

RENEWABLE ENERGY AND RURAL ELECTRIFICATION

Challenges

Secure of energy supply is a crucial factor for development. Despite the fact that a substantial part of the world's population still lives at subsistence levels of consumption, human activities are overstretching the globe's limited resources. Therefore, the efficient use of natural resources and energy is receiving more and more attention. The main challenges for energy supply in the future are scarcity and increasing prices of fossil fuels, obligations to limit greenhouse gas emissions, the need to reduce energy intensity to stay competitive, and an often limited capacity to deal with these issues.

Renewable energy (RE) is increasingly taking over new generation capacities worldwide. RE enables a green energy system and independency from fossil fuel imports. Challenges lie in the connection to the

public grid, the grid integration of fluctuating sources such as solar or wind power, financing matters, and in setting up support schemes and procurement processes for market integration. In addition, rural electrification with decentralized RE sources is the viable option to on-grid systems.

GFA offers its partners complete project management solutions ranging from policy advice on RE strategies and regulatory frameworks, support energy generation from all RE sources for both on- and off-grid solutions to capacity development and project pipeline development. Over the years, we gathered a solid experience of accompanying client institutions in their development process. Our approach ensures a long-lasting impact on our partners' capacities to develop appropriate solutions to RE related issues.

GFA services

GFA's experts have a wealth of international experience regarding energy planning and policy, and a profound knowledge of regulatory frameworks needed for sustainable energy development. In order to support long-term development and the implementation of specific actions with our partner institutions, we pass this know-how on to local decision makers.

- Policy advice
- Programme design and supervision
- Regulatory frameworks
- Awareness campaigns
- Project communication

GFA offers its clients and beneficiaries comprehensive project management ranging from project development to evaluation.

- Overall technical assistance
- Studies and analyses
- Identification of challenges and potentials
- Feasibility verification
- Pilot project implementation
- Monitoring and evaluation

Our experts enhance the capacities of public and private sector professionals to come up with innovative energy solutions needed to face the challenges of energy security in their countries. Assistance ranges from technical seminars to institutional support and procurement trainings.

- Institution empowerment
- Organisation development
- Capacity building and training
- Knowledge transfer

With longstanding experience in generating energy from all renewable sources, our experts are well-positioned to advise on the best strategies to tackle energy demand. We also advise our partners in developing new financing models for RE investments and conduct due diligences.

- Implement energy generation from all RE sources
- Identify new capacities for RE
- Project pipeline development and due diligence
- Rural electrification
- Hybrid models
- RE financing and due diligence

ENERGY EFFICIENCY

Challenges

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Energy efficiency (EE) plays the major role in decreasing non-productive energy consumption. Particularly in developing and transition countries

with obsolete industrial technologies and buildings not adapted to regional climate, technological and processual upgrading, refurbishment, and the introduction of EE standards are big challenges. Given the benefits like reduced energy costs, increased competitiveness and the positive impact on the environment, the demand for EE consultancies is growing.

GFA offers its partners complete project management solutions ranging from the identification and implementation of EE measures to policy advice and capacity development. Over the years, we gathered a solid experience of accompanying client institutions in their development process. Our approach ensures a long-lasting impact on our partners' capacities to develop appropriate solutions to EE related issues.

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With longstanding experience in implementing energy efficiency measures in the building, industry and transport sectors, our experts are well-positioned to advise on the best strategies to improve energy performance. We also consult our partners in developing new financing models for investment-related energy efficiency installations.

- Conduct of energy audits
- Implementation of EE measures
- Development and implementation of energy management systems
- Certification according to ISO 50001
- ESCO and energy performance contracting
- NAMA/MRV



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