

Thai Small Island Electrification

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ASE Webinar Series #6

Market and business opportunities for rural electrification in Southeast

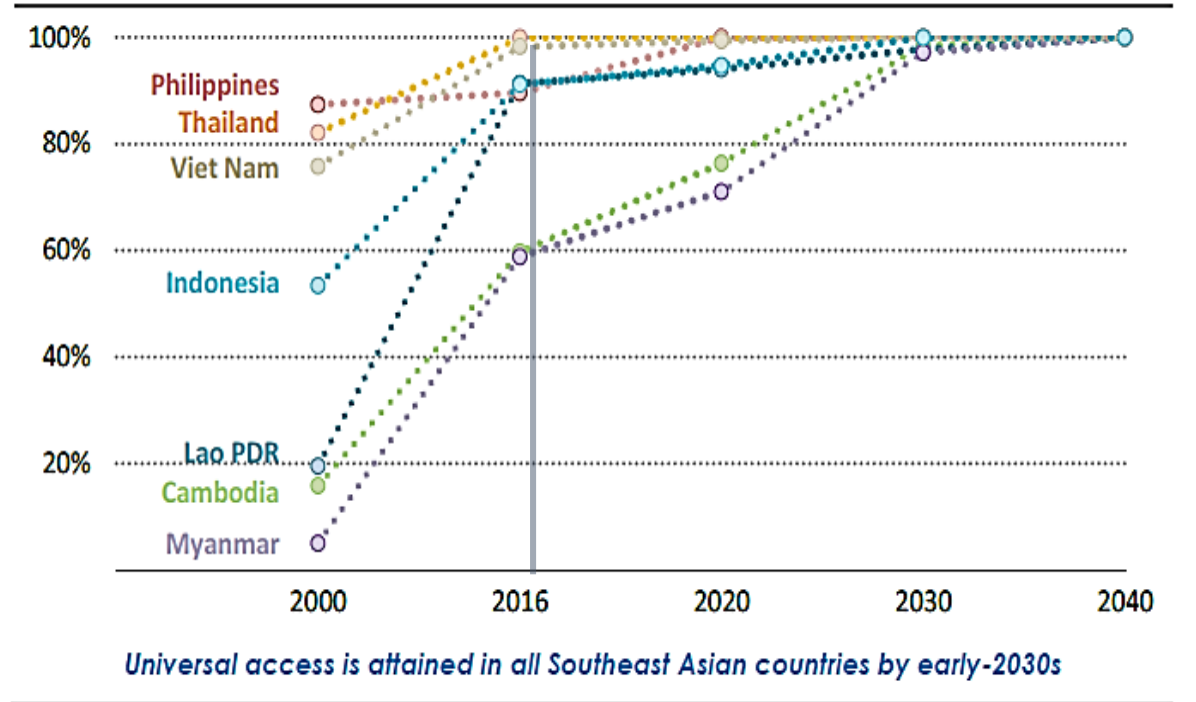
8 September 2020

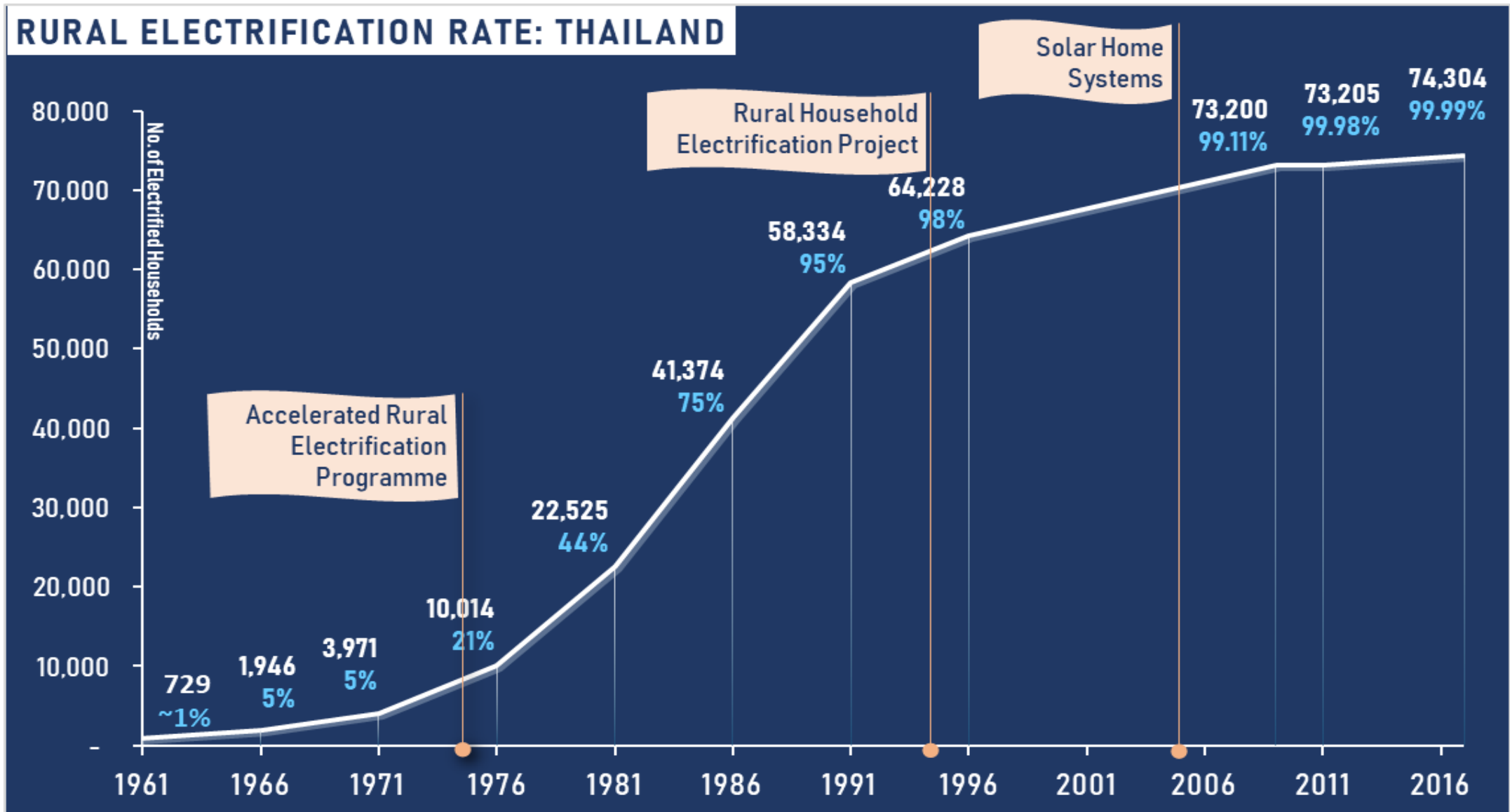
Current National Electrification Status

PEA Status (2017)	No.	%
#Total Villages	74,304	100%
#Unelectrified Villages	7	0.01%
#Electrified Villages	74,297	99.99%

PEA Status (2017)	No.	%
# Total Households	21,460,000	100%
#Unelectrified Households	49,472	0.23%
#Electrified Households	21,509,472	99.77%

2016 – IEA Regional Snapshot





Recap of Rural Electrification Policy

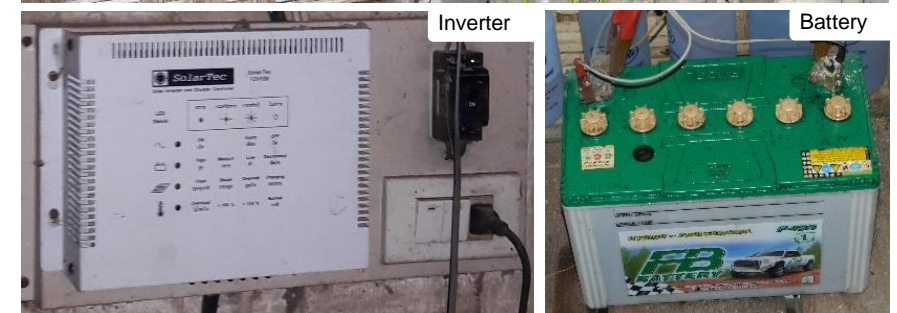
- 1960's** – PEA's establishment - rural electricity access rate stood at 2%, for people living outside Bangkok Metropolitan Area
- 1972** – 10% electrification rate - 45,000 villages located in 68 provinces
- 1973** – Approval of **National Plan for Thailand Accelerated Rural Electrification**, target to electrify 50,000 villages in 15 (25) years.
- 1990's** – Reached 95% + electrification rate
- 2004** – Launched “Solar Home System (SHS)” program, target to close all gaps, 200,000 households in 3 years.



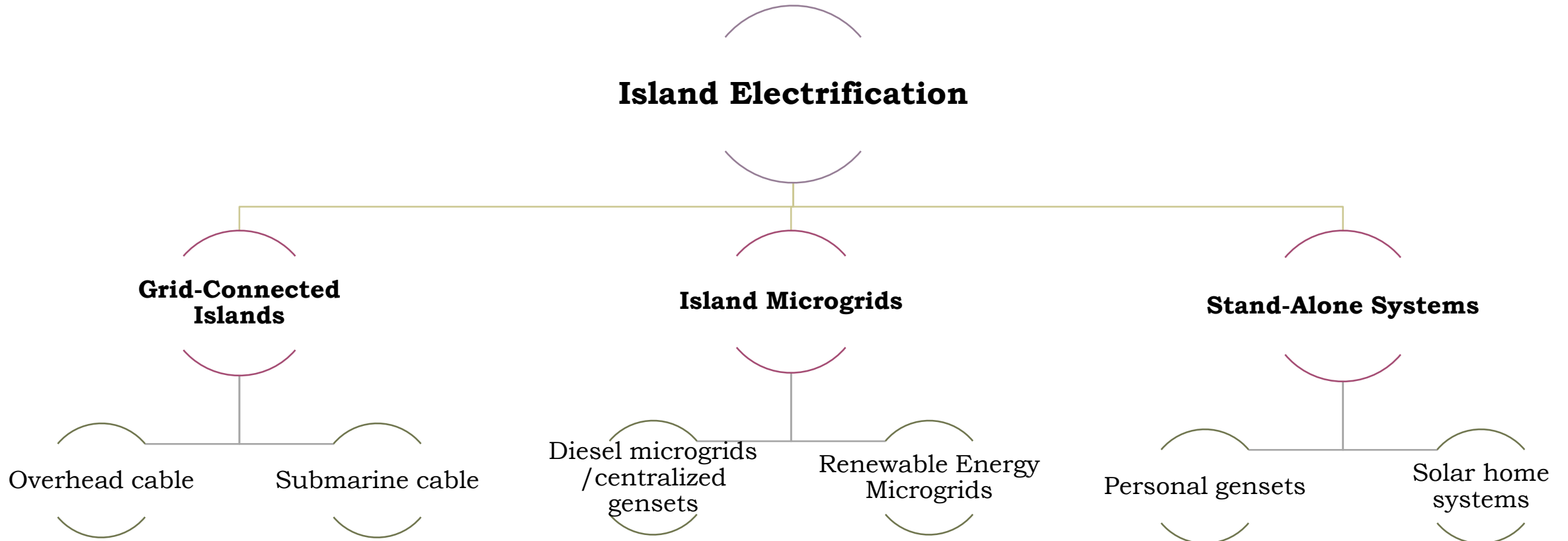
Scheme for last mile electrification..

Policy: Solar Home System Schemes, 2004-2006

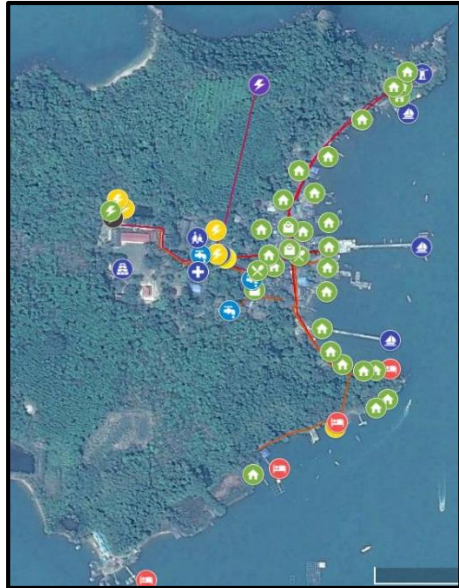
- **Total budget:** 5,625.282 million THB
- **Target:** 203,000 households in 73 provinces
- **SHS Components:**
 - 120 W PV
 - 150 W inverter/charge controller
 - 125 Ah, 12 V lead acid battery
 - Light bulbs



Summary of Electrification Options



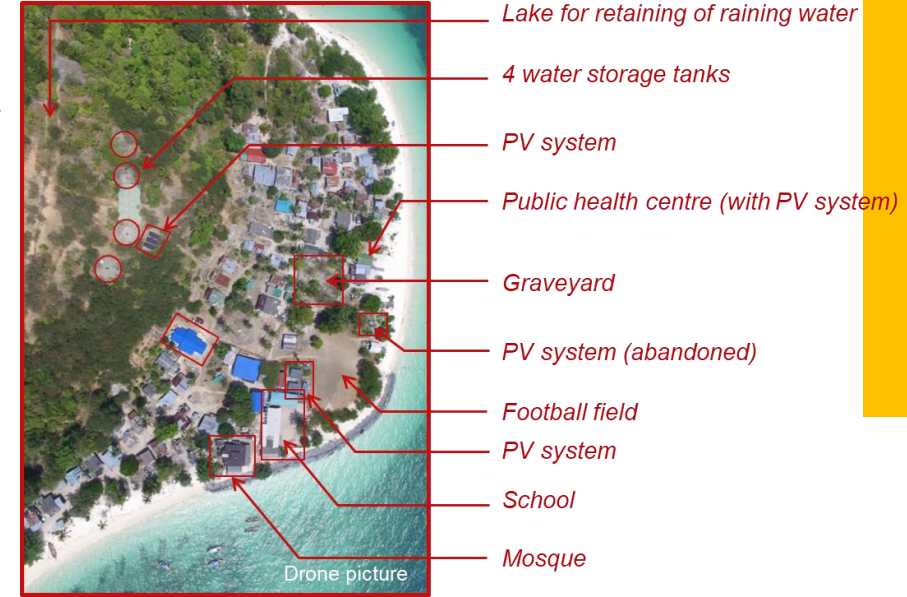
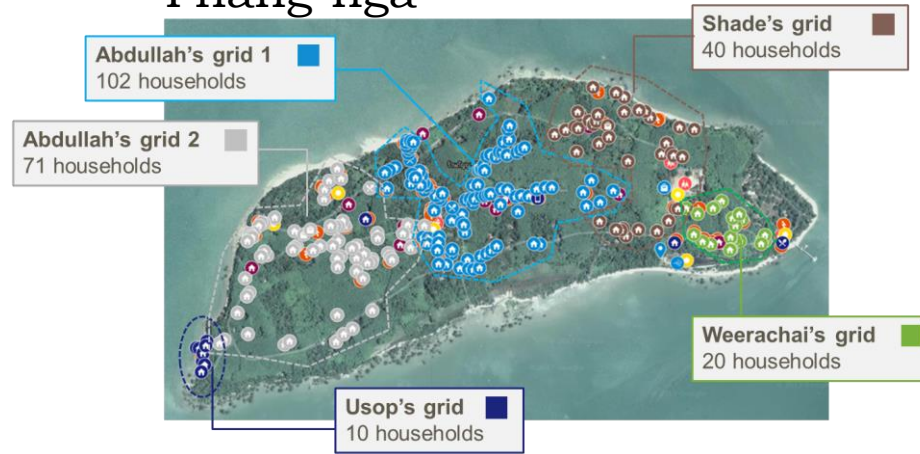
Site Assessments



Koh Jik,
Chanthaburi

Koh Bulon Don,
Satun

Koh Mak Noi,
Phang-nga



Potential Projects in the Pipeline

No.	Island Name		Province	No. of Households	Population	Electricity Source
1	Koh Kham Yai	เกาะขามใหญ่	Chonburi	55	203	Personal Genset
2	Koh Jik	เกาะจิก	Chanthaburi	141	489	RE-Microgrid
3	Koh Sin Hai	เกาะสินไห	Ranong	305	1,116	RE-Microgrid
4	Koh Lao	เกาะเหลา	Ranong	108	212	Personal Genset
5	Koh Phayam	เกาะพยาม	Ranong	280	521	Private Microgrid
6	Koh Chang	เกาะช้าง	Ranong	145	313	Personal Genset
7	Koh Nok Thapao	เกาะนกเขา	Surat Thani	86	171	Centralised Genset (PEA)
8	Koh Taen	เกาะแตน	Surat Thani	30	126	Personal Genset
9	Koh Phaluay	เกาะพลวย	Surat Thani	180	438	DEDE RE Sources
10	Koh Lon	เกาะโลน	Phuket	73	238	Personal Genset
11	Koh Mak Noi	เกาะหมากน้อย	Phang-nga	250	1,400	Private Microgrid
12	Koh Mai Phai	เกาะไม้ไผ่	Phang-nga	164	696	Centralised Genset (SAO)
13	Koh Por	เกาะปอ	Krabi	120	200	Centralised Genset
14	Koh Hung	เกาะฮั่ง	Krabi	154	500	Personal Genset/SHS
15	Koh Lipeh	เกาะหลีเป๊ะ	Satun	900	1,300	Centralised Powerplant
16	Koh Bulon Lae	เกาะบุโหลน เล	Satun	79	170	Personal Genset
17	Koh Bulon Don	เกาะบุโหลน ดอน	Satun	81	300	Centralised/Personal Genset

Key Take – A - Ways

- Thailand has less than 1% of unelectrified households
- Thailand has done :
 - Many “trial – and – error” in the past efforts for rural electrification
 - Many good examples with some failures
 - Pipeline of potential and bankable projects





Energy Transition Shall Continue

Thank You

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