

# INARA TRAINING FOR WOMEN

## DAY 1 & Day 2 (Theoretical & Practical)

### Session 1: Introductory session

**Objective:** Trainers introducing themselves and encouraging participants to introduce themselves and their respective backgrounds.

Filling pre-test

### Session 2: General Definition of Energy

**Objective:** Familiarizing with the terms “Energy” and “Power” and the way it is quantified. Learning the different forms and sources of Energy and its usage worldwide.

Case study: Lebanon and its energy status.

#### **Key Topics:**

- Definition of Energy and Power
  - Measurements and Units
  - Reading Electric Bills
  - Different Sources and Forms of Energy  
(Thermal, Electrical, Mechanical, Chemical, Nuclear)  
(Solar, Wind, Hydraulic, Geothermal, Biomass)
  - Transformation of Energy from One Form to the Other
- Global Energy Usage and Economic, Social and Environmental Consequences
- Case Study: Lebanon
  - Previous & Current Energy Status in Lebanon
  - Reasons Leading to Current Situation (Technical / Political / Financial)
  - EE and RE Market Response to Current Situation

### Session 3: Efficiency & Energy Management

**Objective:** Familiarizing with the term “Efficiency”. Learning about Energy Efficiency measures and ways to reduce energy consumption.

#### **Key Topics:**

- Definition of Efficiency
  - Principle of Efficiency
  - Importance and Consequences of Energy Efficiency
- Global and Local Trends in Energy Conservation & Energy Management

- Adopted Ways to Use Energy more Efficiently
- Basic Characteristics of Energy Saving
- How to Apply Energy Management
- Global and Local Trends in Renewable Energy
  - Solar Thermal Applications Integration in residential & commercial sector
  - Solar Electrical Applications Integration in residential, commercial & industrial sector
  - Hydraulic Electrical Applications Integration in residential
  - Other RE Applications
- **Session 4:** Load Management applying for the solar system.
- **Session 5:** Operation & Maintenance for the solar system.

**Notes:**

- The training for women and youth will be 2 days; each day will be conducted for theoretical and practical.
- For the theoretical, they must use our previous training material, and add the load management section and operation and maintenance.
- For the Practical, they must use our Experiment type document (that is shared separately) to get some ideas and develop it further. We need creative experimental items.
- The projected days for the women and youth trainings are tentative and might varies depending on the weather conditions.
- Schedule, location, and projected number of participants will be shared separately.

# INARA TRAINING FOR YOUTH

## DAY 1 & Day 2 (Theoretical & Practical)

### Session 1: Introductory session

**Objective:** Trainers introducing themselves and encouraging participants to introduce themselves and their respective backgrounds.

Filling the pre-test

### Session 2: General Definition of Energy

**Objective:** Familiarizing with the terms “Energy” and “Power” and the way it is quantified. Learning the different forms and sources of Energy and its usage worldwide.

Case study: Lebanon and its energy status.

### **Key Topics:**

- Definition of Energy and Power
  - Measurements and Units
  - Different Sources and Forms of Energy  
(Thermal, Electrical, Mechanical, Chemical, Nuclear)  
(Solar, Wind, Hydraulic, Geothermal, Biomass)
  - Transformation of Energy from One Form to the Other
  - First Law of Thermodynamics Simplified
- Global Energy Usage and Economic, Social and Environmental Consequences
- Case Study: Lebanon
  - Previous & Current Energy Status in Lebanon
  - Reasons Leading to Current Situation (Technical / Political / Financial)
  - EE and RE Market Response to Current Situation

### **Session 3:** Efficiency & Energy Management

**Objective:** Familiarizing with the term “Efficiency”. Learning about Energy Efficiency measures and ways to reduce energy consumption.

#### **Key Topics:**

- Definition of Efficiency
  - Principle of Efficiency
  - Importance and Consequences of Energy Efficiency
- Global and Local Trends in Energy Conservation & Energy Management
  - Adopted Ways to Use Energy more Efficiently
  - Basic Characteristics of Energy Saving
  - How to Apply Energy Management
- Global and Local Trends in Renewable Energy
  - Solar Thermal Applications Integration in residential & commercial sector
  - Solar Electrical Applications Integration in residential, commercial & industrial sector
  - Hydraulic Electrical Applications Integration in industrial sector
  - Other RE Applications

### **Session 4:** Energy Auditing

**Objective:** Learning about Energy Auditing and Quantifying Energy Usage. Acknowledging the Importance of Instrumentation to Measure Energy Consumption and Identify Potential for Energy Saving.

#### **Key Topics:**

- Energy Auditing
  - General Principle of Energy Auditing
  - Instrumentation (Hardware & Software)
  - Basic Auditing for Residential Applications
- Measurement & Analysis
  - Measurement Translation & Identification of Potential for Energy Savings
  - Identification of Inefficient Energy Use
    - Industrial Applications – Short Examples
    - Commercial Applications – Short Examples
    - Residential Applications – Detailed Examples
- Energy Savings
  - Energy Savings Measures and Quantification
    - Industrial Applications – Short Examples

- Commercial Applications – Short Examples
- Residential Applications – Detailed Examples
- **Session 4:** Load Management applying for the solar system.
- **Session 5:** Operation & Maintenance for the solar system.

**Notes:**

- The training for women and youth will be 2 days; each day will be conducted for theoretical and practical.
- For the theoretical, they must use our previous training material, and add the load management section and operation and maintenance.
- For the Practical, they must use our Experiment type document (that is shared separately) to get some ideas and develop it further. We need creative experimental items.
- The projected days for the women and youth trainings are tentative and might varies depending on the weather conditions.
- Schedule, location, and projected number of participants will be shared separately.