# RENEWABLE ENERGY FOR RURAL ELECTRIFICATION: LESSONS FROM MALAWI

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# HIGHLIGHTS


**SIZE**

118,484 $km^2$ (20% Water)

**POPULATION**

13 Million(86% Rural)

**GDP/capita**

US$337

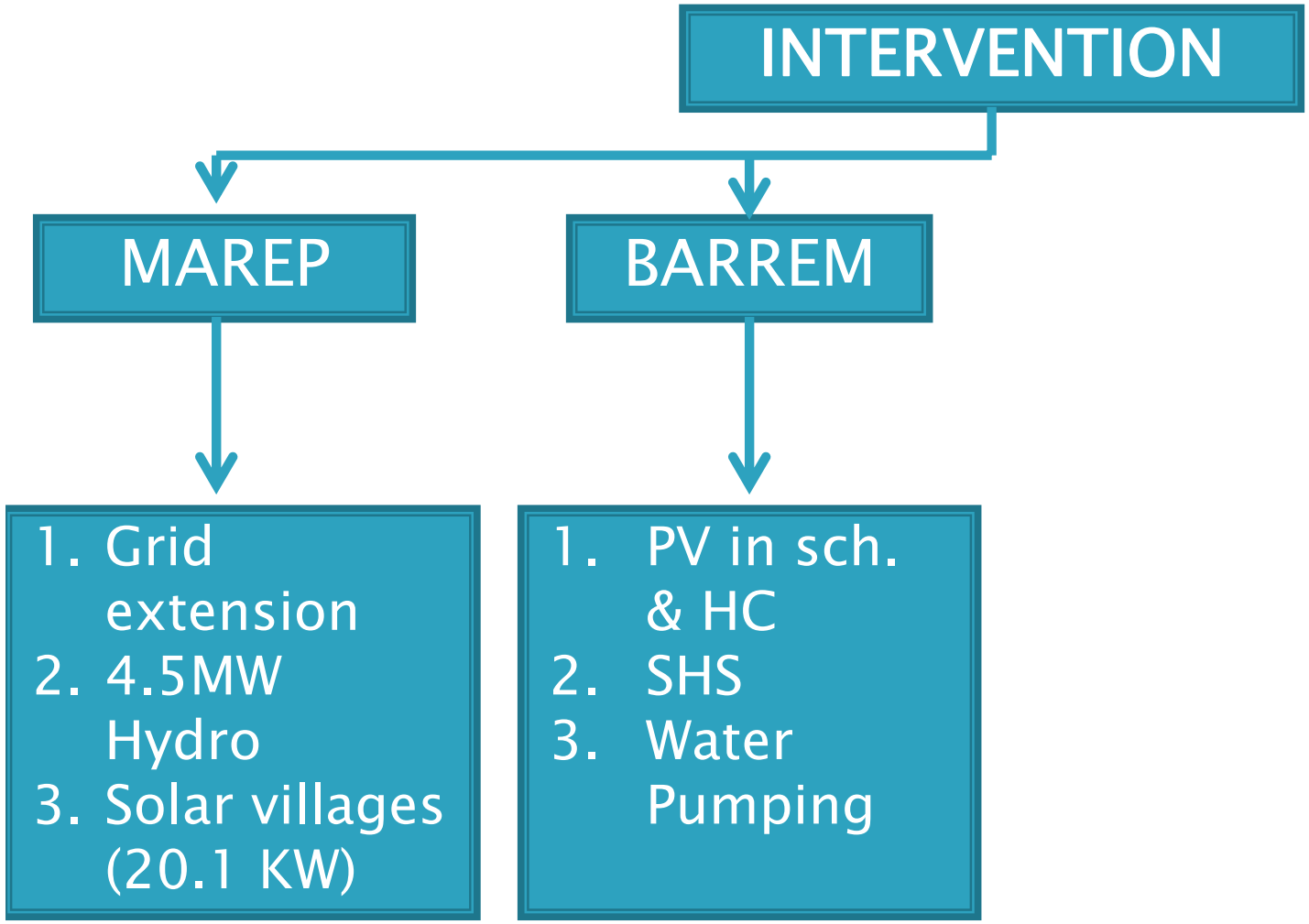
**Electrification**

7.6% (1% Rural)

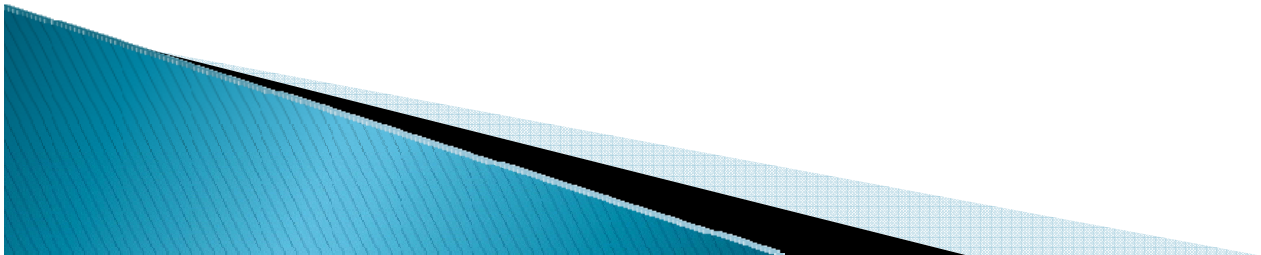
**ENERGY RESOURCE**

Biomass, coal, hydro, solar, wind

# RURAL ELECTRIFICATION INITIATIVES



| System Type | No systems | Average Wp | Total Wp |
|---|---|---|---|
| Households | 4000 | 20 | 80000 |
| Institutions (not stated whether schools or health or other) | 178 | 75 | 13350 |
| Health Centres (lighting) | 150 | 75 | 11250 |
| Health Centres (vaccine) | 130 | 140 | 18200 |
| Beverage Coolers | 11 | 375 | 4125 |
| Water pumps | 113 | 200 | 22600 |
| Radio communication | 150 | 30 | 4500 |
| **Total** | **4732** | | **154025** |



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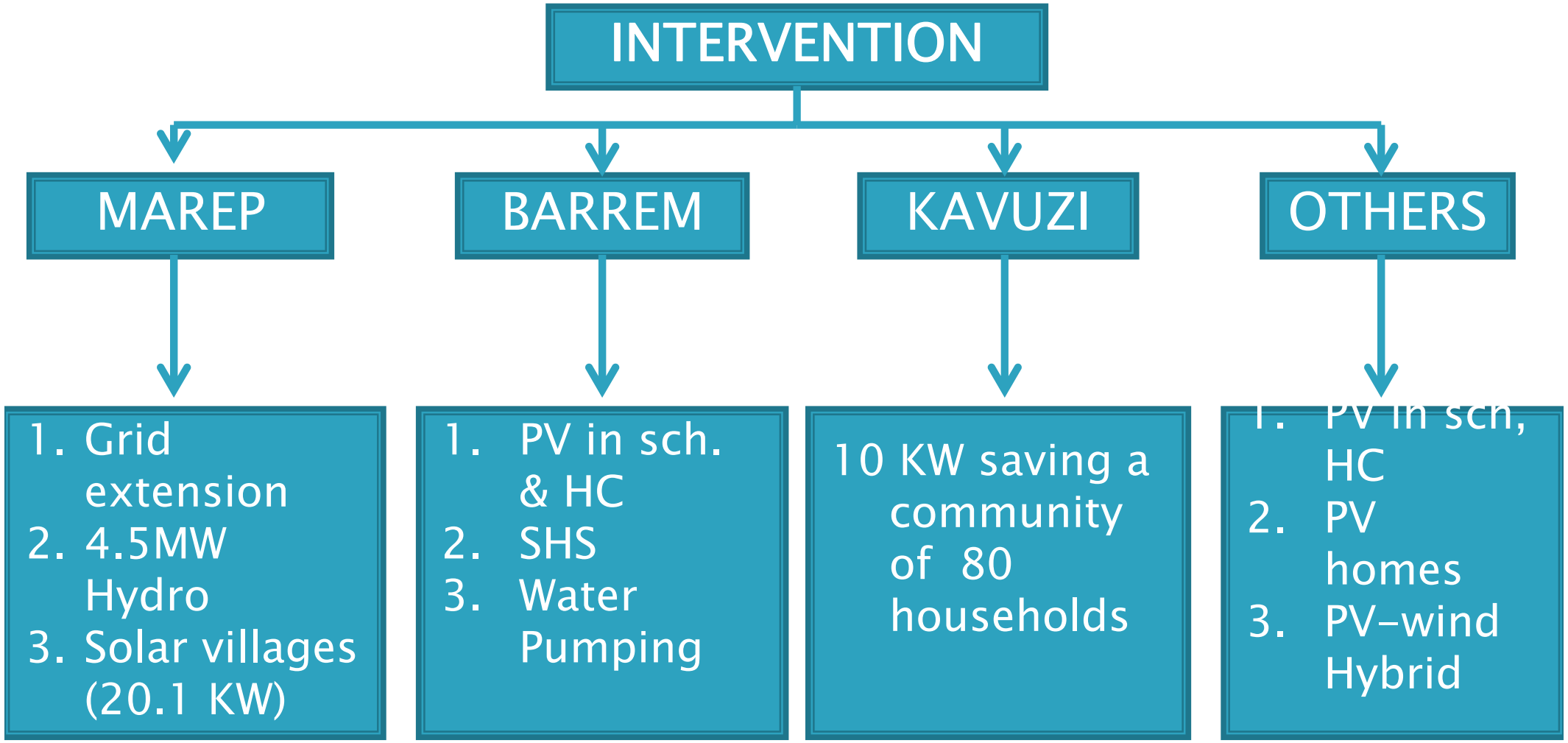
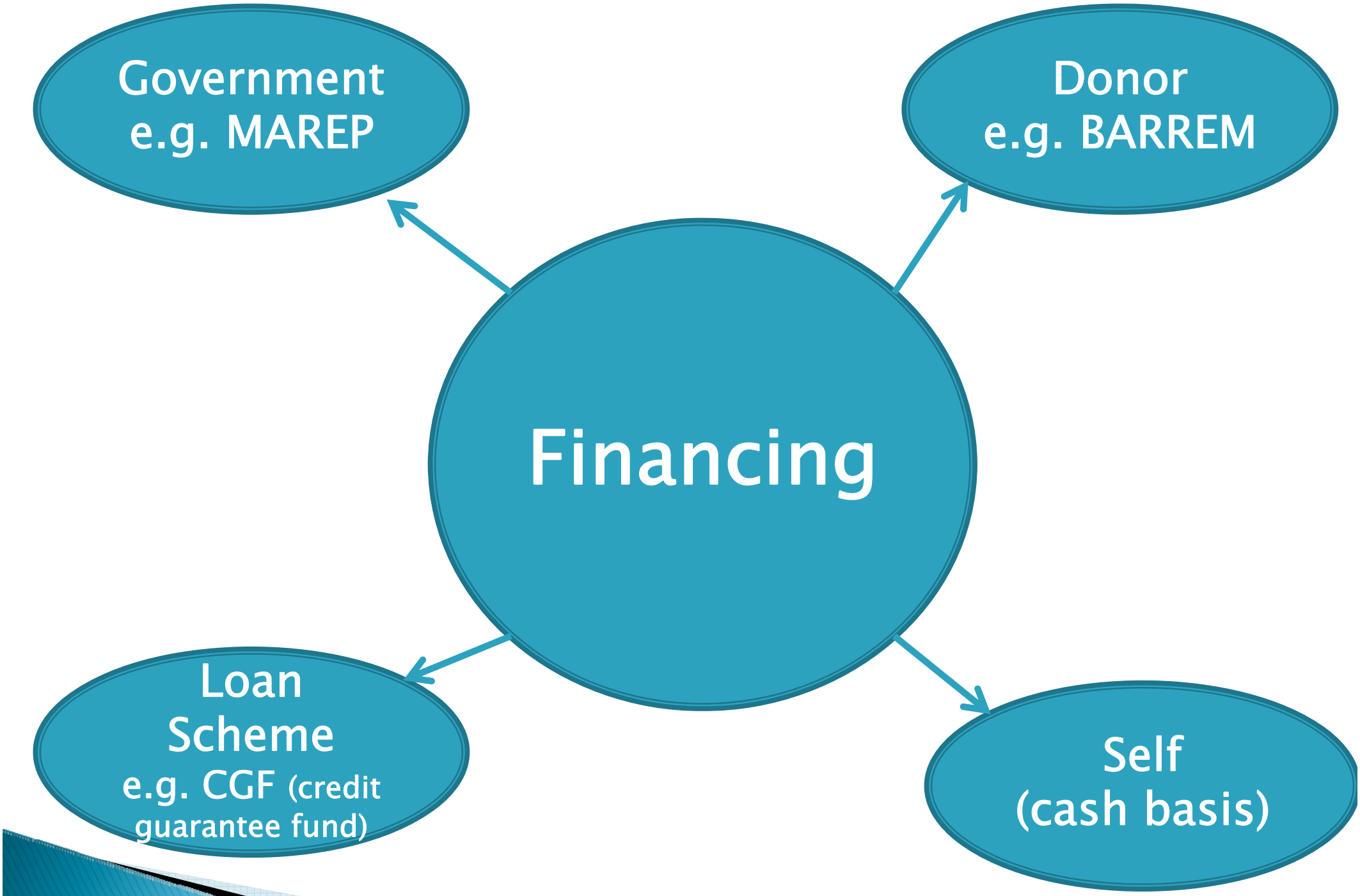



Government
e.g. MAREP
Donor
e.g. BARREM
Financing
Loan
Scheme
e.g. CGF (credit
guarantee fund)
Self
(cash basis)

Universities


Barefoot Project

Mounting PV module on a roof

Preparations for installation

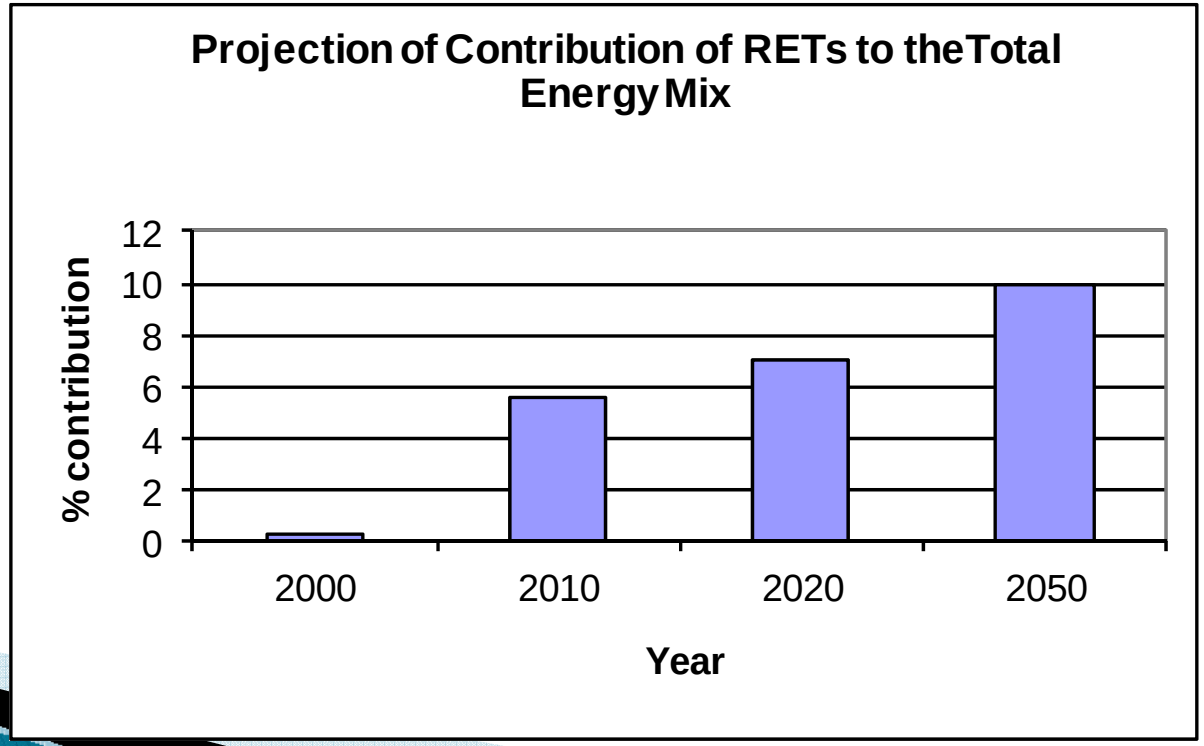
Universities


Barefoot Project

User Training (on site)

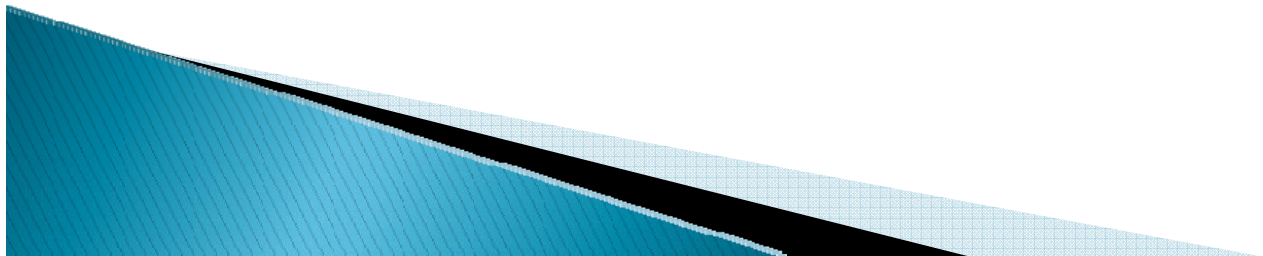
# LESSONS

1. Solar and micro hydro electricity are proved viable.
2. Productive time, livelihood, education and flow of information are improved in the project areas
3. Lack of good policies to promote technology uptake



# LESSONS

2. Financing mechanism unsatisfactory
3. Poor resource assessment
4. Increased unprofessional installations-poor system performance
5. Poor system management by end users
6. Influx of low standard RE equipment
7. Lack of after sale services
8. Theft



# CONCLUSIONS

- Solar PV remains the most used alternative energy for rural electrification in Malawi
- Rural electrification interventions have not substantially increased level of rural electrification
- Many challenges still need to be addressed in order to have effective rural electrification through renewable energies.

# I WELCOME YOUR COMMENTS