

# **Questionnaire on “Energy Requirements for Irrigation”**

## Contents

- 1- Energy
- 2- Required energy per hectare for different irrigation systems
- 3- Energy costs
- 4- Impacts of energy cost on development of irrigation systems

### 1- Energy

-Use of different energy sources for operation of irrigation systems (Ha)

Irrigation systems	Electricity	Diesel engine	Gravity force	Solar	Others
Surface	.....	.....	.....	.....	.....
Micro			.....		.....
Sprinkler			.....	.....	.....
Irrigation machines			.....	.....	.....

### 2-Required energy per hectare for different Irrigation Systems.

Irrigation System	Electricity		Diesel engine	
	Demand power kw/ha	Energy Consumption (kw.h/ha/year)	Demand power (kw/ha)	Fuel Consumption (lit/ha/year)
Surface Micro - dripper - minidiffuser - bubler - tape - -				
Sprinkler - solid set - semi movable - fully movable - -				
Irrigation machines - center pivot - linear move - traveling - -				

### 3- Energy costs in US\$

a- for Electricity

Implementation cost per kw =

Subscription fee per kw =

Cost of active power per kw =

Cost of reactive power per KVAR =

Cost of consumption energy per kw.h =

b- for Diesel engine

Implementation cost per kw =  
Cost per liter of Fuel =

4- Impacts of energy costs on development of irrigation systems

	very high	high	average	low	nil
surface systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Micro	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
sprinkler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
irrigation machines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5- Have you made any modification to save energy in operating irrigation systems?  
Please describe each system in detail

6- Are the energy costs for irrigation systems subsidized in your country.

Yes  No

If the answer is "yes", what is the rate of subsidization.

7- What are the possible environmental impacts related to the energy used for irrigation systems.