

H-W Boehnke	Energy Sector Specialist
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- Family name: BOEHNKE, Dipl.-Ing.
- First names: Heinz-Wolfgang
- Date of birth: May 7, 1953
- Nationality: Germany
- Civil status: Married
- Education:

Institution [Dates from – Date to]	Degree(s) or Diploma(s) obtained
TÜV Nord, Berlin 2013	Certified Consultant (TÜV) PV Systems
Chamber of Industry and Commerce Hamburg, 1989	Licensed Vocational Trainer, international trade
University of Applied Science Lippe, Germany, 1972-1976	Dipl.- Ing. Mechanical Engineering, Construction Power Engines and Machines. Master's Degree (MSc equivalent)
Technical College FOS Lippe 8/71-7/72 Phönix Elektrizitätsgesellschaft, Germany, 1968-1971	Bachelor's degree, Technical Mechanics Professional Certification, tool&die crafting

7. Language skills: (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
German	1	1	1
English	1	1	1
French	2	2	2
Spanish	2	3	3
Tagalog	3	2	4

- Membership professional bodies: International Solar Energy Society / Deutsche Gesellschaft für Sonnenenergie
- Other skills: IT-administrator. Trainer on market development RE economics; staff development and process consulting.
- Present position: Senior Energy Consultant, CEO of TECHNOSOL
- Years within the firm: 35 years with intermissions for international assignments

12. Key qualifications:

- 39 years n-depth Renewable Energy sector experience in planning, feasibility assessment, implementation:
 - Grid integration projects of various sizes and voltage levels
 - Off-grid projects, decentralized grid planning, mini-grids, monovalent and hybrid
 - Commercial / technical development and promotion of renewable energy applications
- 25 years international **technical advisory**, technical management in **developing countries**, technology integration
- 18 years of **development cooperation** in **power sector** management and energy sector reform. Electrification w/RE options, demand and supply assessment, strategy development. (Philippines, SADC, Myanmar, Tonga, CAREC).
- 9 years team leader**, coordinator (Philippines, Africa, CAREC) managing **multinational teams** of different technical backgrounds (long- and short-term), coaching and capacity development
- 12 years** advice in **Central Asia** and **ASEAN** region, plus the Pacific Islands on energy policy and RE business advisory including financing and business models, capacity development on rural and urban electrification (CAREC, Philippines, Myanmar, MEKONG, PICT) Resident in Afghanistan 3 years, Philippines 7 years.
- 7 years** of experience with **European Commission TA** in business advisory, budget support towards energy sector reform. Development Partners cooperation, action matrix formulation and Energy Road Map implementation.
- Strong background in **capacity building, institutional strengthening** and training of public and private sector stakeholders, maintaining working relationships with administration, academy, private sector and social communities.
- Demonstrated track record of providing support to:
 - **Policy, legislative, and regulatory frameworks** and strategies for power sector management
 - **Development/** sustainable implementation, financing RE projects, energy access; rural electrification design, M&E
 - **RE feasibility and economic assessments**, quality assurance and standardization, PPP and innovative financing models; RE based income generation, business advisory, development of productive use tools
 - Budget management and monitoring, financial assistance agreements including budget support
 - Public relation and awareness, visibility, reporting and documentation.

13. Specific experience in Developing/Transition countries:

Countries	Date: From - to (month / year)
Philippines	1991-1996, 2016 resident, 2020
CAREC: Tajikistan, Kyrgyzstan, Pakistan, Afghanistan; Mongolia	3/2017 – 6/2019
ASEAN: Myanmar, PRC, Thailand, Lao, Cambodia, Vietnam;	1999 – 2001, 11/2013-10/2015
PICT: Tonga, Vanuatu, Niue, Fiji, Kiribati, Palau,	2009 - 2010; 2015
SubSah Africa: Central African R, Cameroun, DR.Congo, Uganda, Rwanda	2009-2014, 2017
MENA: Tunisia, Jordan, Palestine, Egypt, Morocco	2008-2011
SADC: South Africa, Namibia, Zambia, Botswana, Eswatini, Zimbabwe,	2000-2007, 2018

14. **Other relevant information:** List of publications upon request.

15. **Professional experience:**

Date from Date to	Project days	Location	Company & Reference Person	Position	Description
08/1985 - ongoing	Cont.	Jork, Germany	TECHNOSOL Heinz-W. Böhnke hwb@technosol.de	Owner, CEO, Senior Renewable Energy Expert	Solar Engineering Procurement Construction EPC company with 35 year track record in project consultancy and development. Focus from 1985 to international off-grid systems , expanding from 2000 to on-grid projects totalling more than 120 PV plants to MW range on FIT-based generation and service. Design, install and operate, monitor RE delivery models and rural power solutions (on-grid / off-grid) ; conduct feasibility and profitability studies for RE projects, regulations on standards and safety, advise energy consumer association (BDE). Train RE entrepreneurs.
01/2020 – 02/2021	181	Philippines C40-CFF Quezon City 50 schools PV, missions	INTEGRATION for GIZ CFF Ferdinand P Larona ferdinand.larona@giz.de	Team Leader, Senior Renewable Energy Expert	Urban Renewable Energy advisory under C40 City Financing Facility : Optimization of feasibility and financing options for 50 solar rooftop PV installations up to 5 MW . Project development support on assessment, business models with PPP-based funding, legal and economic evaluation and operational administration to City Government working group. Capacity development focused on Technical optimization for output maximization with service provision and impact assessment. Tender specification with quality assurance as a blueprint for upscaling to public buildings.
01/2018 – 06/2019	174	CAREC: KYR, TAJ, AFG, missions	INTEGRATION for Asian Development Bank ADB Sohail Hasnie, shasnie@adb.org	Team Leader, Solar Expert	Access to electricity with new off-grid solar technology in Central Asia: Enable pilot off-grid communities in five CAREC member nations to move from minimum lighting to 1 kWh/d power units with solar modules and long-life lithium-ion batteries using matched efficiency appliances. Manage national teams in technology development, rural electrification framework , optimize models for distribution and monitoring service. Develop tools for site appraisal , economic and financial assessment, technical and social monitoring. Evaluate business models for PPP-based service provision.
03/2017 – 10/2018	114	Mongolia, missions	INTEGRATION for Asian Development Bank ADB Ralph Pfoertner rpfoertner@integration.org	PV System Engineer	SREP Upscaling Renewable Energies PPTA Identify priority renewable energy subprojects in remote grid systems in the Mongolia Renewable Energy Investment Plan (MREIP). Update long term electricity load demand forecasting for targeted grid systems (i) prepare a project feasibility study including resource assessment and grid stability study , operation and maintenance strategy for the subprojects and environment impact assessments, (ii) conduct due diligence on several aspects of the priority subprojects, and (iii) provide planning and implementation training.
01/2017 04/2017	42	East Africa (Uganda, Rwanda, missions)	GOPA-intec (for EU-TAF) Dr.Andreas Wiese Andreas.Wiese@gopa-intec.de	Team Leader / RECP Policy Advisory	Africa-EU Renewable Energy Cooperation Programme RECP – Policy Advisory RECP-PA provides evidence-based RE policy advisory services, targeting public bodies to improve framework conditions for private investment opportunities in renewable energy projects. Facilitate regional cooperation among energy sector stakeholders and complementary action to interventions of partner organizations. Capacity Development in stimulating policy, strategy, roadmap, regulation and legal framework for impact oriented output.
03/2016 10/2016	210	Philippines (resident)	GIZ International Services (for European Commission) Florian Seeger florian.seeger@giz.de	Team Leader ASEP Access to sustainable energy programme	ASEP Access to sustainable energy programme: Institutional Strengthening of the Department of Energy (DoE) through capacity development and renewable energy based electrification to achieve the target of 90% household electrification in rural and remote unelectrified areas. <ul style="list-style-type: none"> • Conduct organizational, institutional and staff capacity demand assessment and feasibility studies • Evidence-based decision making on electrification technologies, long term economic and environmental implication • Capacity Development of DoE's disaster resiliency planning incorporating sustainable pro-poor focus in rural and remote unelectrified areas • Support DoE on comprehensive information, education and communication programme • Assist DoE to establish international technologies network for electrification, improved managerial decision making • Promote RE, understanding for energy efficiency, and the role of RE in rural electrification. • Support relevant stakeholders to gather knowledge on RE technologies for rural electrification and increase their capacity to conduct and/or evaluate feasibility studies.

05/2015 - 09/2015	120	Kingdom of Tonga	AETS (for EU) Contac Partner : Mr. Paula Povalu M'au, PaulM@mic.gov.to	Energy Sector Specialist	EU-TA for the Energy Sector in Tonga. Assist Ministry of Environment, Energy, Climate Change, Disaster Management, Meteorology, Information & Communications (MEIDECC) in improving energy sector coordination and providing assistance to the EU budget support (Sector Reform Contract) programme. Formulate Action Fiche , indicators for disbursal, Performance Assessment Framework (PAF). Assist CEO of Energy Department and utility TPL in national energy sector coordination, structuring, progress planning and reporting. Facilitate Development Partner cooperation (ADB, WB, JP, NZ, AU) with a view to improving aid effectiveness , contribute to joint activity matrix, convene consultation meetings. Support TA needs assessment.
11/2013 – 10/2015	110	Myanmar	Asian Development Bank ADB Hyunjung Lee, hjlee@adb.org	International Renewable Energy Expert	Institutional Strengthening of National Energy Management Committee (NEMC as coordinating body of 7 energy related Ministries) in Energy Policy and Planning. Provide advice on power sector reform, strengthened capacities in RE policy planning , capacity development, RE options assessment . Provide RE component to long-term National Energy Master Plan . Draft RE Policy, based on assessment, strategy and Road Map, for on-grid and off-grid RE . On rural electrification , developed demand planning and service capacity structure. Advised NEMC on institutional development, legislation and regulation. Conducted national stakeholder consultations with ministries, public and private implementers to support cooperation on solar, hydro, and bioenergy in the framework of the RE action plan. Designed capacity development for RE implementation management, structured training matrix. Designed RE financial incentives for market support strategy to increase private sector participation.
04/2009 – 05/2011 intermittent	72	Central African Republic, Cameroun, Democratic Republic of Congo	Worldwide fund for nature (wwf) Johannes Kirchgatter Johannes.Kirchgatter@wwf.de	Project head, lecturer	Congo Basin Forest Protection Provide off-grid and mini-grids in remote Central Africa/DRC nature reserve with PV Hybrid installations <ul style="list-style-type: none"> • Design, material sourcing and testing, construction, training and service • Demand assessment, design of thermal and electrical supply, new distribution grid • supply solar PV and solar thermal infrastructure, installation supervision Develop service concept, monitoring, training of users, evaluate performance
11/2008 – 12/2011 Intermittent	48	MENA countries, regular missions	GIZ (for Federal Ministry for Economic Cooperation and Development / BMZ) Klaus Knecht, KKnecht-FRB-BER@t-online.de	Coordinator, lecturer	Regional energy policy coordination Energy Partnerships with focus on RE policy and application, curriculum development within the MENA Region. Assessed capacity development needs on energy policy in higher education, public administration, and private sector. Worked with stakeholders in Tunisia, Jordan, Palestine, Egypt, Algeria, and Morocco to strengthen their involvement in energy policy formulation, legislation, and development of regulatory capacity . Organized and facilitated regional workshops on RE training for post-graduate higher education. Developed training materials and coached trainers. Facilitated and coached advisory bodies of non-state actors. Technical assistance on regional grid planning and transnational grid management.
04/2010-05/2010	27	Afghanistan	GIZ (for BMZ) André Möller, andre.moeller@ecoclimate.net	Renewable Energy Specialist	TA to Ministry of Energy and Water on energy sector reform and energy planning , including RE implementation in rural areas . Provided institutional capacity development to RE Department, including organization and implementation of a planning workshop. Planned implementation network for rural electrification based on hydro-power, wind generation, and PV off-grid . Coached department heads on budget planning for hydro, wind, and solar project development , project formulation and funding models.
02/2010 – 04/2010	78	Vanuatu (PIC)	Government of Vanuatu (for AusAid) Leo Moli, LMoli@vanuatu.com.vu	Senior Rural Energy program expert	Programme to expand access to power to communities across Vanuatu. Provided high-level policy advice to Ministry of Lands and Natural Resources. Conducted energy sector policy and aid-effectiveness analysis for output-based options assessment of rural electrification . Prepared the work plan for delivering an expanded and sustainable access to energy for rural communities . Advised on institutional structure for rural electrification .
08/2009 – 04/2010	36	Kingdom of Tonga (PIC) regular missions	International Renewable Energy Association (IRENA) Hugo Lucas, HLucas@irena.org	Off-Grid Energy Consultant	Development of Tonga Energy Road Map TERM as sustainable electrification model for Pacific Island Countries (PIC). Conducted energy demand assessment and developed the off-grid electrification strategy for Outer Islands including administrative and regulatory framework, cost of implementation, and service. Prepared electrification options assessment, including PV, wind, biomass and marine resources . Developed Outer Island power component

					of TERM strategy paper, for donor community and Government. Participated in planning sessions on energy sector policy reform in PICs, led by the World Bank.
07/2009 – 08/2009	30	Niue (PIC)	NAO, Government of Niue (for EU). NPC Speedo Hetutu, Speedo.Hetutu@mail.gov.nu	Consultant Trainer	Technical Assistance to Niue Power Corporation in the framework of EU support to the power provider NPC. Designed, supplied and supervised installation of PV grid support generation. Organized maintenance, monitoring, and expansion planning. Trained utility managers from 12 Pacific Island Countries in RE design, economics , and evaluation.
06/1999 – 09/2000	238	Hamburg, Germany	SunTechnics / Conergy HM Rüter, CEO info@ruetinvest.de	Head, International Relations	Developed international corporate market strategy. Established branches in Austria, Spain, Togo, and Namibia. Developed corporate off-grid portfolio and island energy systems . Partnered Rural Electrification Program Namibia. Coordinated policy advisory group. Managed team of 9 international staff members marketing, technical and strategy.
10/2000 – 12/2007	180	SADC countries regular missions	InWent for GTZ / European Commision , Klaus Knecht, KKnecht-FRB-BER@t-online.de	RE Specialist, Coordinator	Integrated South African Business Advisory Program (INSABA) Zimbabwe, Namibia, Zambia, Botswana, and South Africa. Training and policy dialogue interventions in phase 1 focused on RE business advisory and establishment of a regional counterpart structure; in phase 2 focused on off-grid productive use models and developing technical/economic business tools.
08/1999 – 12/2001	42	Mekong Region: ROC, Vietnam, Lao, Cambodia, Thailand regular missions	CDG for GTZ, Klaus Knecht, KKnecht-FRB-BER@t-online.de	Renewable Energy trainer, Coordinator	Council on Renewable Energy in the Mekong Region (CORE) Capacity building program. Policy and legal framework development to the Ministries of Energy, Science, Education in PRC, Thailand, Lao PDR, Cambodia and Vietnam on energy sector reform, Rural electrification and technical advisory. Coached private sector stakeholders on marketing and quality control. Established and supported regional exchange and consultative bodies on RE promotion and implementation. Prepared and documented training on project development, feasibility assessment, cycle management. and organized regional workshops on RE
10/1990 – 06/1996	2076	Philippines (resident)	GTZ (for Federal Ministry for Economic Cooperation and Development / BMZ) Dr. Rolf.Posorski, rolf.posorski@gmx.de	Team Leader	Special Energy Program (SEP) : Manage nationwide RE pilot projects demonstrating new technology applications. Supporting the Philippine National Rural Electrification Program / Department of Energy (DoE), National Electrification Administration (NEA), Electric Cooperatives (ECs), private sector, financing institutions. Leading international team (technical experts, economist, public-private partnership specialist), national consultants for studies, certification and monitoring. Develop PV off-grid, mini-grid and hydro systems , “Rural Photovoltaic Electrification” strategy; Nationwide and international nstitutional and technical training program. DP cooperation.
12/80-1/85	908	Germany	AEG New Technologies	ProductManager	Product management Solar Home Systems, Photovoltaic refrigeration, marketing South America
8/79-12/80	312	Germany	Stiebel Eltron Solar	ProjectManager	Project Management, Solar Thermal Technology, Computer aided design and performance analysis
04/1977 – 01/1979	786	Afghanistan (resident)	UNDP, Arthur N. Holcombe	UNV	Streamline National Cartographic Institute's transport unit Capacity building and preventive maintenance organization