



**Supported by the European Commission through the EC –
ASEAN Energy Facility**

Vocational Technical Training for Cambodia and Laos Rural Electrification SMEs (VTCL)

PRESENTATION

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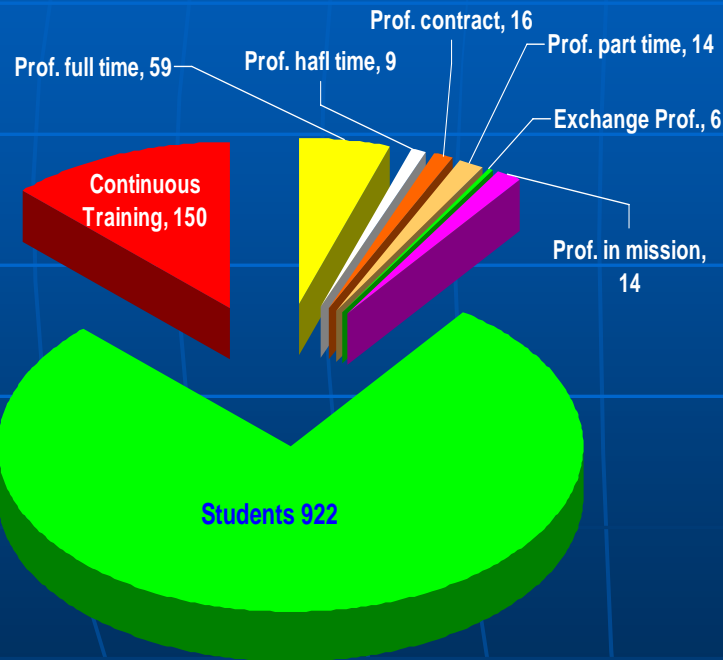
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Institute of Technology of Cambodia (ITC)

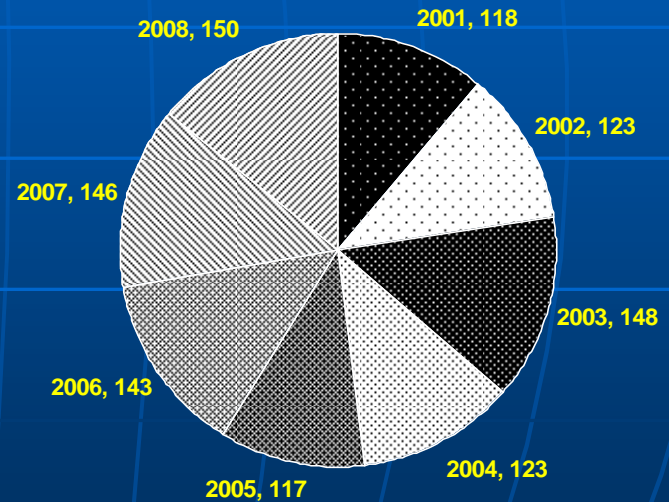


Was created in 1964 and supported by cooperation between the Cambodian government and soviet union government until 1975
1975-1979 ITC was closed (genocide regime)
1980-1991 Support by Soviet union government
1991-1993 Supported by UNDP in association with UNESCO after the soviet Union
1993- 2004 Support by cooperation between the royal government of Cambodia and the French coordinated by AUF (agency university French speaking country)

Academic Staffs & Students Enrollment

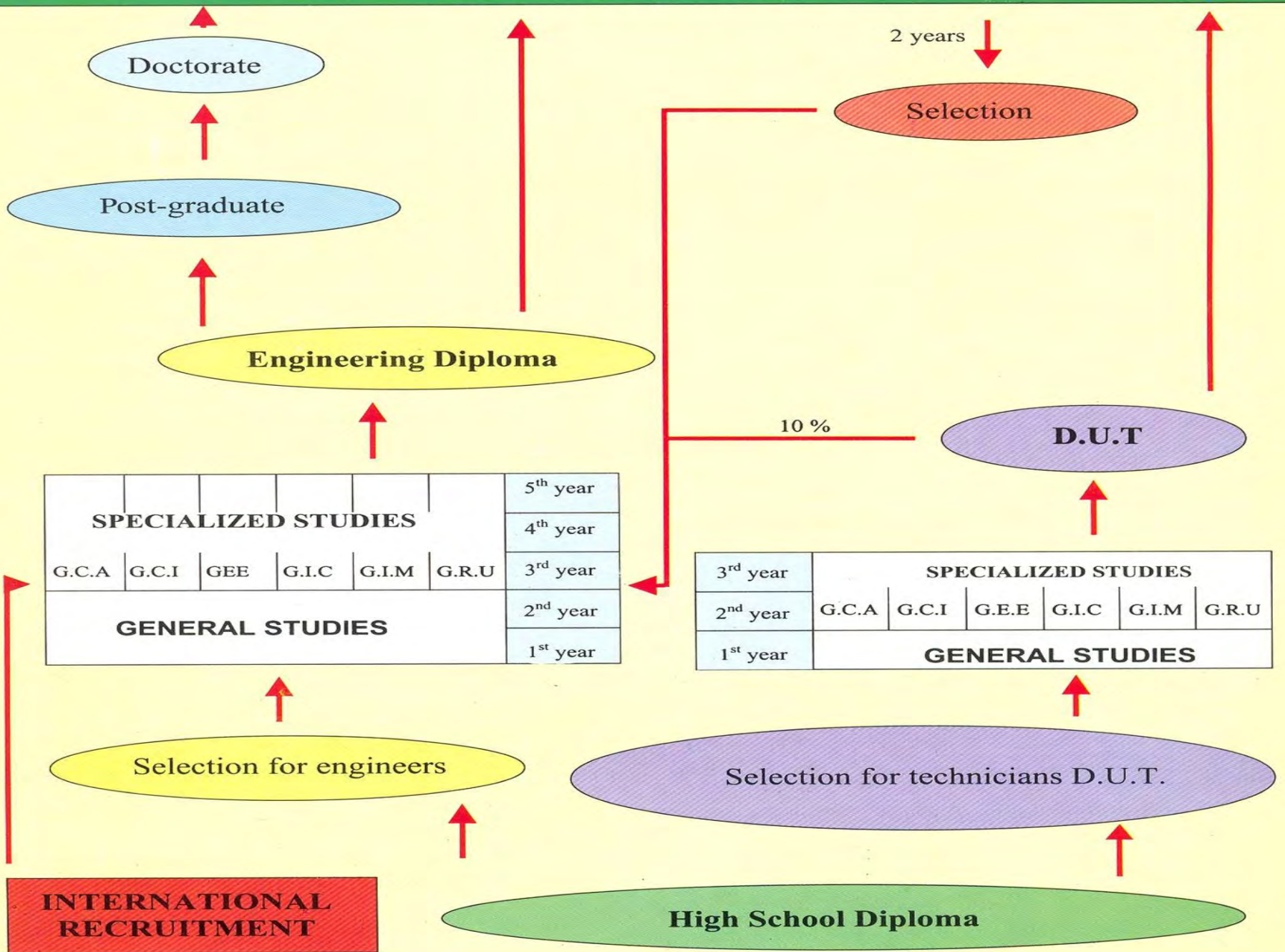


**Staffs/students enrollments
fiscal year 2004-2005**



**Perspective of
Staff Enrollments**

WORK EXPERIENCE



Doctorate

Post-graduate

Engineering Diploma

2 years

Selection

10 %

D.U.T

SPECIALIZED STUDIES

5th year

4th year

G.C.A | G.C.I | G.EE | G.I.C | G.I.M | G.R.U

3rd year

GENERAL STUDIES

2nd year

1st year

Selection for engineers

INTERNATIONAL
RECRUITMENT

SPECIALIZED STUDIES

3rd year

2nd year

1st year

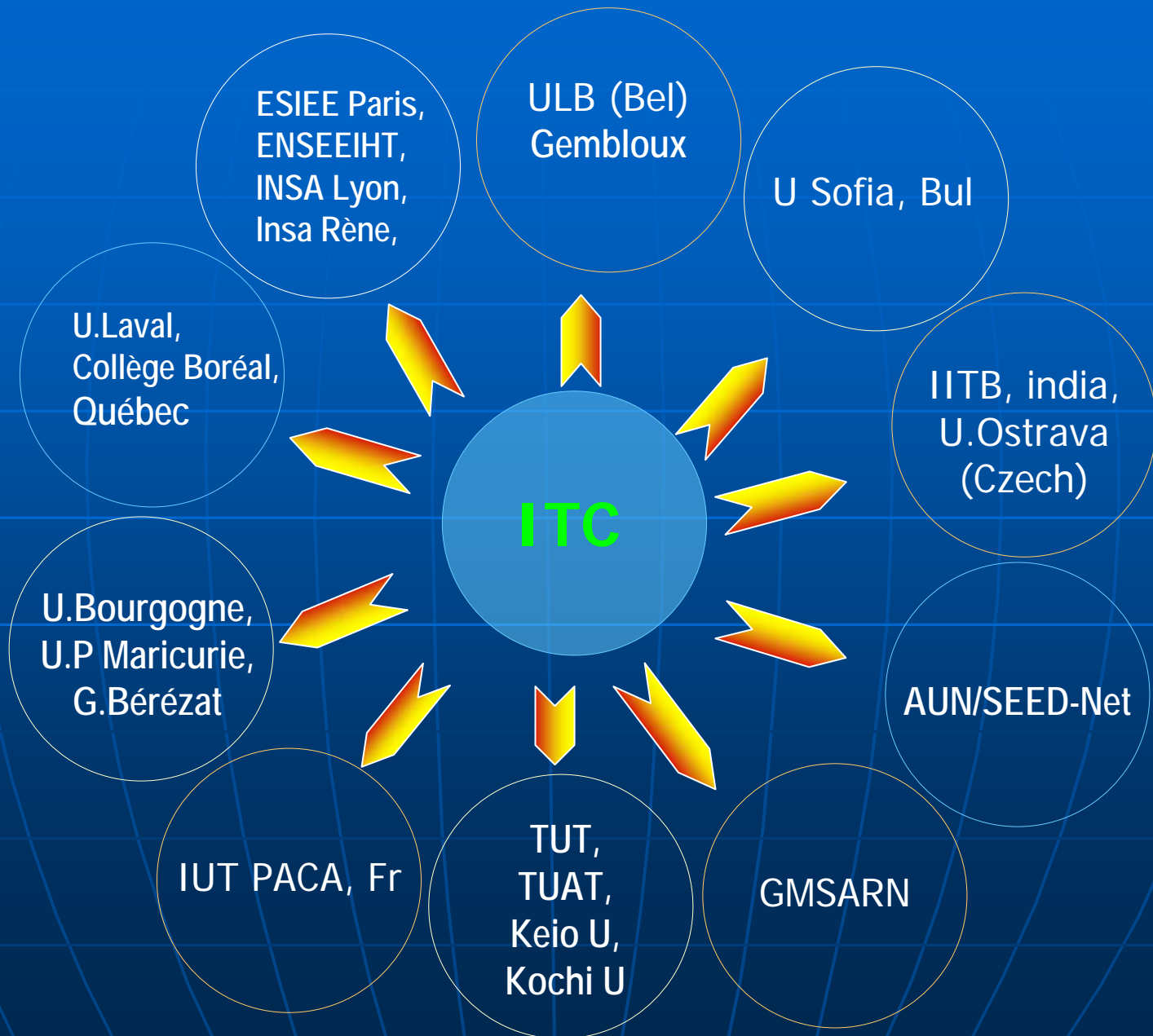
G.C.A | G.C.I | G.E.E | G.I.C | G.I.M | G.R.U

GENERAL STUDIES

Selection for technicians D.U.T.

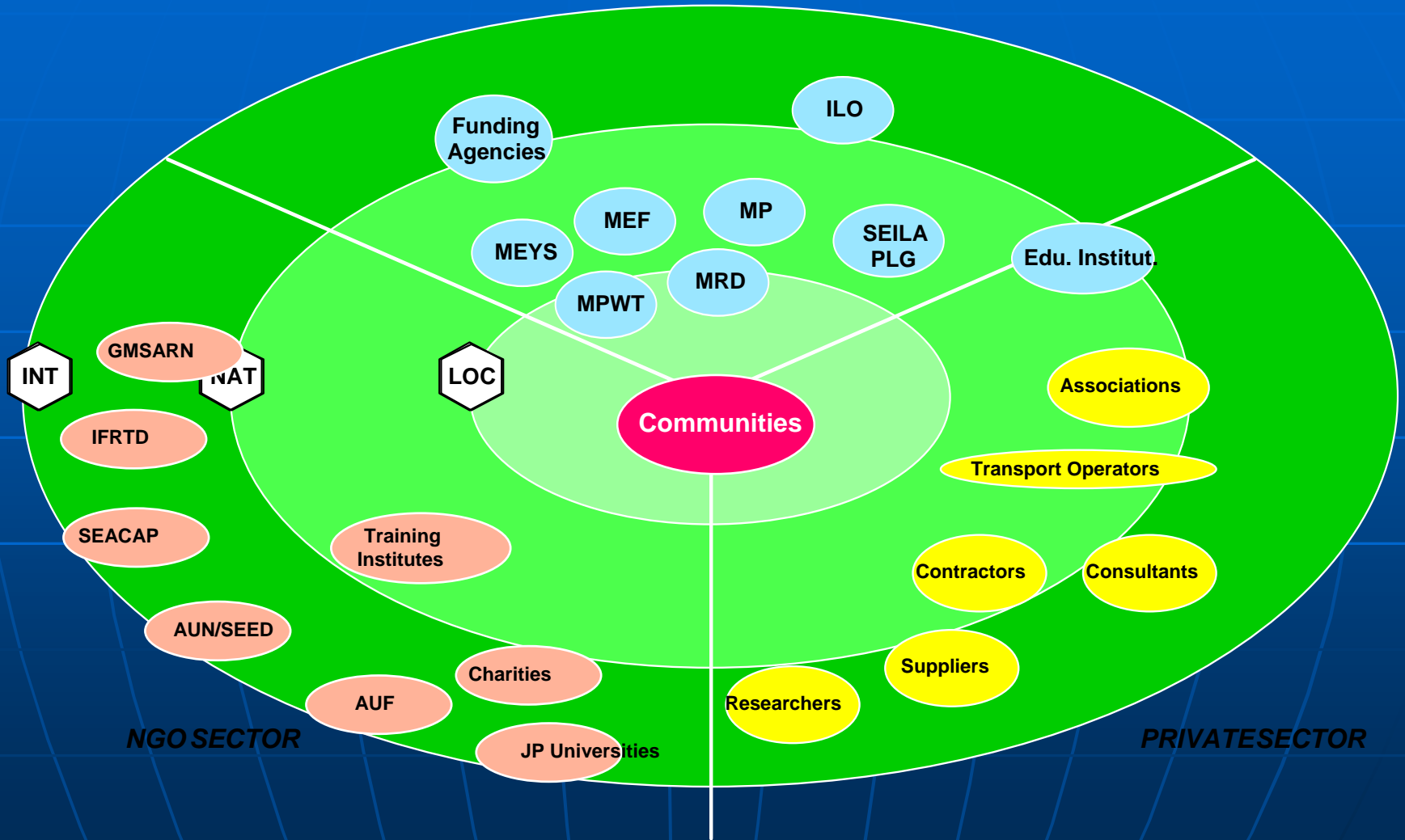
High School Diploma

Partner Institutions

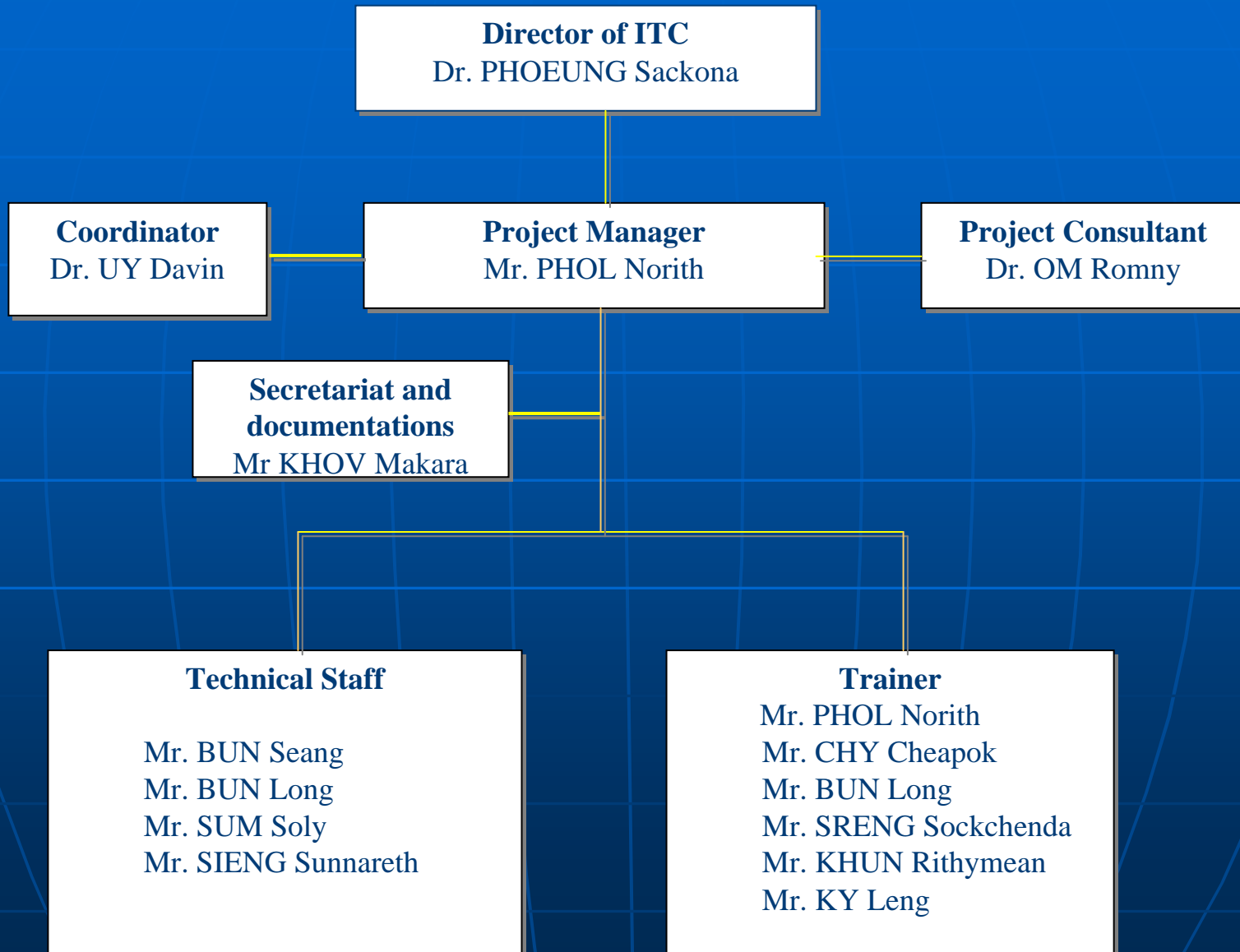


OTHER PARTNERS

GOVERNMENT SECTOR



Organization chart of VCTL's committee for Cambodia



Activities of Survey Process

According the decision of Kick-off Meeting in Phnom Penh the survey process was started from December 2005 to January 2006.

It divided 3 steps :

- Before contacting the REE
 - Develop questionnaires
 - Translation into Khmer Language
 - Distribute its to REE (120 REE + 15 Students)

- Started communication to REE
 - By phone
 - Local visiting

- Analysis the data of REE

Sample of Raw Data collections

Microsoft Excel - Survey_data_All.xls

File Edit View Insert Format Tools Data Window Help Adobe PDF

Type a question for help

80%

Arial 10 B I U

Reply with Changes... End Review...

F14 Junior secondary

	A	B	D	E	F	G	H	I	
1	Vocational Technical training for Cambodia Survey 2005								
2			2	3	4	5	6	7	
3		<i>Interviewee Name</i>	Mok Chin	Ouch Por	Ke Kuyhuoy	Park Hean	Kong Buntheurn	Sok Hoy	Ly
4		<i>Profession /responsibility (or main tasks):</i>	REE Owner	REE Owner	REE Owner	REE Owner	General manager	REE Owner	REI
5		<i>Address</i>	Phsar Pangsey To	Phum Sayva, Khum	Phum Kampong Ch	Phsar Preysandek	Thmar Sar, Khum K	Phsar Trapaing Kra	Phs
6		<i>Survey date</i>	19/12/2005	19/12/2005	16/12/2005	16/12/2005	15/12/2005	7/12/2005	19/
11	4.	How long have you been in this business/organisation?	10	15	14	18	6	16	
12	5.	What was your previous activity (job?)	Battery Charging	Police	Farmer	Government staff	Battery Charging	Seller	Dis
13	B. Educational Background								
14	6.	What is your highest level of educational background?	Junior Secondary	Secondary	Junior secondary	Junior secondary	Secondary school	Primary	Se
15	7.	What diplomas do you have (please list all educational diplomas). In which year?	No	No	No		Secondary school	No	
16	7.1	<i>in which year</i>				1960	1999		
17	8.	Name of the institution that delivered these diplomas				Ministry of educatic	Ministry of education		Au

Feuil1 / Feuil2 / Feuil3

Draw AutoShapes

Ready NUM

Analysis the result of survey process in order 120 REE +15 Students

- General Information
 - . Owner 85.2%, Students 8.9%, Other 5.9%
 - . Male 85.2%, Female 14.8%
- Education background:
 - . Primary 9.6%
 - . Secondary 71.1%
 - . High education 19.3%
- Technical and Professional background
 - . business Management
 - No skills 13.5%, Basic 63.9%,
Some good 21.1%, Very good 1.5%

Cont'd

- . Engine O & M
 - No skills 15.6%, Basic 58.5%
 - Some good 23.0%, Very good 3.0%
- . Generator O&M
 - No skill 15.6%, Basic 51.1%
 - Some good 30.4%, Very good 3.0%
- . Distribution network O&M
 - No skill 14.8%, Basic 57.8%
 - Some good 24.4%, Very Good 3.0%
- . Safety
 - No skill 14.8%, Basic 63.7%
 - some good 18.5%, Very good 3,0%

Cont'd

■ Training Needs

- . Business Management 67%
- . Generator types and fuel sources 63%
- . Energy efficiency 74%
- . Diesel generators sizing O & M 71%
- . Design & M of distribution network 76%
- . Practical skill for O &M 67%
- . Safety 74%

■ The duration of training

Few week 9%, 1 week 33%, 2 weeks 37%,
1 month 18%, longer 1%

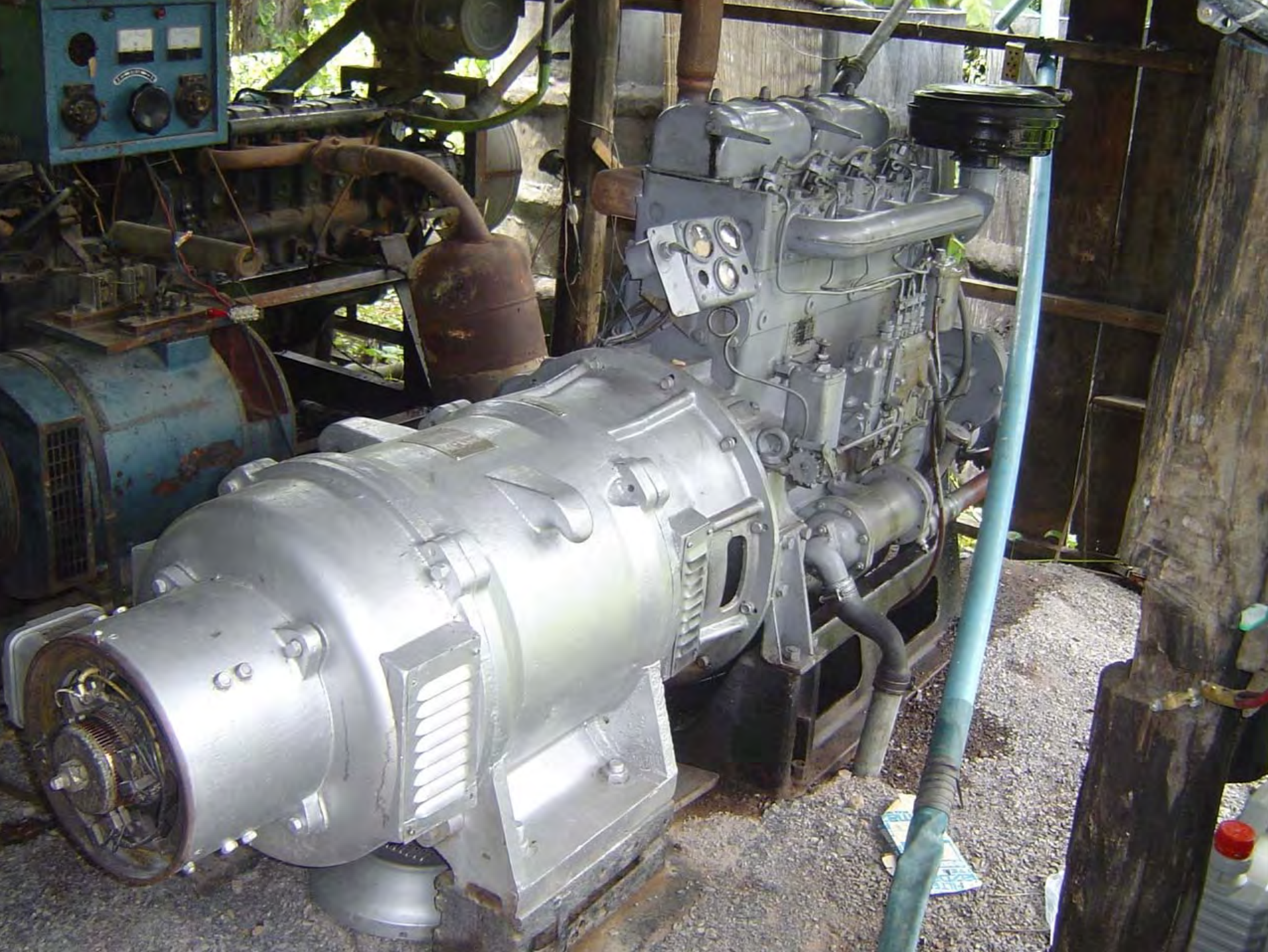










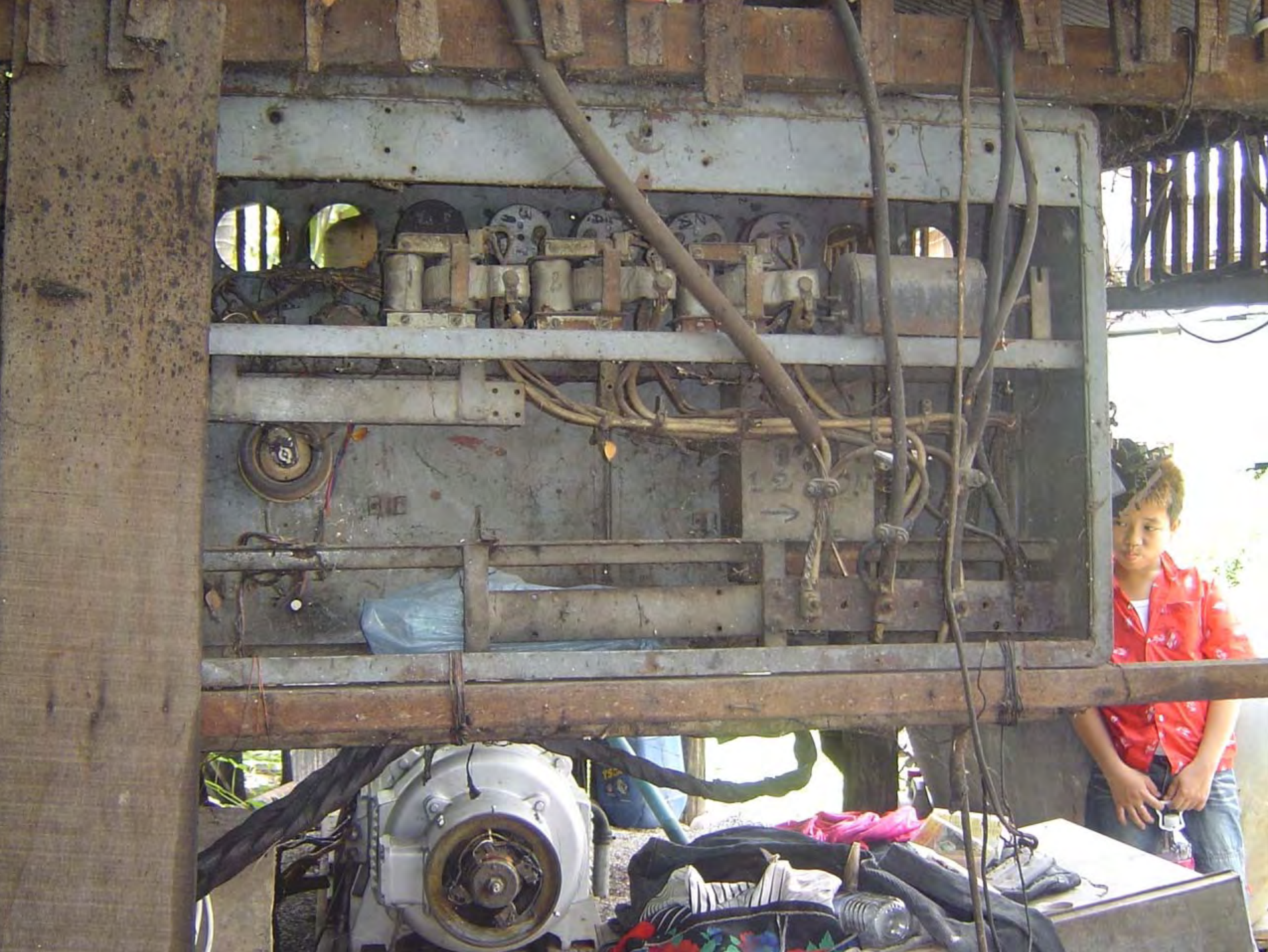
















Conclusion

During the survey process we observe that there are some barriers for future consideration:

- ***Some REE operators doesn't operate correctly by electrical rule. Its caused from:***
 - *Lack of technical skills (H&R),*
 - *Lack of competences,*
 - *Lack of performance,*
 - *Lack of experiences,*
 - *Poor evaluation, etc.*

- ***Some locations users do not take care the security.***
- ***Mostly diesel Generators are run by REEs***
- ***Cost of electricity is very high (about 0.8 US\$/kWh)***
- ***Power loss power is high (about 50% losses)***
- ***Operator staffs has very limited skills***
- ***There is no efficiency***

- **Suggestion:**
 - *Conducting trainings are importance,*
 - *REE side evaluations*
 - *Visit and performance at REE side's*



**Thank you for your kind
attention.**