5th ENEPLAN Workshop:
Innovation, applied research in renewable energy and relationships with SMEs

Innovative Solutions For Energy Problems
Case Studies from Egypt
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AGENDA

➢ Introduction

➢ Experimental Work and Research

➢ Small Enterprises in Egypt

➢ Wrapping Up
INTRODUCTION

➢ Integrated Systems
  ▪ A solution to both energy and waste problems “Waste to Energy Concept”

➢ Other Energy Sources
  ▪ Solar energy
RESEARCH WORK

➢ Bioenergy production

  ▪ Biodiesel production
    o Homogeneous catalyst
    o Heterogeneous catalyst

  ▪ Biogas production
RESEARCH WORK CONT’D

➢ Scope

▪ Optimization of factors affecting reaction
▪ Kinetic modeling
▪ Process design and feasibility
RESEARCH WORK CONT’D

➢ Solar Energy Utilization
  ▪ Thermal energy utilization “CSP systems”
    o Stirling engines
    o Parabolic troughs
  ▪ Direct electrical power generation “PV systems”
SMALL ENTERPRISES

➢ Biofuels Production

▪ Tagaddod (30%) “for exportation”

▪ Biodiesel Misr (60%) “for exportation”

▪ Ain Organization (10%) “local use”

▪ Bioenergy EG “new start up”
SMALL ENTERPRISES CONT’D

➢ Solar Energy Services

  ▪ Karm Solar
  ▪ Solarize Egypt
  ▪ Re-NILE “start up belongs to ZC students”
  ▪ Sola Egypt
TAGADDOD COMPANY

➢ Mission

▪ Collection of wastes (e.g. waste cooking oil)

▪ Production of renewable energy sources (e.g. biodiesel)

➢ Vision

▪ Tagaddod aspires to be the leading supplier of green energy, made from renewable resources - the wind, the sun, natural underground heat and clean fuels - to all businesses and households.

▪ A cleaner tomorrow is their vision
TAGADDOD COMPANY CONT’D

➢ Products
  ▪ UCOME “Biodiesel”
  ▪ Crude glycerol

➢ Market Share
  ▪ About 30%

➢ Website
  ▪ www.tagaddod.com
RE-NILE COMPANY

- Startup belongs to Zewail City Students
- Increase awareness about Renewable Energy
- Solar Energy Systems and Services
  - PV systems
  - Solar water pumping systems
- Environmental Solutions (e.g. waste water treatment)
WRAPPING UP

➢ Integrated Systems

➢ Experimental Work and Research

▪ Bioenergy

▪ Solar energy

➢ Small Enterprises in Egypt

▪ Tagaddod Company

▪ Re-NILE Company
THANK YOU

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