Regional Workshop

Low-Carbon Technologies for MSMEs in the ASEAN

18-19 September, 2019, Manila, Phillipine

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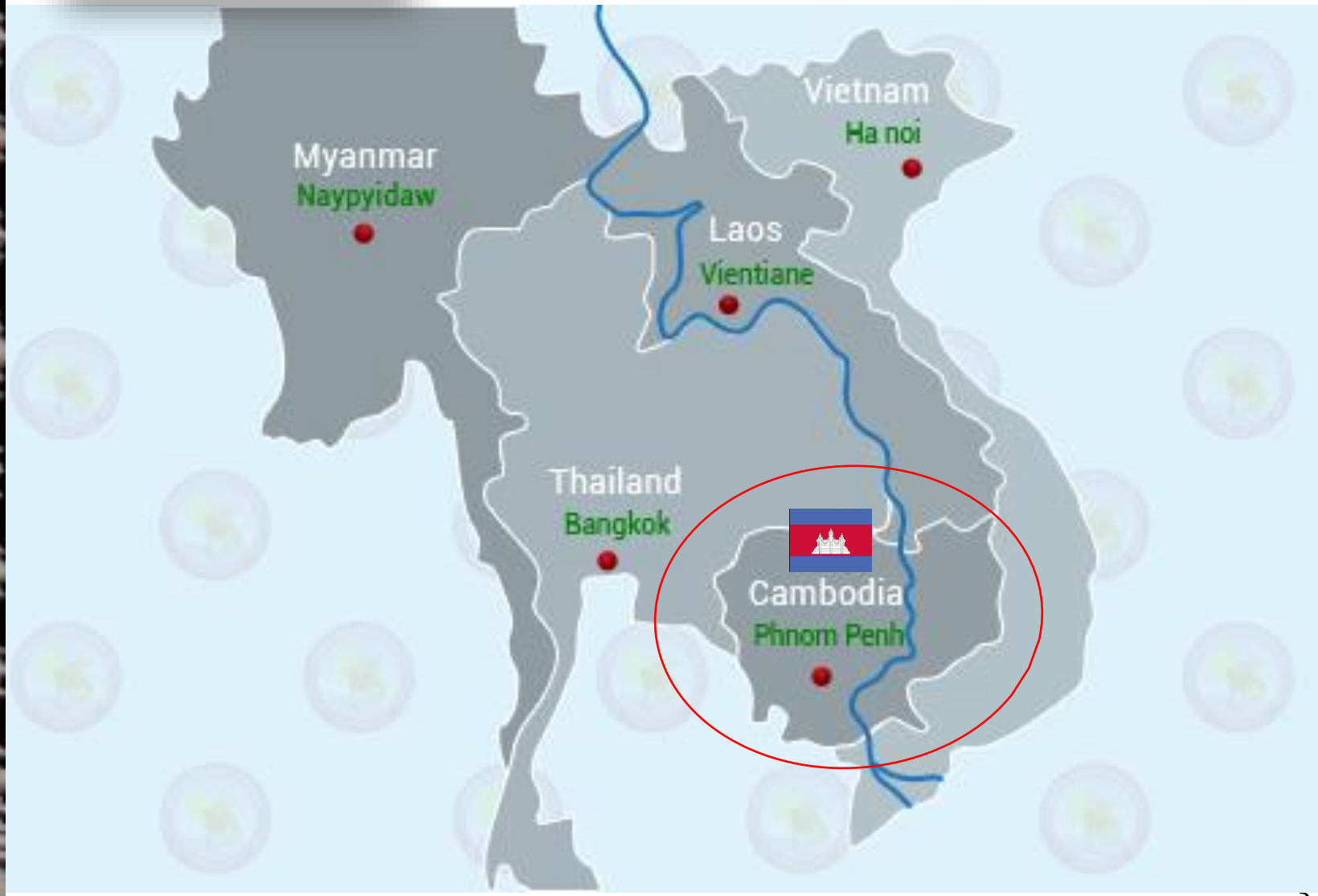
CONTENT

1. OVERVIEW OF SMEs IN CAMBODIA
2. ENERGY EFFICIENCY FOR SMEs
3. LOW CARBON TECHNOLOGY POLICY IN CAMBODIA

Kingdom of Cambodia



1. OVERVIEW OF SMEs IN CAMBODIA

1-Amount of Factories and Labors in Cambodia 2014-2018

Indicators	2014	2015	2016	2017	2018
Factories	1,301	1,450	1,579	1,522	1,611
Labors	778,878	859,546	921,858	982,203	1,003,253

Source : Cam-NSDP 2014-2018

2-Amount of SMEs and Labors in Cambodia 2014-2018

Indicators	2014	2015	2016	2017	2018
SMEs	143,192	146,842	152,332	155,640	155,745
Labors	936,476	960,347	996,673	110,6754	1,107,806

Source : Cam-NSDP 2014-2018

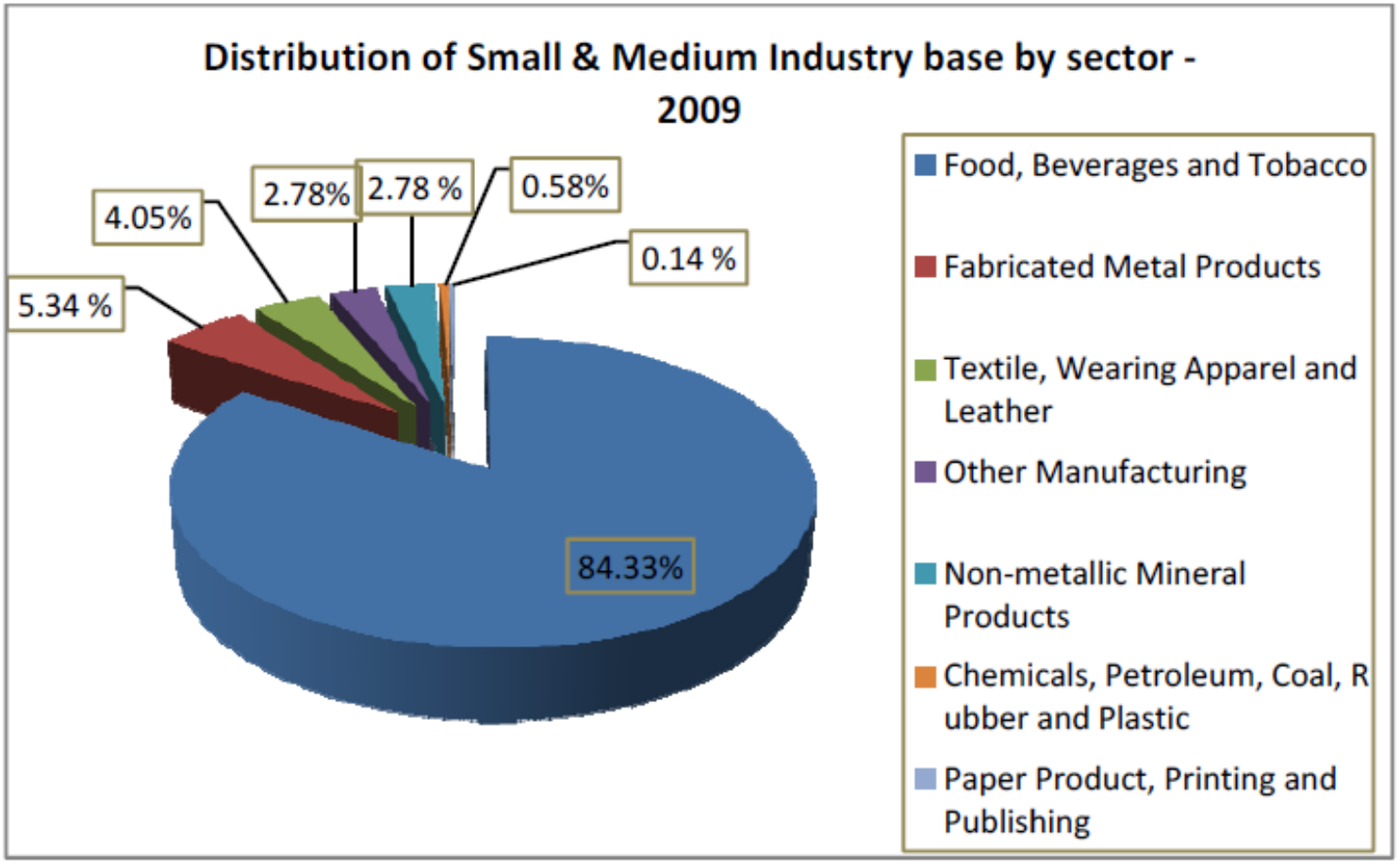
1. OVERVIEW OF SMEs IN CAMBODIA

Table 1: A Definition for SMEs

	Statistical Employee number	Financial Assets excluding land (USD)
Micro	Less than 10	Less than 50,000
Small	11 – 50	50,000 – 250,000
Medium	51 – 100	250,000 – 500,000
Large	Over 100	Over 500,000

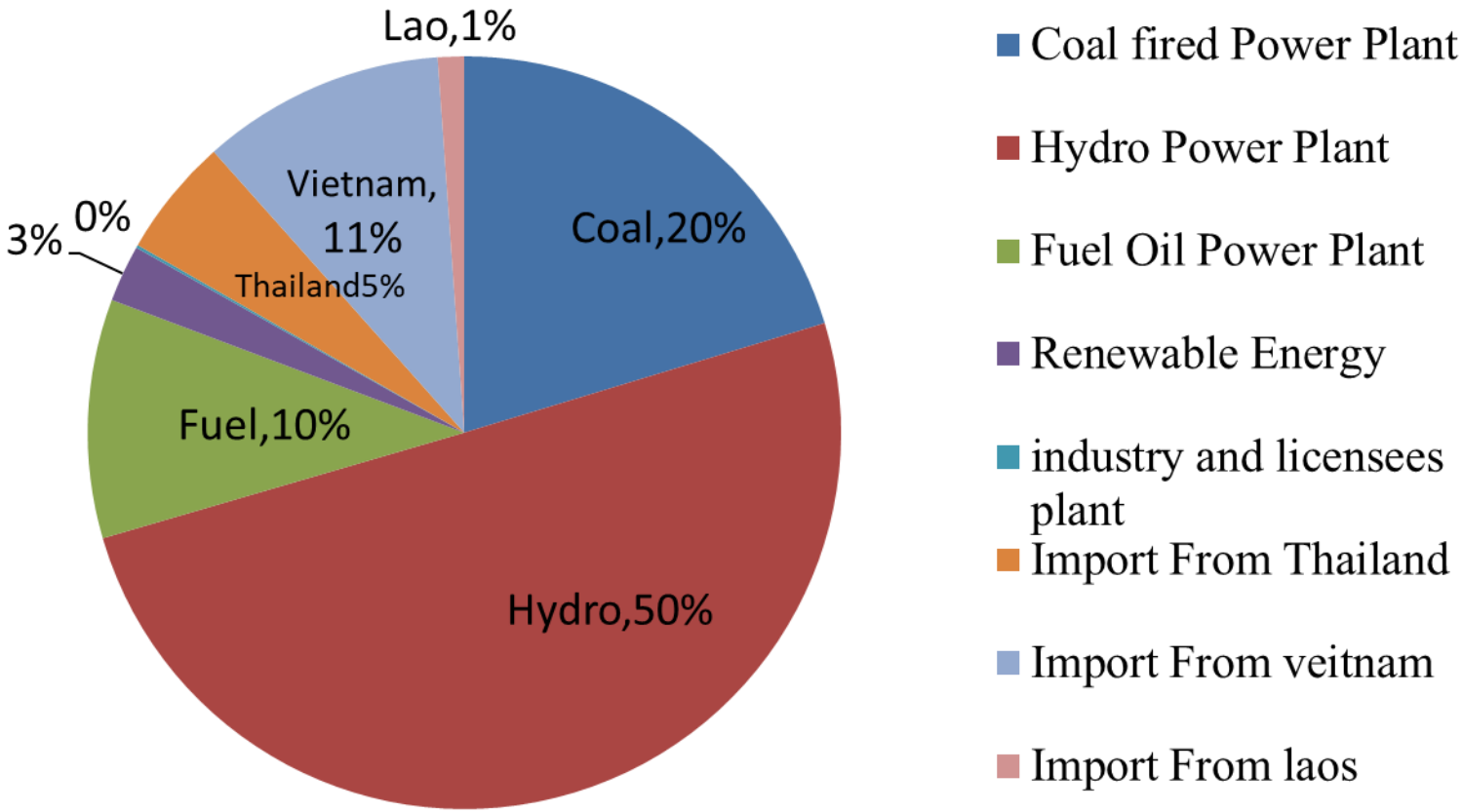
Source: ADB and RGC's Sub-committee on SME Secretariat, 2005 and 2007.

1. OVERVIEW OF SMEs IN CAMBODIA



Source: MIME, 2009.

Energy Mix in 2018



Generation Development Planning

No	Companies Names	Power Project	Install Capacity (MW)	Years COD
1	**CEL II**	Coal Power Plant	**135**	2019
2	**CHNEITEC ENERGY CO., LTD**	Solar Park	**180**	2020/2021
3	**ADB**	Solar Park	**60**	2021
4	**SPHP Co., Ltd.**	Hydro Power Plant	**80**	2023/2024

2. ENERGY EFFICIENCY FOR SMEs

The Royal Government of Cambodia

National Energy Efficiency Policy
2018-2035

Checked and Approved by Technical Working Group on 10th Seminar
13th November 2018

MSMEs

POTENTIAL EE IMPROVEMENT				
(Sub) Sector	Min	Max	Average	Comments
Rice mills		70%	35%	Substitution of fossil fuels by rice husk gasification
Garment industry	20%	35%	28%	Through the use of more efficient wood boilers and sewing machines; application of thermal insulation
Ice factories			25%	Introduction of biomass gasifiers
Food industry	15%	20%	18%	Replacement of inefficient lights Replacement of inefficient air compressors
Rubber factories			25%	Improvement of drying process, use of more efficient electrical motors
Brick factories		70%	35%	Replacement of tunnel kilns by vertical shaft kilns Improvement of brick molding
Commercial buildings	20%	30%	25%	Based on international benchmarks
Charcoal production	30%	40%	35%	Through the use of more efficient kilns such as the Yoshimura Kiln (GERES)
Domestic cooking		50%	25%	Through the use of improved stoves (GERES)
REE		80%	40%	Reduction of generation and distribution losses of REE´s
Residential electricity for household appliances		50%	25%	Based on international labeling schemes for household appliances

3. LOW CARBON TECHNOLOGY

CAMBODIA CLIMATE CHANGE ALLIANCE

Implemented by: Ministry of Environment

Supported by: European Union

UNDP

SWEDEN

Ref. No.: MME/PLCT/LOA17

Project Name: Promote Low-Carbon Technologies for Power Generation

Low Carbon Technology Assessment for Electricity Generation in Cambodia

3. LOW CARBON TECHNOLOGY

Policy area	Policy recommendations
National Development	- Support the policies with strategic planning tool for continuous monitoring (and feedback for policy revisions); - Establish, under NCSD, an Inter-ministerial (key officers) level Steering Committee on LCT development, responsible for providing policy, strategy and regulatory directions; - Set intermediate targets, and related criteria/indicators for monitoring and impact assessments, particularly related to LCTs; - Enact RE Portfolio Standards (RPS) covering all the sectors of energy; - Use standard and common template for policy documents, such that policy coherence for sustainable development could be tested and ensured.
Environment & Climate change	- Develop readiness plan for implementation of NDCs, particularly in mitigation sector ; - Mainstream climate change actions (particularly related to LCT mitigation options) and related M&E in sub-national and sectoral planning processes and budgets

3. LOW CARBON TECHNOLOGY

Policy area	Policy recommendations
Power & Energy	- Mandate national level RE resource measurement, assessment and mapping (particularly solar, biomass, small-hydro and wind); - Direct establishment of RE resource inventory for the country; - Formulate LCT road map for implementation in short, medium and long-term; - Provide priority for grid infrastructure development plan for optimum RE integration with decentralized generation; - Establish and empower “LCT Operational Committee” to monitor the progress and assess the impacts, together with specific “LCT Expert Committees” and “LCT Working Groups; - Adopt sustainability assessment methodology for evaluating, ranking and selecting LCT options.
Knowledge, Skills & Capacity	- Develop climate change communication strategy and education & skill development plan, targeting LCTs. - This should be based on core competency (CC) framework and related programme outcomes (POs) that describe the essential knowledge, skills, attitudes and values necessary for the promotion of LCTs in the professional, educational, and other life contexts.

3. LOW CARBON TECHNOLOGY

Policy area	Policy recommendations
Finance	- Establish, under NCSD, a high-level Steering Committee on Climate Change Finance to develop and advocate a sound financing framework, including, establish National Climate Fund, Access global climate funds, Improve governance of climate change finance, Manage climate change related public finance and regulations, introduce mechanisms to attract private sector investments. - Formulate policies and regulations for introducing financial de-risking instruments to mobilise private sector investments for up scaling LCTs. - Formulate investment modalities that could facilitate transfer LCT funding to complement local development activities.
Industry (Energy and LCT support industry)	- Explore the opportunities for SMEs to contribute to deployment of LCTs though local manufacture, part-manufacture, repairs, maintenance, etc.; - Develop/adapt technical standards/specifications for LCTs (solar PV, wind, small hydro, biomass, energy storage, electrical systems); - Develop and implement technical training on LCTs (design, system sizing, fabrication & installation, repair & maintenance, performance monitoring, testing, etc.); - Establish university-industry linkages to support SMEs

Thank You Very Much!