



Ministry of Industry and Trade

Opportunities for LCMT Development in Viet Nam

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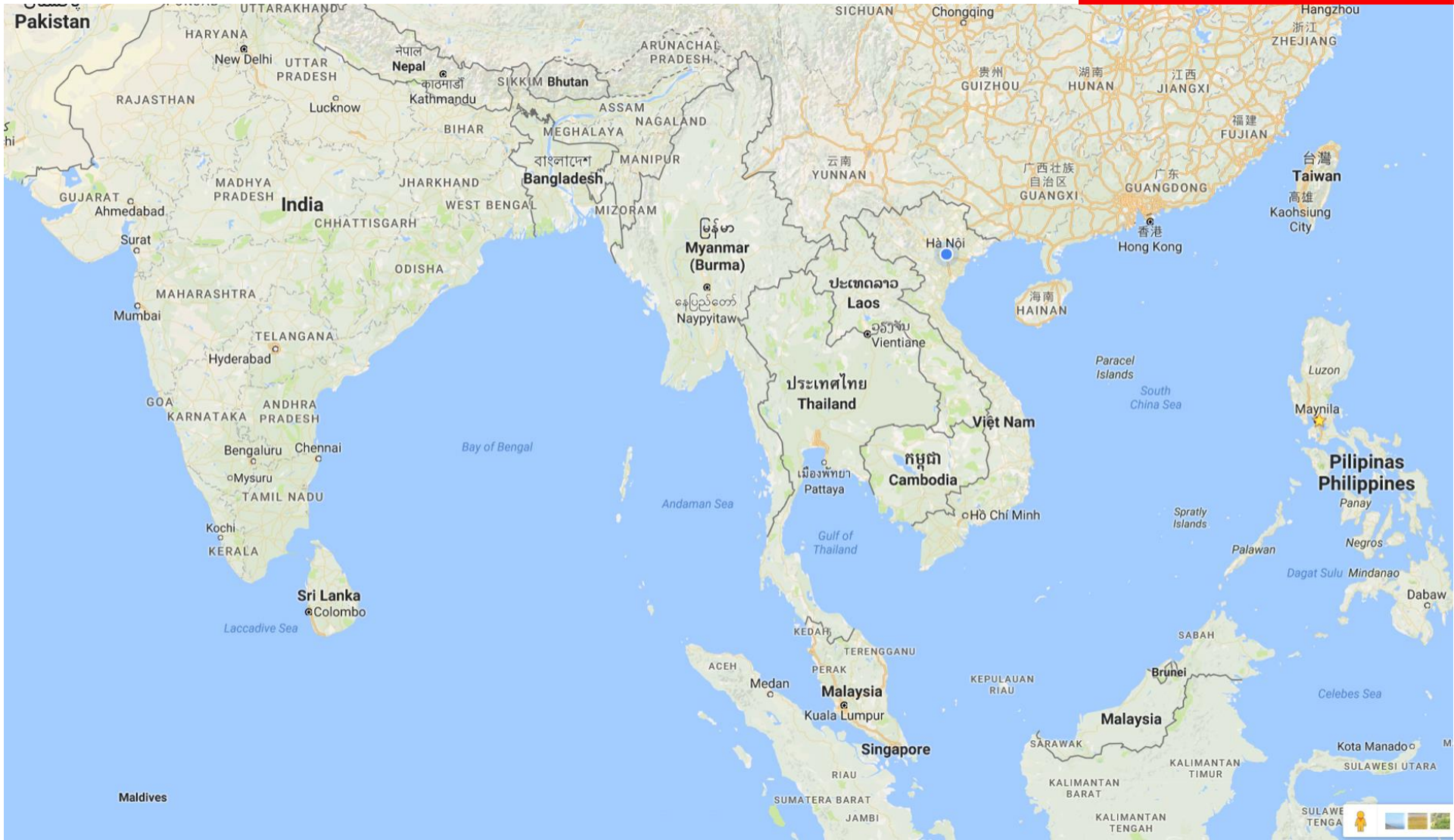
Department of Energy Efficiency and Sustainable Development

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A. About Vietnam



1. General Information



1. Official name: The Socialist Republic of Vietnam
2. Total Area: 331.698 Km²
3. Capital: Hanoi
4. Population: \approx 92,7 million (2016)
5. Population density: 282/km²
6. Urban pop: 32.753 mil
7. GDP per capita: USD 2,215 (2016)
8. Economic growth rate: 6.21% (2016: GSO)
9. Monetary unit: Vietnam Dong (VND)
10. Internet domain: “.vn”
11. International dialing code: +84

B. Why do we promote LCMIT?

Status of urbanization in Vietnam

795 cities and towns

2 special metropolitan

17 grade I

25 grade II

41 grade III

82 grade IV

628 grade V



Vietnam's population

100 million by 2025, an increase of 5,8% from 2016 (The UN source)

Urbanization rate

Urban areas in Vietnam have expanded spatially at 2.8% per year and this is among the fastest rates in the region (WB)

Towns/Urban areas and Greenhouse gases (GHG)

Towns/urban areas: sources of GHG

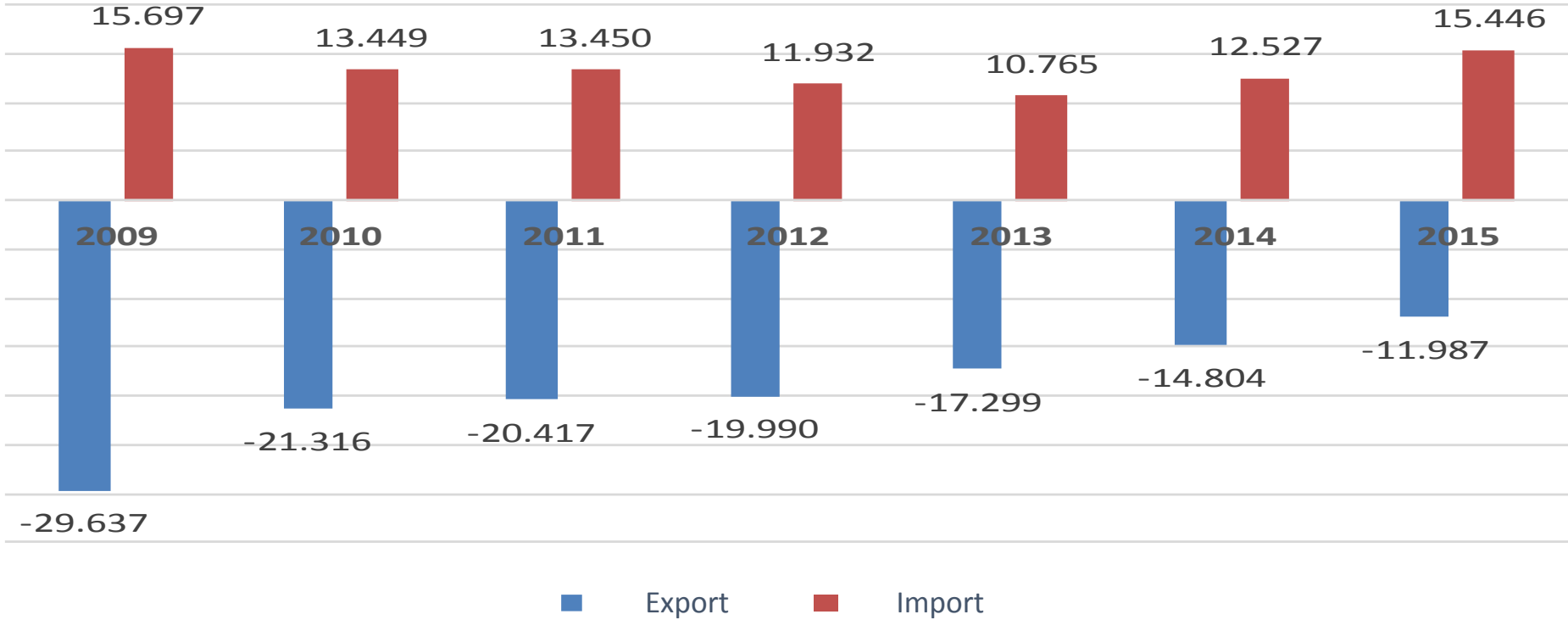
Towns are the solution to the climate change

- As towns/urban areas today are home to about half the global population but represent almost two-thirds of global energy demand and 70% of carbon emissions from the energy sector (IEA) and therefore crucial to meeting Vietnam's carbon reduction targets.
- Building sector represents 40% of the world's energy consumption and contributes to one-third of GHG emissions.

Energy Consumption in Vietnam

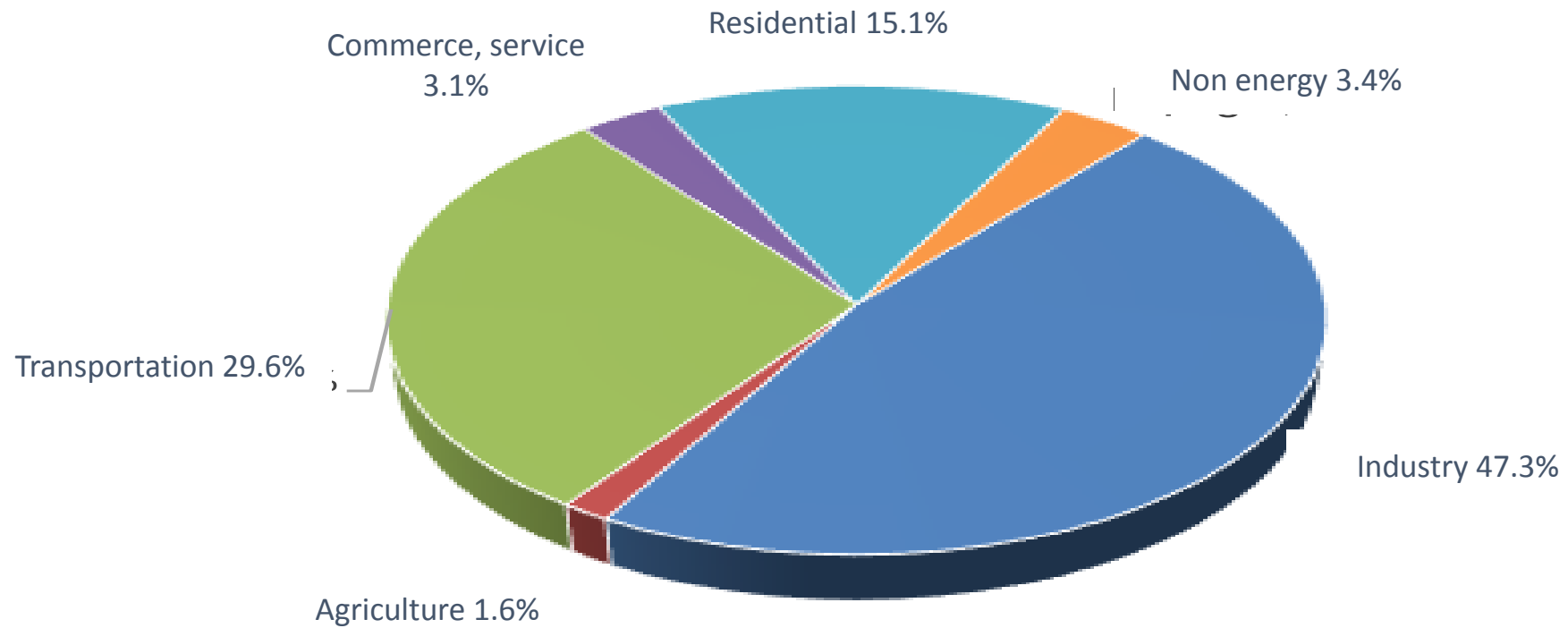
- GDP grew at average rate of 7.26%/year during the period of 2001-2010 and 5.91% during the period of 2011-2015.
- Energy demand grew at rate of 10% during 2001-2010, and at 13%/year during the period of 2001-2010 and about 11% during 2011-2015.
- Greenhouse gas emission from energy sector accounted for 63% of total GHG emission in 2010 in Vietnam and will account for 83% and 86% in 2020 and 2030 respectively
- According to forecast in the National Power Development Plan (Revised PDP VII), in the next 15 years (2016 - 2030), Vietnam's power demand would increase 8.7%/year on average.
- Domestic power supply capacity increase from 38,358 MW in 2015 to 60,000 MW in 2020 and 129,500 MW in 2030.

Energy Consumption in Vietnam



Import-Export during the period of 2009-2015, KTOE

Energy Consumption in Vietnam



Energy consumption per sectors, 2015

C. Climate-Energy Policies for Low-carbon Development in Vietnam

Climate - Energy Policies for Low-carbon Development

✓ Party Central Committee Resolution dated June 3, 2013

- *Developing a low-carbon economy;*
- *Reducing GHG emissions on a GDP unit by between 8% and 10% against base year 2010.*



Climate - Energy Policies for Low-carbon Development

✓ National Green Growth Strategy - Targets (2012)

- *Reduce the intensity of greenhouse gas (GHG) by 8%-10% as compared with the 2010 base*
- *Reduce energy consumption per unit of gross domestic product by 1%-1,5% per year.*
- *Reduce GHG emissions in the energy sector by 10%-20% compared with business as usual (BAU)*



Climate - Energy Policies for Low-carbon Development

✓ National Green Growth Action Plan – 2014

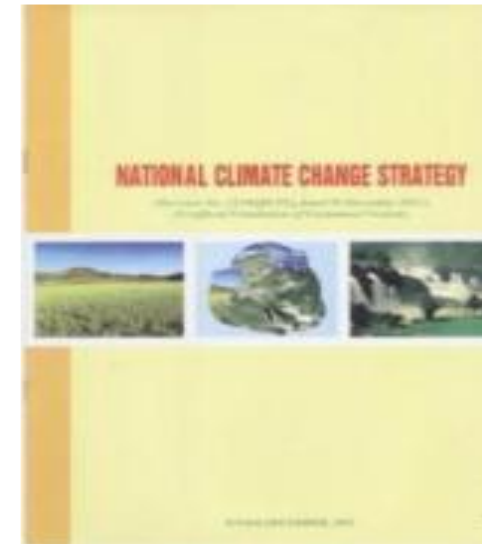
- *Urban planning/ master planning,*
- *Development of urban technical infrastructure,*
- *Development of green cities, eco-urban areas and greenworks, urban transportation, and*
- *greening urban landscape*



Climate - Energy Policies for Low-carbon Development

✓ National Climate Change Strategy dated Dec. 5, 2011

- *Carry out GHG mitigation options;*
- *Ensure sustainable*
- *development goals; and Develop a low-carbon economy to protect and enhance quality of life;*

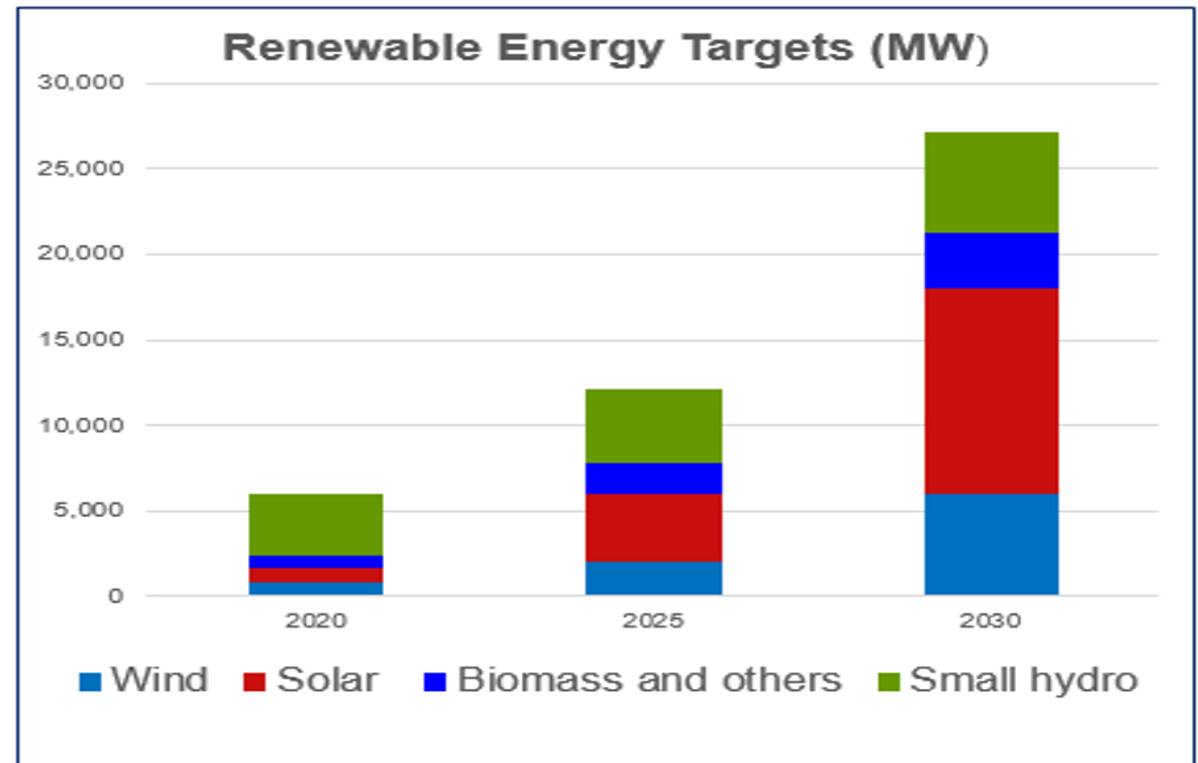


Climate - Energy Policies for Low-carbon Development

✓ Renewable Energy Development – Targets

(Source: Viet Nam's power development plan up to 2030, with vision to 2050, issued 18 Mar 2016)

Renewable Energy (MW)	2020	2025	2030
Wind	800	2,000	6,000
Solar	850	4,000	12,000
Biomass and others	750	1,824	3,281
Small hydro	3,540	4,239	5,915
Total	5,940	12,063	27,195



**D. The National Targeted
Program on Energy Efficiency –
VNEEP**



The National Targeted Program on Energy Efficiency - VNEEP

Decision 79/2006/QĐ-TTg dated 14/4/2006 by the Prime Minister approving The Program Phase I for the period 2006 – 2015.

Decision No. 1427/QĐ-TTg dated 12/10/2012 by the Prime Minister approving the Phase II of the Program during the period 2012 – 2015.

Proposal for the National Program on Energy Efficiency during the period 2019-2030 Phase III.

Key Achievements from VNEEP 1 & 2

Results from VNEEP 1 & 2

	VNEEP I	VNEEP II
Duration	2006-2010	2011-2015
Energy efficiency targets (%)	3-5	5-8
Energy saving (%)	3,4	5,65
Total energy saving (million TOE)	4,5	11,261

- Energy savings during the period 2006-2010 was 3,4%; total energy saved 4.5 million TOE.
- Energy savings during the period 2011-2015 was 5,65%; total energy saved 11,261 million TOE.

Key Achievements from VNEEP 1 & 2

Formulation and completion of the legislation

- Law on Energy Efficiency and Conservation (50/2010/QH12) dated 28/6/2010
- Decree 21/2011/NĐ-CP dated 29/3/2011 promulgates the details for implementing the Law
- Decree 134/2013/NĐ-CP dated 17/10/2013 promulgates on the fines in administrative violations on electricity area, dam safety, and the efficient use of energy
- A series of Decisions, Circulars and regulations on energy efficiency in industry, construction, agriculture, transport sector... was issued.

Key Achievements from VNEEP 1 & 2

Energy Efficiency in Industry sector

- The list of key energy users are developed and issued annually;
Monitor and promote energy efficiency solutions;
- Supported energy efficiency and develop energy management system;
Provided in-depth training and capacity building to implement EE solutions and optimize energy system for enterprises;
- Implemented capacity building for financial institutions to develop investment and financial services for the EE related projects;
- Piloted Energy Service Companies (ESCO) models and provided consultancy and financial support services to implement EE investment projects.

Key Achievements from VNEEP 1 & 2

Energy Labeling Program



- More than 10,000 products from 15 product target groups were labeled with energy stamps.
- Local and foreign Testing Labs have been nominated for EE testing for labeling and MEPS program.
- The number of consumed incandescent lamps reduced from 50-55 million bulbs in 2011 to below 5 million bulbs in 2015.

Key Achievements from VNEEP 1 & 2

EE in Buildings and Public Facilities

- Promoted the implementation of The National Technical Standards on EE in Buildings QCVN 09/2013/BXD;
- Developed database on energy usages in key and big buildings;
- Piloted assessment criteria and certified for green buildings;
- Organized competitions on EE buildings, competitions for design and application of EE measures in buildings;
- Developed EE public lighting system in many provinces and cities nationwide.



Key Achievements from VNEEP 1 & 2

EE in Transport sector

- Conducted surveys, developed and implemented EE solutions in public transport means such as big buses in cities;
- Develop standards, technical norms for energy consumption for some road motorized vehicles;
- Implemented energy labeling program for under 7 seat – cars;
- Developed technical and management solutions to save fuel cost in waterway transportation and aviation.

Proposal of VNEEP3 for the Period 2019-2030

The draft of VNEEP 3 – core objectives are:

- To mobilize all domestic and international resources for the promotion of energy efficiency and conservation via the synchronous and end-to-end solutions in governance of government and development of policy enforcement; research and development of science, product, and technology; training and development of human resources; international collaboration in energy efficiency and conservation;
- To establish the habit of energy efficiency and conservation in all aspects of social activities; decrease energy intensity in industrial sectors; make energy conservation a mandatory indicator for key energy-utilizing facilities with guidance towards green growth, greenhouse gas emission reduction, and sustainable development.
- To achieve the efficiency rate of 8 - 10% per total national commercial energy consumption for 2019 - 2030 against the energy demand forecast in the National Power Development Plan for 2011 - 2020 with consideration up to 2030

Proposal of VNEEP3 for the Period 2019-2030

The draft of VNEEP 3 – Challenges and Remedies

Challenges

- Implementation time of the Program, especially in 2019, is not much left;
- Energy price structure does not promote the urgent need of energy efficiency and conservation;
- Expenditure on the project (scale and budget distribution).

Remedies

- Determination of the political system;
- Support from domestic and foreign experts, international funding for promoting energy efficiency and conservation in Vietnam.

Proposal of VNEEP3 for the Period 2019-2030

The draft of VNEEP 3 – Social-economic impacts

- Contribute to the implementation of National Energy Policy;
- Reduce the increase in commercial energy source by average 0.8%/year for 2020 - 2030;
- Reduce greenhouse gas emission by 10 – 15 millions tons of CO₂ equivalent;
- Achieve energy saving of 55 – 60 millions TOE.

E. Conclusion

F. Conclusion

□ Potential of LCMT development in Vietnam:

- To be in line with current policies of the Party and the State
- To promote the cooperation between Vietnam and the international community
- High potential for greenhouse gas reduction in Vietnam

□ Next Plan

- Extend to other cities
- Capacity building: planning and monitoring
- Assist in LCS scenarios development, monitoring
- Integration of LCMT development in provincial climate change planning process

THANK YOU FOR YOUR KIND ATTENTION!