Northern Transmission and Distribution Project(PTD1) 2004 financed by ADB

- 115 kV line Nam Leuk-Xiengkhuang(164 km)
- 115 Kv line Thalat-B Done(46 km)
- 115 line B. Done-None Hai(54.5 km)
- 115 kV line Luangprabang-Xayabury
- 32,532 Households are going to electrify

Northern Transmission and Distribution Project(PTD2) 2003-2007 funded by ADB, NDF

- 115 kV line (300 km)
  - Luangprabang-Oudomxay (173 km)
  - Oudomxay-Luangnamtha (79 km)
  - Hinheup-Vangvieng (46 km)
  - Nam Ngum-Thalat(5km)
- Medium(1009 km) and low voltage lines (608 km)
- 342 villages & 33800 hh

Northern Transmission and Distribution Project(PTD2) 2003-2007 funded by ADB, NDF

No	Items	Unit
A	*115 kV lines*	
01	LuangprabangOudomxay	173 km
02	OudomxayNam Mo	36 km
03	Nam MoLuangnamtha	43 km
04	HinheupVangvieng	46 km
05	Nam Ngum 1Thalat	5 km
	Total(1)	**303 km**
B	*Substation 115/22 kV*	
01	Luangprabang extension	2x12.5MVA
02	Oudomxay	1x12.5MVA
03	Luangnamtha	1x12.5MVA

C	*Medium voltages34.5/22 , 9*	
01	Xayabury	227 km
02	Xiengkhuang	354 k
03	Oudomxay	284 I
04	Luangnamtha	62 km
05	Khet Phiseth Xaysomboune	82 km
	Total	**1009 km**
C	*0.4 kV lines*	
01	Xayabury	138 km
02	Xiengkhuang	78 km
03	Oudomxay	248 km
04	Luangnamtha	100 km
05	Xaysomboune	44 km
	Total	**608 km**

Northern Transmission and Distribution Project(PTD 3) 2007-2011 funded by ADB, NDF??

- Project will be Covered Luangpabang, Xiengkhuang, Xayabury, Huaphan, Phongsaly, Oudomxay, Luangnamtha and Bokeo projects
- 115 kV line Luangnamtha-Bokeo
- 115 kV Phonesavan-Xamneu
- 115 kV Nam Mo-Boun Neu(Phongsaly)
- 73, 467 households will be electrified

Availability of Database

Target Eight Northern Provinces

1. Socio-Economic Databse & Information
(1) Provinces information

No	Provinces	Number of				Electrified					
		Dist	Villages	hh	Pop	Dist	%	Villages	%	hh	%
1	Phongsaly	7	642	27,413	158,832	4	57.14	32	4.98	2,339	8.5
2	Luangnamtha	5	404	23,027	126,925	5	100	37	9.16	2,922	12.7
3	Oudomxay	7	693	42,176	241,047	2	28.57	44	6.35	3,485	8.3
4	Bokeo	6	376	22,121	125,069	3	50	36	9.57	2,828	12.8
5	Luangprabang	11	1186	70,411	371,030	11	100	273	23.02	18,055	25.6
6	Huaphan	8	853	38,815	264,056	8	100	129	15.12	8,750	22.5
7	Xayabury	10	533	56,406	316,490	7	70	83	15.57	9,279	16.5
8	Xiengkhuang	7	528	31,232	218,819	7	100	48	9.09	4,073	13.0
	Total	**61**	**5,215**	**311,601**	**1,822,268**	**47**	**77.05**	**682**	**13.08**	**51,731**	**16.6**

(1) Provinces information(cont.)

Provinces	Growth rate %	Desity Person/km2	Person/hh
Phongsaly			
Luangnamtha			
Oudomxay			
Bokeo			
Xiengkhuang			
Xayabury			
Huaphan			

(2) District-Wise database of each target province(Income)

- People in Survey areas do have regular incomese, but from subsistance
- Majority of survey occasionally has surpluses food, some village can even offer their agricultural products for sale
- Combined household income and acceptance, people are able to pay for electricity, if available for them, some households a lump-sum payment may not be possible
- Prior to the needs and importance of electricity, people in survey areas are willing to pay by village (20,000-30,000Kip/per month

(2) District-Wise database of each target province

- Average Income Per household

(some example see Surveys Report by ADB TA 3374-Lao, 2001

- Current mode of in-house lighting

- Main sources of lighting and heating

  - Micro hydro
  - Pico hydro
  - Diesel generators
  - fuel-wood

7. Environmental Impacts
(1) Environmental Management Policy relating rural electrification

- **Electricity Law, Environmental Protection Law**
- **Enacted the Regulation on Implementing the Environmental Impact Assessment for Electricity Projects**
- **Enacted the Environmental Management Standard:**

- Power Sector Environmental Policy

- Environmental Impact Assessment for Electricity Projects

- Environmental Management Plan

7. Environmental Impacts
(1,2) Environmental Management Policy and procedures relating rural electrification

- **Completed and will be enforced the Environmental Management Standard:**

- Environmental Screening for Electricity Projects

- Social Impact Assessment for Electricity Projects

- Resettlement for Electricity Projects

- Socio-Economic and Cultural Guideline for Electricity Projects

- Public Participation for Electricity Projects

Conclusion

- The Master plan study will provide favorable hydro power potentials resources
- Provide the possible sources for substitution of import fuel for energy generation and import power
- Strengthen the capacity of DOE's staff in engineering fields such as planning, socio-economic assessment, designing, survey and financial capability

Thank you for Your Attention