

# Renewable Energy in Oman

Prepared By:  
**KHALIL AL ZIDI**





# AGENDA

Introduction

Challenges

Initiatives

Capacity Building

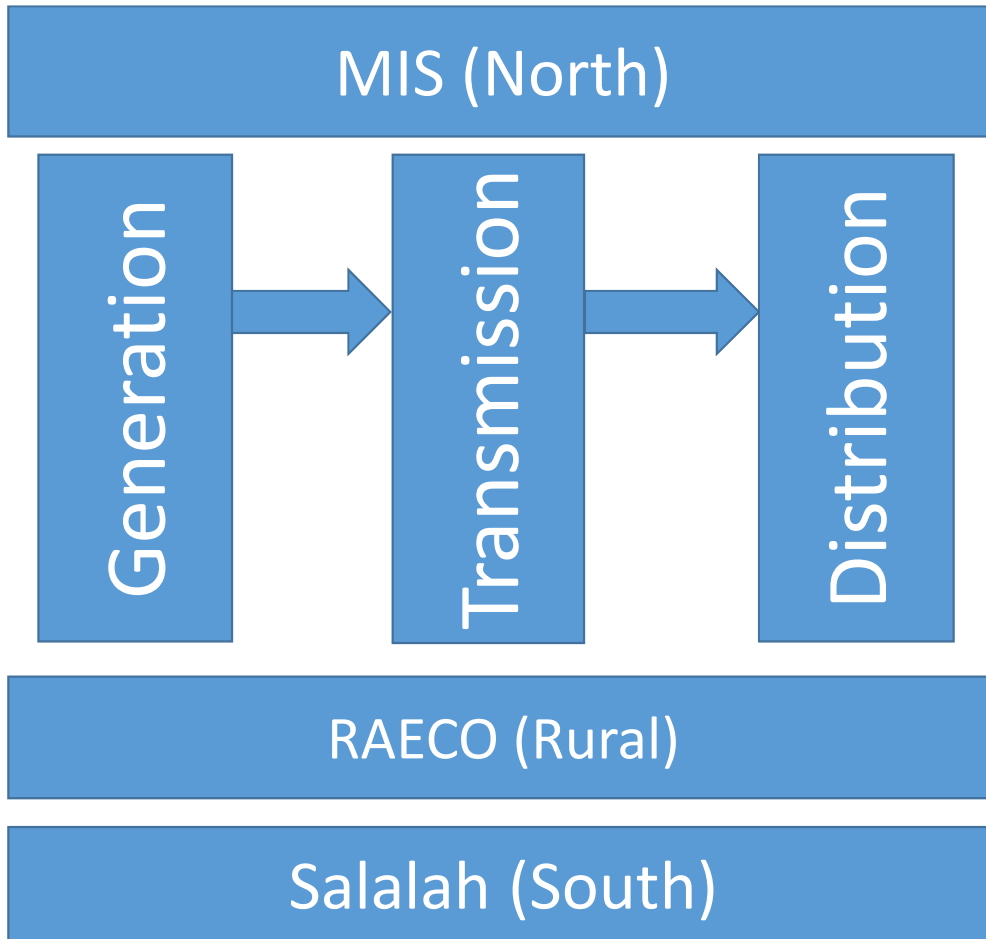




# Electricity Sector in Oman



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water





# Electricity Sector in Oman



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

PAEW

Policy maker, Strategic investment decision maker ...

Tariff

AER

Regulator, License, legal claims ...

RAECO

OPWP

The single buyer, Project development, Contracts management and follow-up, 7 years capacity planning ...



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

# Introduction





# Introduction



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

## □ Renewable Energy Resources Study:

### Targets:

- 1- How much renewable energy is available
- 2- Possibility for electricity generation

### Results:

- 1- Significant potential from solar and wind
- 2- Limited potential from geothermal, biogas and wave

### Recommendations:

- 1- Conduct pilot projects in Rural areas (currently Diesel generation)
- 2- Start feasibility study for utility (large scale) solar generation



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

# Challenges





# Challenges



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

 **Cost**

 **Bankable Data**

 **Subsidy**

 **Target**





الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

# Initiatives





# NESS



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

## □ National Energy Strategic Study

The study produce a detailed energy supply development plan and demonstrate the impacts for the whole Oman economy through a comprehensive energy balance and macroeconomic model.



**Target and  
Phasing**



**Long Term  
Policy and  
Strategy**

 **Feasibility at Omani Gas Price**

# Roof-top program

## Roof-top Program

An incentive program is investigated from technical and financial point of view for roof-top PV systems.

### Residential

1.4GW

FiT

450MW

20 years

Capacity Building

SME and Job Creation





# Wind



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

## □ Wind Atlas

The best sites for wind energy plants will be identified in two stages:

- 1- Identifying and ranking the best sites for wind farms in the Sultanate considering the local and ground constraints.
- 2- Wind Masts will be installed on the best sites for Bankable data (at 80m).



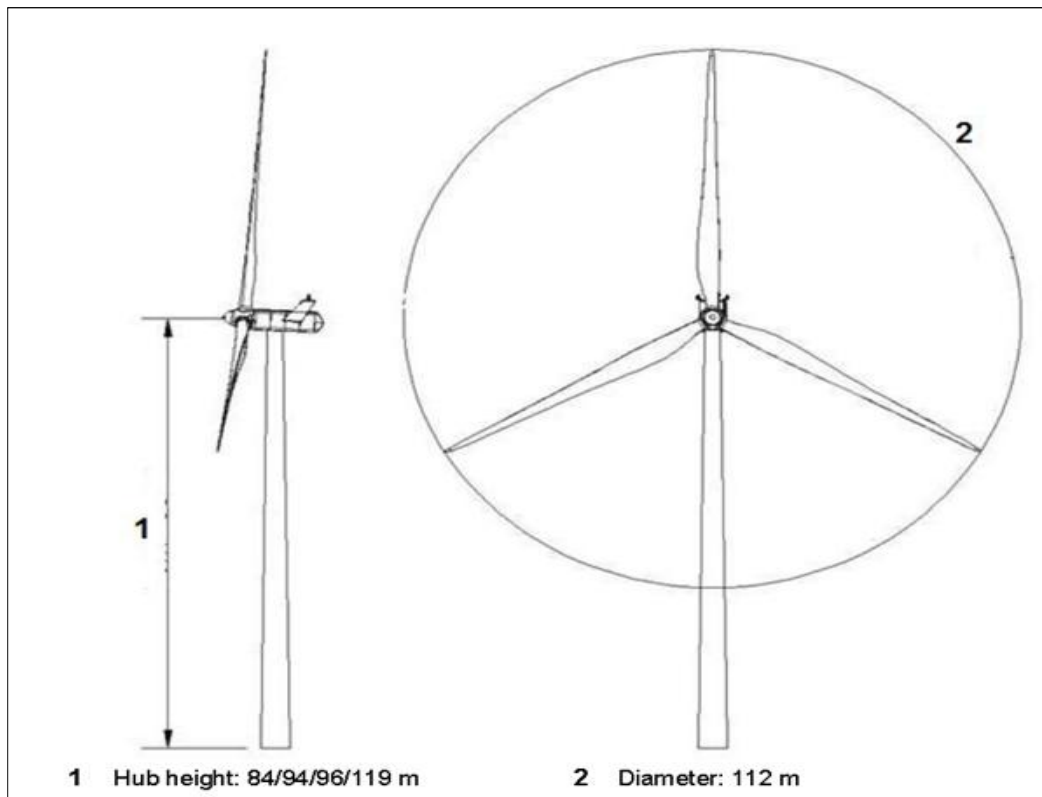


# Dhofar Wind Farm (50MW)



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

## □ Dhofar wind farm (50MW)



25 turbines

2MW

□ Operation: 2017



# Rural Systems Electrification



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

❑ All new requests for funds of new generation in Rural Systems must include a study of feasibility of Renewable Energy resources

✿ 1 solar pilot project (operating)

✿ 1 wind pilot project (evaluation stage)

✿ 3 in planning phase  
(to be floated commercially)

❑ Long Term Master Plan





الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

# Capacity Building





# Capacity Building



الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water

## □ Strategic R&D Program

- ✦ Power Generation and Storage
- ✦ Water Desalination
- ✦ Air Conditioning and Cooling
- ✦ Energy Efficiency and Conservation







الهيئة العامة للكهرباء والمياه  
Public Authority for Electricity & Water



# Thanks

