



MBA Renewables Alumni Conference
Perspectives of Renewable Power Generation
for On-grid and Off-grid Power Supply
Berlin, 6 – 10 June 2018



BEUTH HOCHSCHULE FÜR TECHNIK BERLIN
University of Applied Sciences



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DAAD

Deutscher Akademischer Austauschdienst
German Academic Exchange Service

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Foreword



Dear MBA Renewables Alumni,

Private individuals installed almost half the renewable power generation capacity in Germany, a fact that made the bottom-up energy transition called “Energiewende” possible in the first place. Today, the concept of the energy transition has been successfully exported. With respect to climate change, however, we cannot focus on carbon dioxide emission reductions within energy generation alone, we must also look at how to reduce energy consumption. By doing so we sharpen both blades of the scissors and “cut” carbon dioxide emissions: one blade cuts (avoids) carbon dioxide emissions at source (energy efficiency) and the other cuts carbon dioxide emissions in the production of energy (renewable energies).

The vision of the Beuth University of Applied Sciences Berlin with more than 13,000 students is to shape the city of the future. The University offers more than 74 future-oriented Bachelor’s and Master’s programmes in the fields of technology, computer science, engineering, natural sciences, life sciences and economics. With the MBA Renewables study programme organized in cooperation with the Renewables Academy AG (RENAC), we are contributing to the concept of replacing conventional energy generation by renewable energy and integrating many different disciplines in our innovative study programme.

Prof. Dr. Florian Schindler (PhD)

Beuth University of Applied Sciences Berlin, Director Institute of Distance Learning



Dear MBA Renewables Alumni,

Thank you for returning to Berlin after having finished your Master’s degree programme to learn more about renewable energy use, to discuss energy related topics with former fellow students and to strengthen your international network.

We are convinced that knowledge is one key factor in the sustainable development of clean and secure energy supplies. That’s why we at RENAC do what we do.

In March 2018, RENAC celebrated its 10th anniversary. Currently we are welcoming students of the seventh on-campus time and the participants of the second MBA Renewables Alumni conference. Eighty MBA Renewables students have graduated! These are milestones for all of us.

This year the theme of the MBA Renewables Alumni conference is the “Perspectives of Renewable On-grid and Off-grid Power Supply”. We chose this theme because the ongoing process of transition towards a green energy future requires the combination of different (renewable) energy technologies. During the conference we will approach this from a technical, economic and political perspective.

I wish you an enjoyable time and a fruitful alumni conference in Berlin.

Berthold Breid

CEO Renewables Academy AG (RENAC)

Impressions: On-Campus time 2012 – 2017



2012



2013



2014



2015



2016



2017

Participants

	Last name	First name	Country
Mr	Bacelic Medic	Zlatko	Croatia
Mr	Battikh	Michel	Syria
Mr	Diogo	Miguel Chiutano	Mozambique
Ms	Ebert	Inga Carola	Germany
Ms	Escobar Rubalcava	Alejandra	Mexico
Mr	Govindan	Naresh Kumar	India
Mr	Greenaway	Timothy	Australia
Ms	Hackenberg	Jonquil Elizabeth	United Kingdom
Mr	Haferland	Alexander	Germany
Mr	Jacob	Jean-Luc Paul	France
Mr	Jayakumar	Sakthi Ganesh	India
Mr	Keller	Wolfgang Markus	Germany
Mr	Lang	Stefan Bernhard	Germany
Ms	Lauhkonen-Seitz	Riikka Johanna	Finland
Ms	Loeffen	Laura	Russian Federation
Mr	Marji	Fadi Izzat	Jordan
Mr	Najar	Adel	France
Mr	Naville	David Maurice Pyrame	Switzerland
Mr	Ong	Edwin	Australia
Ms	Ramos Perez	Diana Maria	Colombia
Mr	Ranzanici	Andrea	Italy
Mr	Saide	António Osvaldo	Mozambique
Mr	Washizu	Rodrigo Yuji	Brazil
Ms	Zinetti	Silvia	Italy

Impressions: Alumni Conference 2017



Programme

Wednesday – 6 June 2018

18:00 **Opening: Reception at Beuth University of Applied Sciences Berlin**

Beuth University of Applied Sciences Berlin
Beuth Halle | Haus Beuth
Lütticher Straße 38 | 13353 Berlin

Welcome Speeches

Prof. Dr. Sebastian von Klinski, Vice President Beuth University of Applied Sciences

Prof. Dr. Florian Schindler (PhD), Director Institute of Distance Learning

Uta Zähringer, Head of Division Academic Programmes and Professional Trainings,
Renewables Academy AG (RENAC)

From Power to People Networks: How the MBA Renewables Has Electrified My Career

Andrea Ranzanici, MBA Renewables Alumnus

Keynote Speech: Thinking Beyond Renewables

Markus Steigenberger, Agora Energiewende

22:00 End of Reception

Thursday – 7 June 2018

9:00 **Perspectives of Renewable Power Generation for On-grid and Off-grid Power Supply – Site Visits**

Start at Renewables Academy AG (RENAC)
Schönhauser Allee 10 – 11 | 10119 Berlin

11:00 ENERTRAG Hybrid Power Plant: www.enertrag.com
Schenkenberger Str. 115A | 17291 Prenzlau

14:15 *Lunch break*

16:00 Autarsys GmbH | Innovative Energy Solutions
for a more sustainable world: www.autarsys.com
Johann-Hittorf-Str. 8 | 12489 Berlin

18:00 End of day II at
Renewables Academy AG (RENAC)
Schönhauser Allee 10 – 11 | 10119 Berlin

Friday – 8 June 2018

Perspectives of Renewable Power Generation for On-grid and Off-grid Power Supply

Beuth University of Applied Sciences Berlin
Room B501 | Haus Gauß
Luxemburger Straße 20a | 13353 Berlin

10:00 Renewables and Hybrid Systems for Energy Access

Dipl. Ing. Setu Pelz, PhD Student/Off-Grid Systems,
Rainer Lemoine Institute

Presentation, Q & A

11:30 *Coffee break*

11:45 Hybrid systems: How to Get Rid of My Diesel Generator?

Lars Koerner, RENAC AG

Presentation, Q & A

13:15 *Lunch break*

15:00 Business Models and Case Studies

Dr. Enrique Garralaga, SMA Sunbelt

Presentation, Q & A

16:00 Brainstorming: Future MBA Renewables Alumni Network

17:00 End of day III

Saturday – 9 June 2018

Perspectives of Renewable Energy Use | Alumni Presentations

Beuth University of Applied Sciences Berlin
Room B501 | Haus Gauß
Luxemburger Straße 20a | 13353 Berlin

10:00 How to Start: Site Surveys

moderated by:
Sakthi Ganesh Jayakumar

Digitalization of Inspections and Site Surveys

Alexander Haferland

Discussion

10:30 How to Make it Work: Renewable Energy Technologies in Use

moderated by:
Adel Najar

PV-Diesel Hybrids: Overview of Technologies and Methods

Michel Battikh

RE-Hybridisation - "Triple Win" for Utilities: Case Study
Review on Vietnam Grids

Naresh Kumar Govindan

The Social Insect: Creating Sustainable Smart Communities
with a Renewable Core

Jonquil Hackenberg

Discussion

12:00	How to Make it Legal: Politics and Strategies for Renewable Energy Use	moderated by: Inga Ebert
	Elements of Renewable Energy Strategy for Jordan and the GCC	Fadi Marji
	Discussion	
13:00	<i>Lunch break</i>	
14:30	How to make Business: Opportunities and Challenges	moderated by: Silvia Zinetti
	Technical and Financial Appraisal of Solar Powered Irrigation with Remote Monitoring and Management System in Nigeria	Ademola Samuel Abikinda
	Renewable Energy to Scale up Agricultural Production and Productivity in Mozambique	Antonio Saide
	Productive Use of Renewables and Business Opportunities: Solar Milk Cooling Case in Colombia	Diana Ramos Perez
	Discussion	
15:30	Summary	
19:00	Long Night of Sciences www.langenachtderwissenschaften.de	

Sunday – 10 June 2018	
10:00	International Brunch
	Renewables Academy AG (RENAC) Schönhauser Allee 10 – 11 10119 Berlin
12:00	Farewell & Goodbye

Speakers



Dipl.-Ing. Setu Pelz | Reiner Lemoine Institute

Renewables and Hybrid Systems for Energy Access

Setu Pelz has been awarded a scholarship by Reiner Lemoine Institute (RLI) in January 2017. The title of his dissertation is “Smart Measurement of Energy Development Pathways – Measurement, modelling and analysis methods for continuous assessment of decentralised energy transformation processes”.

His main research interest is the econometric analysis and modelling of energy demand and benefit for rural electrification. Mr. Pelz holds a double degree in Mechanical Engineering and Business Management from RMIT University in Melbourne. After completing his studies in 2010, he joined the renewable energy industry, gaining experience as an engineer in the onshore and offshore wind energy sector. In 2015, Mr. Pelz started working at MicroEnergy International in Berlin, focusing on the topic of Energy Poverty and innovative solutions such as Swarm Electrification.



Lars Koerner | Renewables Academy AG (RENAC)

Hybrid Systems: How to Get Rid of My Diesel Generator?

Lars Koerner joined the Renewables Academy in May 2014 as Project Director Solar Energy. He coordinates international capacity building programmes, training centres implementation, develops and delivers trainings and training-of-trainer seminars.

Lars Koerner holds a Diploma in Environmental Engineering / Renewable Energies, is a TÜV certified trainer and state-licensed electrician. Before joining RENAC he gained valuable years of experience in implementation and techno-economic evaluation of large-scale rural PV hybrid electrification projects as Project Engineer and Senior Product Manager at SolarWorld AG. He is an expert in sizing and simulation of solar power systems and the co-author on off-grid and hybrid systems in Earthscan’s 3rd edition of “Planning and Installing Photovoltaic Systems”. He developed “FLOW”, a practitioner’s tool for sizing, simulation and economic evaluation of off-grid, weak-grid and hybrid PV systems.



Dr.-Ing. Enrique Garralaga Rojas | SMA Sunbelt Energy GmbH

Business Models and Case Studies

Dr. Garralaga is responsible for the development and implementation of PV-Diesel and large-scale battery storage projects within the SMA Sunbelt Energy GmbH.

Before joining SMA, he worked at Siemens as Photovoltaic Program Manager at the CTO office of Siemens Energy. In the past he headed a R&D group on solar at ISFH (Germany) and has been working as free-lance consulting project engineer for several companies implementing large scale projects in Europe and South Africa. Dr. Garralaga’s background extends to a MSc in Physics at the Universidad de Zaragoza, a MSc in Physics, specialisation Optoelectronics, at Universität Paderborn, and a European MSc in Renewable Energies with a specialization in Photovoltaics. Furthermore, he also holds a PhD in Engineering from the Christian-Albrechts-University of Kiel.

Technical site visits

ENERTRAG AG Hybrid Power Plant Prenzlau



ENERTRAG is a European energy company that generates electricity exclusively from renewable sources – mainly from wind energy. The company is ranked among the leading wind power producers with more than 667 installed wind turbines and 3 billion kilowatt hours annually.

With 460 employees throughout Europe, ENERTRAG combines all competencies that are necessary for the operation of wind turbines and for the generation and supply of renewable energy. From planning, development and financing to the construction and the operation up to feeding into the own power grid with the associated transformer substations and connection throughout Europe, ENERTRAG is one of the few companies worldwide that operates every necessary link in the production chain with sustainable wind energy.

The Hybrid Power Plant was opened in 2011 and is the first of its kind in the world. Wind energy is transformed into hydrogen, which is much easier to store. In this way renewable energy can be 100% flexible and can be used when and where it is needed. The Power Plant in Prenzlau consists of three wind turbines producing 6.9 MW of electricity, an electrolyser of 600 kW for the production of hydrogen and two thermal power stations that can be operated with biogas and hydrogen.

www.enertrag.com

Autarsys GmbH



Autarsys is a Berlin-based company that manufactures containerized energy storage systems (ESS) for hybrid renewable energy applications. Their systems make wind and solar powered systems more energy-efficient and cost-effective, increasing the share of renewable energy by up to 90%. Autarsys develops on and off-grid projects in all corners of the world with a focus on developing countries.

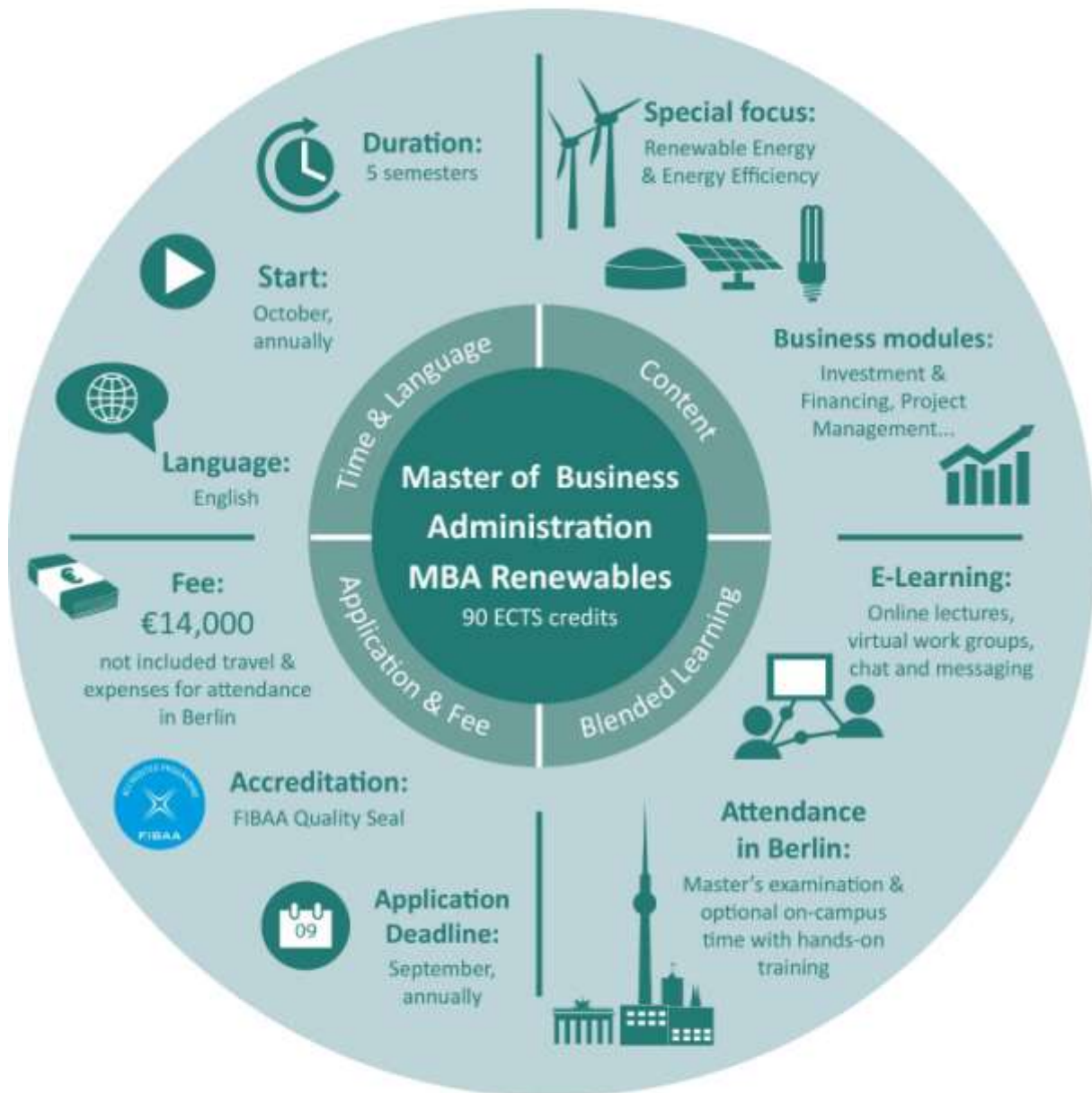
In the On-grid mode, the ESS enables local power generators and grid operators to use primary control reserve power and generate income through energy arbitrage and ancillary services. Whereas, in the Offgrid mode, applications enable fuel saving for diesel generators, load shifting and energy smoothing. With renewable energy sources, their off-grid and hybrid – solar and/or wind & diesel genset – systems provide power at a cost that is 30% less than pure diesel generators.

www.autarsys.com

Safety regulations and standards for site visits

- Bring closed and robust footwear.
- If necessary you will be provided with personal protective equipment (helmet, reflective vest, possibly ear protection) and it is necessary for you to wear this.
- Please follow all instructions and advice from the tour guides throughout the visits.
- Please do not leave the group or the path and please refrain from touching any power plant components.
- In case of emergency, please follow the orders of the guides. Use the assigned emergency exit signs to get to the collection spot. The guides will then assure the group is complete and will inform rescue workers or any missing persons.
- By taking part in the tours you agree to do so at your own risk and under your own responsibility.

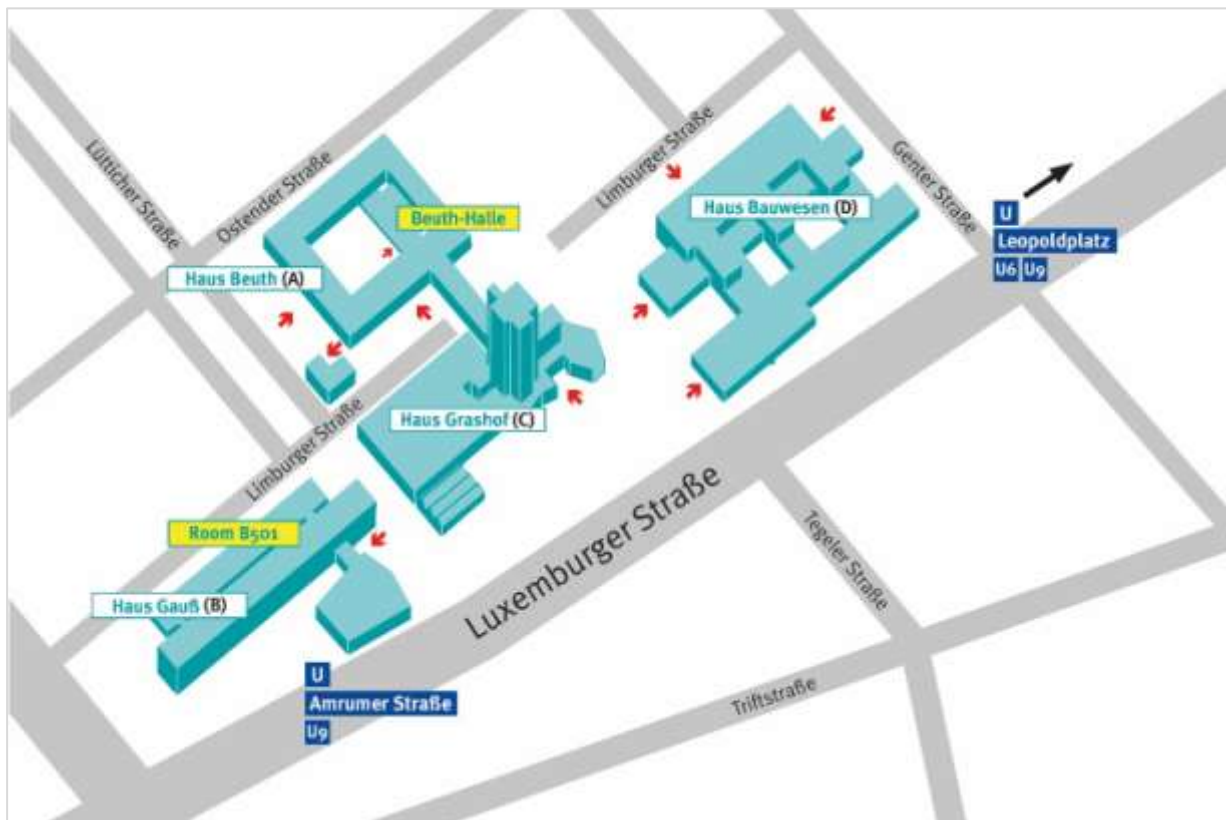
At a glance: MBA Renewables



www.mba-renewables.de



Campus Beuth University of Applied Sciences Berlin



Beuth University of Applied Sciences Berlin

Luxemburger Str. 10
13353 Berlin

Public transport

Metro U9 Amrumer Straße
Metro U6 / U9 Leopoldplatz

Just in case

Mobile phone number of the MBA Renewables team: +49-151-1462 9783

