



Competence Profile – Dr. Georgia BADEL

Decentralized RE solutions in agriculture



Dr. Georgia BADEL, Economist

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RELEVANT CORE COMPETENCIES

- ✓ 20 years experiences in the field of **RE/ EE (business development services for private sector + development cooperation), both in Asia and Africa**
- ✓ 6 years experiences with **development of BMOs** in the field of RE, including design and organization of matchmaking events (B2B, B2F, conferences, study trips) and conduct of comprehensive market studies (Kenya, Tanzania, Rwanda)
- ✓ 8 years experiences on **rural electrification**, including 3 years of developing solar PV minigrids and 5 years working on decentralized stand-alone RE solutions
- ✓ 5 years **advisory services on decentralized (stand-alone) RE solutions**, especially in agriculture value chains, including:
 - Analysis of the **financial viability of investments** in selected RE solutions such as solar milk cooling facilities, solar cold storages, solar dryers, solar mills etc. (*finance modelling*)
 - Development and analysis of **possible business models for piloting and upscaling** the selected solutions (*in strong consideration of the limited ability-to-pay of investors/ users*)
 - **Socio-economic assessments**, including e.g. the ability-to-pay in consideration of expected benefits and organization degree & effectiveness of farmer communities (*farmer groups, cooperatives etc.*)
 - **Development of concrete demonstration projects**, including identification of sites, awareness raising on side of potential users and investors, engaging private sector, negotiating payment schemes with investors, developing and implementing monitoring system for the demonstration project, support on fundraising
 - Supporting **businesses to develop their business plan** (*identification of potential clients, partners for distribution and installation, strategic partners for add-on services, 5-year plan etc.*)
 - **Conducting trainings** on finance modelling and business models
- ✓ **5 years experiences in RE finance services**, including the design of challenge funds (EEP), the development of RE/ EE creditlines (for GCPF/ ReponsAbility) and support to companies in fundraising.
- ✓ 10 years experiences in **advisory services to European companies in Asia & Africa**, including
 - Advice on market entry strategy
 - Project pipeline development (identification of potential clients, financial pre-feasibility analysis etc.)
 - Matchmaking with partners for sourcing, distribution and installation
 - Matchmaking with funds

- ✓ **Country experiences:** Kenya (3 years living + working), South Africa (3 years living + working), China (7 years living + working), India (around 2 years intermittent expert), Lebanon (6 month living + working), Egypt (6 month living + working); short-term assignments in Tanzania, Rwanda, Zambia, Malawi, Madagascar, Benin, Togo, Nigeria, Cameroon, Bangladesh
- ✓ **Languages:** English, French and Italian

SELECTED REFERENCES

(1) Advisory services on decentralized RE solutions in agriculture

- **Analysis of the financial viability of the solar cold storage ColdHubs in Nigeria, development of a business model for upscaling** (including assessment of ability-to-pay, finance modelling for various business models, development of a 5-year plan), 2018/19, GIZ Powering Agriculture
- **Assessment of the commercial viability and of possible business models for RE technologies (solar pumps, solar mills, solar dryers etc.) along selected agricultural value chains** in Malawi and Cameroon (cacao, groundnuts, cassava, poultry), 2018/19, GIZ – Green Innovation Centers
- **Development of business models and analysis of the viability of a small solar milk cooling system** (including assessment of benefits and ability-to-pay; discussion of business models with the cooperatives and farmers; finance modelling and analysis etc.), 2017/18, University Hohenheim/ GIZ
- **Development and implementation of demonstration projects for the small solar milk cooling system** (including assessment of potential sites, selection of 2 sites; development of the business model; monitoring of the demonstration project; negotiation of a payment scheme with the clients, based on projections of milk sales and revenues due to the SMCS), 2018, University Hohenheim/ GIZ
- **Development and analysis of business models for a larger solar milk chilling system in Bangladesh** (including analysis of the cost-effectiveness of the solar chiller compared to grid-diesel solutions; cashflow calculation for the processor model and the third-party model; comprehensive sensitivity analysis; recommendations on incentive schemes for solar chillers), 2017/18, GFA/ GIZ
- **Development of a demonstration project for the larger solar milk chilling system in Zambia** (including engagement of a “pioneer” investor/dairy processor; engagement of a NGO which supports the dairy processor on improving the dairy farming practices of the smallholders; identification of proper funds; site assessment and development of business model; development of the proposal etc.), 2016, BS Consult/ ILK – German Institute of Air Handling and Refrigeration/ Applied New Technologies
- **Development of a business model for a solar ice-maker and development of a demonstration project in Tanzania**, including the development of a viable business model, finance modelling, engagement of a NGO as co-sponsor and cooperation partner etc., 2016/17, BS Consult/ ILK – German Institute of Air Handling and Refrigeration/ Applied New Technologies
- **Rwandan Energy Private Developers (EPD)/ sequa**, Spring 2017: Training on business models, finance modelling and finance of inclusive RE businesses;

(2) Other references on RE market development (finance and business development services)

- **Consultancy on setting-up a Project pipeline (RE/EnEFF) for the Rwandan Bank of Kigali** (contracted by GFA, funded by GCPF- Global Climate Partnership Fund), 2018 (including identifying EE/RE investment opportunities and provision of portfolio screening services to Bank of Kigali, team lead);
- **Designing the 3rd phase of the EEP energy challenge fund** in East and Southern Africa (contracted by NIRAS, funded by Finish Government), 2017
- **AUTARSYS GmbH, 2015/16:** Development of solar minigrid projects, mainly in Zambia, Malawi and Madagascar (including market potential analysis; engagement of local governments, NGOs; socio-economic assessments & selection of sites; development of a business plan for the private supplier; engagement of local partners; finance modelling; identification and mobilization of proper funds etc.)
- **Advisory services to EPD (Energy Private Developers Association Rwanda)** on service portfolio development, 2016-2018
- **Setting-up the Energy Department at the German Chambers of Commerce in China (Beijing) and Kenya**, 2004-07 + 2012-15