00: Network Meeting of Global Women’s Network (GWNET) for the Energy Transition, BMZ booth, B2.309
18:00 - 20:00: Get Together - BSW-Solar booth, B2.309

June 1

10:00 - 11:30: Session 5 - Off-Grid Solar PV for Humanitarian Actions, Hall B1, Room B.12
11:00 - 13:30: Roundtable Invest in Solar Energy in Morocco, ICM - Room 3
11:30 - 12:00: Workshop - REN 21 GSR Report Sneak Preview, Hall B1, Room B.12
12.00 - 13:30: Session 6 - Energy for Agriculture, Hall B1, Room B.12
14:00 - 15:30: Workshop - PV Financing project: Business models to boost the PV sector in Europe, Hall B1, Room B.12
14:00 - 16:00: Workshop - Solar Market Opportunities in Mexico, ICM - Room 14A
14:00 - 15:30: Workshop - Solare Mieterstromangebote: Neues Geschäftsmodell & Win-win-Lösungen für Vermieter, Mieter, Energie & Solarwirtschaft, ICM - Room 11
14:00 - 17:30: Workshop - Indo-German Dialogue on PV Rooftop Development in India, ICM - Room 13b
16:00 - 18:00: Matchmaking - Mexico, Hall B1, Room B.12

June 2

10:00 - 11:30: Country Session - Value Chain Analysis for the PV Market in Pakistan, Hall B1, Room B.11
11:45 - 13:15: Country Session - Enabling PV Afghanistan, Hall B1, Room B.11
13:00 - 14:30: Workshop - PV home batteries - boom market with hidden traps, Hall B1, booth 151
13:30 - 14:30: Country Session - Turkey - a PV-market with high development opportunities but also insecurities, Hall B1, Room B.11
15:00 - 16:00: Country Session - South Africa - biggest African market with emerging PV rooftop segment, Hall B1, Room B.11

The programme is subject to change (editorial deadline: May 29, 2017). Please check the latest version here.

Register now: www.solar-business.com
# 1. Off-Grid Power Conference

**May 31**

<table>
<thead>
<tr>
<th>10:30 - 11:00</th>
<th>Opening Session</th>
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<tr>
<td>Hall B1</td>
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<tr>
<td>Room B.11</td>
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<tr>
<td>Jörg Mayer, Ernesto Macías</td>
<td>Managing Director, German Solar Association (BSW-Solar); President, Alliance for Rural Electrification (ARE)</td>
</tr>
<tr>
<td></td>
<td><em>Welcome and Introduction Off-Grid Power Conference 2017</em></td>
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| 10:35          |                 |
| Hall B1        | 10:35           |
| Room B.11      |                 |
| Dr. Tania Rödiger-Vorwerk | Deputy Director General Directorate 31, Federal Ministry for Economic Cooperation and Development (BMZ), Germany |
|                | *Keynote*       |

| 10:45          |                 |
| Hall B1        | 10:45           |
| Room B.11      |                 |
| Dana Rysankova | Senior Energy Specialist, Energy Sector Management Assistance Program (ESMAP), World Bank |
|                | *Keynote*       |

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<thead>
<tr>
<th>11:00 - 12:30</th>
<th>Session 1 - Off-Grid Hybrid PV</th>
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<td>Hall B1</td>
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<td>Room B.11</td>
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<tr>
<td>Olivier Drücke</td>
<td>Vice President, Solar23 GmbH, Germany</td>
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<tr>
<td></td>
<td><em>Introduction to PV-Diesel generators for commercial/industrial applications in Africa</em></td>
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| 11:20          |                                |
| Hall B1        | 11:20                           |
| Room B.11      |                                |
| Dr. Karsten Schulte | Managing Director, KRAFTWERK Renewable Power Solutions, Germany |
|               | *PV-Battery-Diesel Hybrid Solution in the Atacama Desert* |

| 11:40          |                                |
| Hall B1        | 11:40                           |
| Room B.11      |                                |
| Dr. Karl Kolmsee | CEO, Smart Hydro Power GmbH, Germany |
|               | *Micro-Grids and Productive Use: project examples & lessons learnt* |

| 12:00          |                                |
| Hall B1        | 12:00                           |
| Room B.11      |                                |
| Colm Byrne     | SVP Community Power, HYbrid Energy Solutions Ltd, Ireland |
|               | *Achieving 100% renewable penetration on Hybrid Micro-Grids* |
### Session 2 - Mini-Grids, Micro-Grids & Storage 12:30 - 14:00

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>12:30</td>
<td>Christian Hoehle</td>
<td><strong>SMA Fuel Save Solution - Solar and storage for hybrid grids the easy way</strong></td>
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<tr>
<td>12:50</td>
<td>Pablo Muñoz</td>
<td><strong>Mini-Grids in Africa, experience from the field</strong></td>
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<tr>
<td>13:10</td>
<td>Amalia Suryani</td>
<td><strong>Promoting Technical Quality Measures in PV Mini-Grid Development in Indonesia</strong></td>
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<tr>
<td>13:30</td>
<td>John-Henry Holtzkamp</td>
<td><strong>Batteries for Mini-Grids</strong></td>
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### Session 3 - Off-Grid Solutions for Industries, Telecommunications and Infrastructure 14:00 - 15:30

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<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>14:00</td>
<td>Michael Schiemann</td>
<td><strong>Lead acid batteries – new applications for Flexibilization of Energy Systems</strong></td>
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<tr>
<td>14:20</td>
<td>Takehiro Kawahara</td>
<td><strong>Frontier power market outlook: Case of cell towers and agriculture</strong></td>
</tr>
<tr>
<td>14:40</td>
<td>Richard Caldow</td>
<td><strong>Agricultural and Rural developments - demonstrating Small Scale Wind Systems</strong></td>
</tr>
<tr>
<td>15:00</td>
<td>Patrick Cousins</td>
<td><strong>Off-Grid Power Systems 4.0 - Energy &amp; Water production in the digital world</strong></td>
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</table>
### Session 4 - Investing in Off-Grid Solar

**Hall B1 Room B.11**

**16:00 - 17:30**

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<thead>
<tr>
<th>Time</th>
<th>Speaker/Presenter</th>
<th>Title/Topic</th>
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<tbody>
<tr>
<td>16:00</td>
<td>Dr. Tobias Bidlingmaier</td>
<td>Financing and funding opportunities for renewable energies</td>
</tr>
<tr>
<td>16:20</td>
<td>Antje Klauss-Vorreiter, Dr. Lutz Mittelstädt</td>
<td>maxx Blockchain Hub - Social Crowdfunding for Off-Grid Solutions in Africa</td>
</tr>
<tr>
<td>16:40</td>
<td>Thomas Huth</td>
<td>Financing as key to Solar PAYG expansion</td>
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<tr>
<td>17:00</td>
<td>Maritje Hutapea</td>
<td>Investment in PV Mini-Grid to Boost Electrification in Remote Rural Areas</td>
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</tbody>
</table>

### Session 5 - Off-Grid Solar PV for Humanitarian Actions

**Hall B1 Room B.12**

**10:00 - 11:30**

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<tr>
<th>Time</th>
<th>Speaker/Presenter</th>
<th>Title/Topic</th>
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<tbody>
<tr>
<td>10:00</td>
<td>Virginia Taborda</td>
<td>SOLARKIOSK Solar Infrastructure Solutions</td>
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<tr>
<td>10:20</td>
<td>Inga Buchholz</td>
<td>Access to Energy: The approach of Energising Development (EnDev) in the context of migration and humanitarian crises</td>
</tr>
<tr>
<td>10:40</td>
<td>Svet Bajlekov</td>
<td>Mini-Grid technology improving the livelihood of hundreds of people</td>
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### Dipl. Ing. Peter Schrum
Founder and Main Shareholder, SunFarming GmbH, Germany
**SUNfarming Food & Energy**

<table>
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<tr>
<th>Event</th>
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<tr>
<td>REN 21 GSR Report Sneak Preview</td>
<td>11:30 - 12:00</td>
<td>Hall B1 Room B.12</td>
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#### Christine Lins
Executive Secretary, REN21, France

First published in 2005, the annual Renewables Global Status Report is the most comprehensive and timely overview of the status, recent developments and trends in renewable energy markets, industries, investments, and policy developments worldwide. Data are provided by a network of over 800 contributors, researchers, and authors from all over the world. While the 2017 report will be launched on 7th June in Beijing/China at Clean Energy Ministerial CEM8, the INTERSOLAR presentation will provide a sneak preview of the main findings. www.ren21.net/gsr

### Session 6 - Off-Grid Energy for Agriculture 12:00 - 13:30

#### Ahmad Shaheer Shariar
Deputy Minister, Afghanistan Ministry of Rural Rehabilitation and Development (MRRD), Afghanistan
**Afghanistan Sustainable Energy for Rural Development (ASERD)**

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<tr>
<td>Ahmad Shaheer Shariar</td>
<td>12:00</td>
<td>Hall B1 Room B.12</td>
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#### Erwin Spolders
CEO, Redavia GmbH, Germany
**Cost-effective, reliable solar power for agrofood businesses and sustainable development in Africa**

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<tr>
<td>Erwin Spolders</td>
<td>12:20</td>
<td>Hall B1 Room B.12</td>
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#### Farah Mrabet
Junior Researcher, University of Hohenheim, Germany
**Dairy Value Chains Supported by Solar! Field Experience in Implementing a Small-Scale PV Milk Cooling**

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<tr>
<td>Farah Mrabet</td>
<td>12:40</td>
<td>Hall B1 Room B.12</td>
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#### Paul Nkumbula
Chief Executive Officer, Energy Diverse Integrations Ltd, Zambia
**Innovative Pumping for Irrigation Purposes to rural community farmers**

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<tr>
<td>Paul Nkumbula</td>
<td>13:00</td>
<td>Hall B1 Room B.12</td>
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Meet panellists of these companies and organizations at the Off-Grid Power Conference
11:00 - 13:30  Roundtable Invest in Solar Energy in Morocco

ICM Room 3

GIZ, BSW-Solar (english)

The German-International Cooperation (GIZ) is organizing a business delegation to the Intersolar Munich. The delegation will be formed by high level representatives of the Moroccan Ministry of Energy, Mines, Water and the Environment, the two leading Moroccan solar associations, the Solar Cluster and the AMISOLE, as well as representatives of some representatives from the solar private sector. Goal of the delegation and the round table is to present opportunities for investing in the Moroccan solar market, meet German players and learn about German technology and opportunities. Public and private sector representatives will deliver firsthand information on Moroccan solar sector as well as on various market segments in the fields of solar pumping, PV auto-consumption, industrial solar thermal, metal structures and other support for panels, solutions for system monitoring, storage. At the end, the session offers matchmaking opportunities with the delegation members and Moroccan companies.

14:00 - 15:30  Solare Mieterstromangebote: Neues Geschäftsmodell & Win-win-Lösungen für Vermieter, Mieter, Energie & Solarwirtschaft

ICM Room 11

BSW-Solar, VKU (german)

Der Markt für PV-Mieterstromprojekte nimmt in Deutschland an Fahrt auf. Vor dem Hintergrund des nun vorgelegten Kabinettsentwurfes, der eine Förderung von PV-Mieterstromprojekten im Rahmen des EEG vorsieht, ergeben sich zukünftig zusätzliche Geschäftsmöglichkeiten für Mieterstromprojekte.
Indo-German Dialogue on PV Rooftop Development in India  
14:00 - 17:30  
BSW-Solar, GIZ (english)  
With 40 GW of grid connected solar rooftop installations as part of India's overall solar target of 100 GW by 2022, grid-connected solar rooftop but also off-grid applications are considered to have an enormous development in the upcoming years. In 2016 approximately 5 GW PV capacity has been added in India. The annual growth rate of the market is higher than 50 percent per year. As per the last renewable energy country attractiveness index by Ernst and Young, India is now rated the 2nd most attractive market in solar energy worldwide. Which rooftop market segments will boost within the next 5 years? Which new business opportunities will come up with as much as 30 percent of grid connected rooftop investment costs being eligible for public funding? This Indo-German dialogue focuses on upcoming business models for solar rooftop, financing possibilities, public support schemes and tenders as well as trends in self-consumption. Well-known market players will share up to date sector insights directly from the market.

Solar Market Opportunities in Mexico  
14:00 - 16:00  
BSW-Solar, GIZ (english)  
The Mexican energy transition has created new market opportunities for solar energy. The first two energy auctions of 2016 resulted in contracting energy from new Solar Power Plants with a total capacity of more than 3,5 GW to be built in the next 3 years. The new regulation for distributed generation as of march 2017 will spur a dynamic market development. In this event, public and private sector representatives will deliver firsthand information on different market segments, covering the third round of clean energy auctions, business models for distributed generation and financing options for solar. Matchmaking with representatives of Mexican companies will be facilitated.
14:00 - 15:30  PV Financing project: Business models to boost the PV sector in Europe
Hall B1
Room B.12
free of charge

Over two years ago, the European Commission launched the PV Financing project with the aim to help the deployment of innovative PV business models in the EU by reducing their financial risk and ease their access to finance. The results are summarized in the implementation guidelines, which describe the current suitable models to develop PV projects in Europe. In this session, a detailed description on how implement these models and solutions as well as the best practice examples in France, Germany and Austria will be provided. Additionally, innovative solutions for a fair energy transition in public, cooperative and social housing will be presented. More information on: www.pv-financing.eu

16:00 - 18:00  Mexico: Matchmaking
Hall B1
Room B.12
free of charge

Matchmaking opportunities with companies, government representatives and associations from Mexico.

Accreditation kindly appreciated via Markus Winter: mdw@energiewaechter.de

17:00 - 18:00  Network Meeting of GWNET (Global Women’s Network for the Energy Transition)
BMZ booth, B2.309
free of charge

GWNET is registered as non-for-profit and aims to advance the global energy transition by connecting and empowering women working in sustainable energy in both developed and emerging/developing countries through interdisciplinary networking, advocacy, training, coaching and mentoring, as well as services related to projects and financing. Further information on GWNET can be found under www.globalwomennet.org
Country Session: Value Chain Analysis for the PV Market in Pakistan

BSW-Solar, GIZ (english)

Pakistan has a huge photovoltaic potential and all the necessary conditions for its implementation: high irradiation, a basic regulatory framework and financing mechanisms that support its development. These were the main conclusions of the project “Pakistan Solar Quality Potential” implemented by BSW-Solar in 2016. This session presents the project results, including the potential of PV quality products (including inverters, batteries, testing & monitoring equipment and EPC services) and the current challenges for the PV development in the country. A high-ranking governmental decision maker will open the floor with regard to the current investment opportunities in the country. Additionally, the session offers matchmaking opportunities with Pakistani PV companies.

Country Session Enabling PV Afghanistan

BSW-Solar, GIZ (english)

Afghanistan undergoes a process of re-industrializing its economy and rebuilding its energy infrastructure. This goes along with an increasing energy demand that cannot be met by conventional energy sources only. The country has a great economic PV potential and first efforts can be seen to deploy it: till 2032, 5 GW of Renewable Energy shall be implemented and 1.5 GW for solar energy are foreseen. This session presents the relevant results of the study „Enabling PV“, where the processes of project development for PV power plants and their profitability were analyzed. This includes the identification of the legal and administrative framework and the description of the viable business models for PV. A high-ranking governmental decision makers will open the floor with regard to the current investment opportunities in the country. At the end of the session, companies have the opportunity to meet with the Afghan official delegation.
13:00 - 14:30  PV Heimspeicher – Boom-Markt mit Stolperfallen

Hall B1
booth 151

**BSW-Solar, IBESA, Solar Promotion**
(german)

Dieses Session beschäftigt sich mit aktuellen Themen des boomenden Solarstromspeichermarktes in Deutschland. Dabei wird ein Überblick über die Förderkulisse sowie über relevante Standards und Guidlines gegeben. Schließlich werden der BSW-Solar und der ZVEH die neuste Ausgabe des Speicherpasses vorstellen.

13:30 - 14:30  Country Session: Turkey - a PV-market with high development opportunities but also insecurities

Hall B1
Room B.11

**BSW-Solar**
(english)

Turkey has become the 4th biggest European PV market in 2016. The license free market up to 1 MW is developing fast. Also larger ground mounted projects are being realized. After the successful contracting of a 1 GW tender in March, another, similar tender has been announced for this year. The roof top market has been barely tackled but has a lot of potential. It is estimated that Turkey will install 1 to 1.5 GW of PV annually in the years to come. The country also can serve as a hub for projects in Arab countries and Central Asia. Negative aspects include political and legal risks, a diminished economic growth and a strong focus on local content and industrial development. The workshop with Turkish experts will inform on market opportunities to enter this growing market.
## Country Session: South Africa - biggest African market with emerging PV rooftop segment

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**BSW-Solar (english)**

The South African PV market is about to emerge, despite huge challenges especially in the political framework. South Africa already has a developed market and profits from excellent irradiation conditions. On the other hand a political crisis as well as a possible strategy shift in energy policy to nuclear could affect future investments for PV in South Africa. On the other hand the PV rooftop Segment already develops quite well. Our country session provides an update on all essential facts and figures. This may help you to enter the emerging South African PV market.

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**Imprint**

BSW - Bundesverband Solarwirtschaft e.V.
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10719 Berlin - Germany

www.solarwirtschaft.de/en

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