

PREFAISABILITE DE PROJETS DE PRODUCTION D'ENERGIE A PARTIR DE RESSOURCES BIOMASSES



BIO01 ■ Tools/Methodology/Professions

DURATION

3 days

TARGET AUDIENCE

Ministries in charge of energy
Rural electrification agencies
Development partners
Independent consultants
Project developers

A FEW REFERENCES

ADER (Madagascar)
MIME (Cambodia)
REA (Tanzania)

USED TOOLS

Demand Analyst©

OBJECTIVES

Biomass is an energy source readily available for decentralized electricity production; it is often available in large quantities in areas presenting a potential for the development of economic activities. This course offers a cross-sectional analysis of all aspects of an electricity production project:

- ⇒ Sustainable organization of biomass collection (plantations, waste, etc.)
- ⇒ Output assessment
- ⇒ Technological option
- ⇒ Technical and economical analysis of projects

The objective of this course is to give participants a clear vision of the biomass potential and of the steps to take in order to achieve viable electricity production.



TRAINING PROGRAMME

1. Biomass resources

- ◆ Context and use of biomass
- ◆ Biomass energy resources from sources other than forest
- ◆ Resource characterisation in quantity, seasonality, and energy production potential

2. Energy production : Technological options

- ◆ Production of steam from biomass (steam/electricity cogeneration)
Examples of cogeneration : self-consumption and surplus sale
- ◆ Production of biogas, operating a bio-digester
Examples of electricity production units from biogas
- ◆ Gasification, which type of biomass ? Which operating type ?
Examples of electricity production from gasification

3. Technical and economic analysis

- ◆ Supply, availability, transport, handling and storage
- ◆ Analysis of energy needs (domestic and non-domestic demand)
- ◆ Energy production: selecting technology and sizing
- ◆ Costs and operational and maintenance constraints
- ◆ Investment and economic analysis

4. Practical case studies

- ◆ Pre-sizing a project
- ◆ Utilisation of results and sensitivity study

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