



# CURRENT STATUS, DEVELOPMENT TRENDS AND ENERGY SAVING POTENTIAL OF VIETNAM

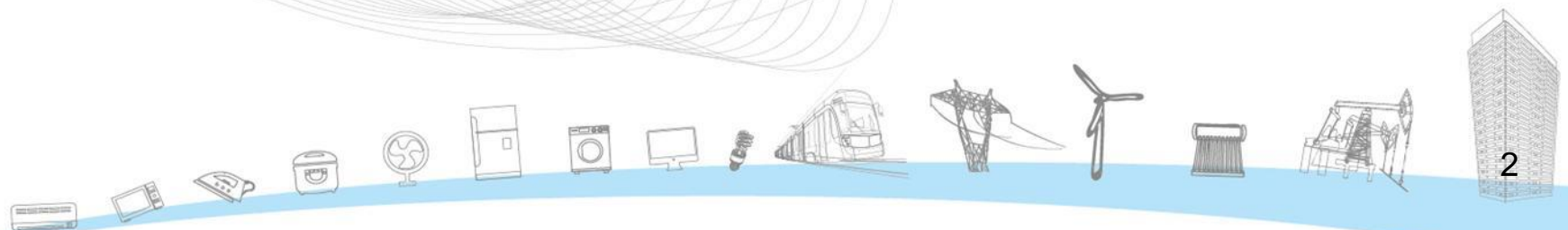
*Hanoi, 4<sup>th</sup> December 2020*

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## I. Current status of policies and laws on energy conservation and efficiency in Vietnam

Average GDP growth in the period 2010-2019 is 6.3%/year, of which: growth in 2017 was 6.81%, 2018 was 7.08%, and 2019 was 7.02%.

Energy demand increased by about 10% in the decade 2001-2010, is expected to continue to increase in this decade (estimated from now to 2030, every 5-year cycle, electricity demand will increase to 1.5 times). Consumption structure: gasoline and oil about 37%, electricity 27%, coal 20%, new energy 14%, natural gas nearly 2% of total final energy consumption.

GHG emissions from the energy sector account for about 63% of Viet Nam's total GHG emissions in 2010 and will account for about 83% and 86%, respectively, by 2020 and 2030.

In the future: primary energy sources will not meet the energy demand of the economy. Vietnam has to import coal for electricity generation, and will import LPG from 2023, The proportion of imported electricity in the total power supply for the whole country remains relatively stable at around 1.3% -2% in the period 2015-2018.

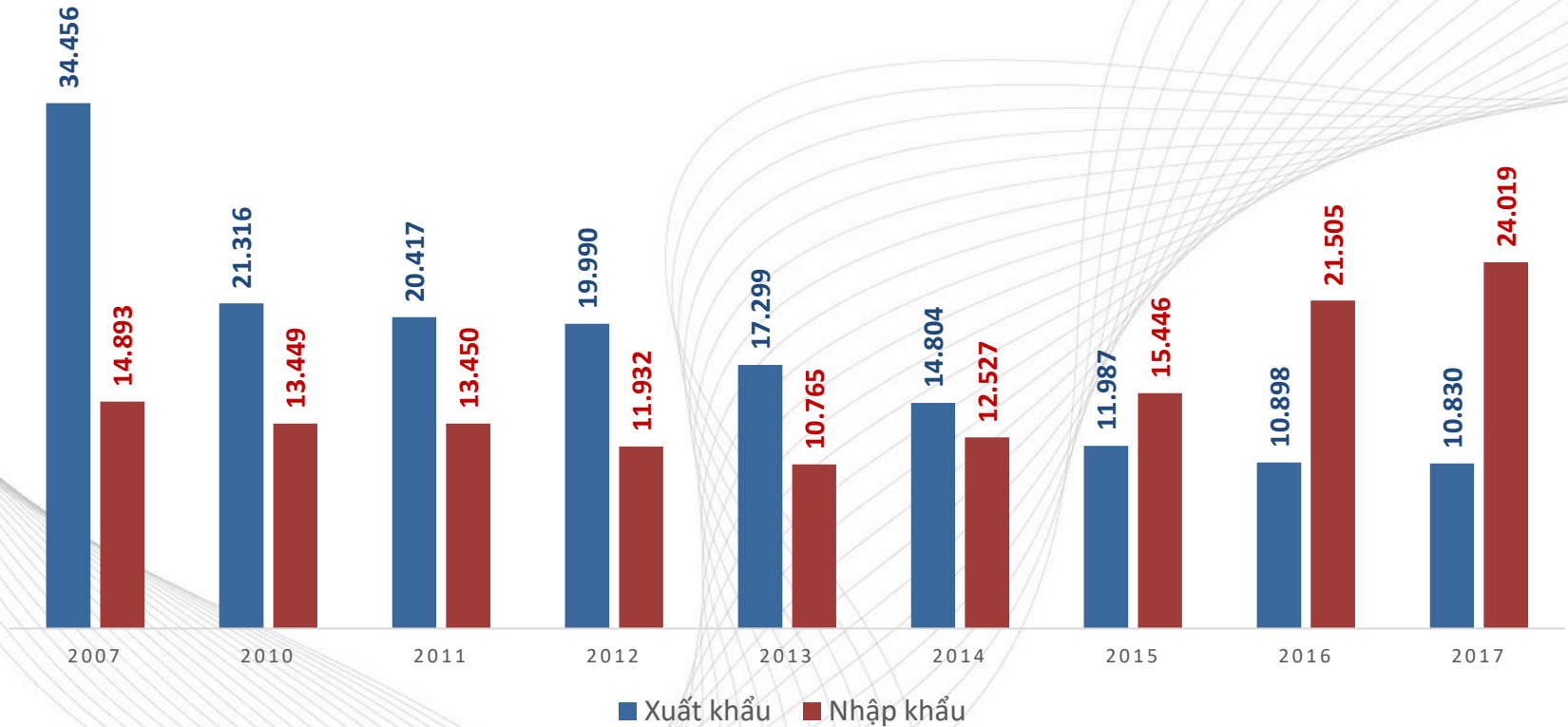
# I. Current status and trends of energy use in Vietnam

## Some indicators for energy in Vietnam, 2007-2017

Content	Unit	2007	2010	2015	2016	2017
Total supply for primary energy	KTOE	45.86	57.02	70.6	70.5	71.9
Total final energy consumption	KTOE	40.47	47.45	54.1	53.8	55.7
Final energy consumption/person	kgOE/person	480,5	545,7	589,7	580,2	594,2
Electric intensity/GDP	kWh/1.000USD	625	748	929	976	996
Electric Consumption/person	kWh/người	726	998	1.564	1.727	1.88



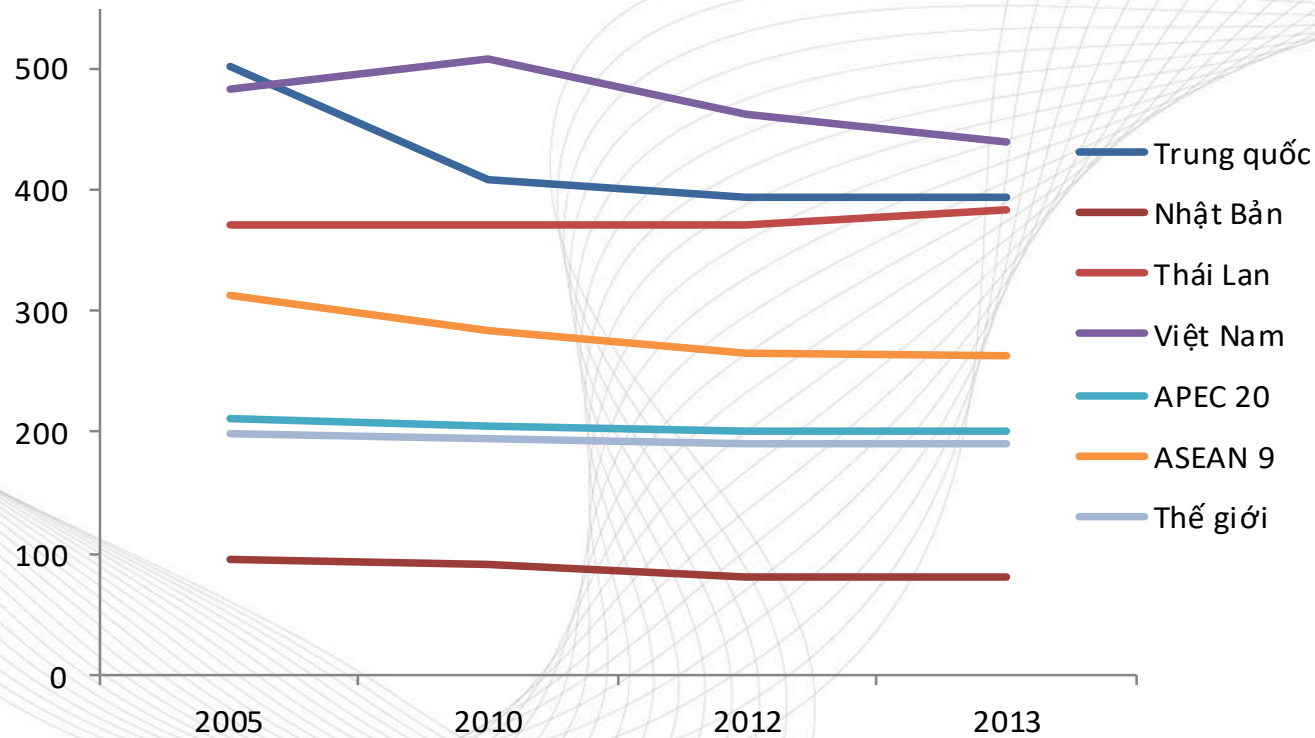
# I. Current status and trends of energy use in Vietnam



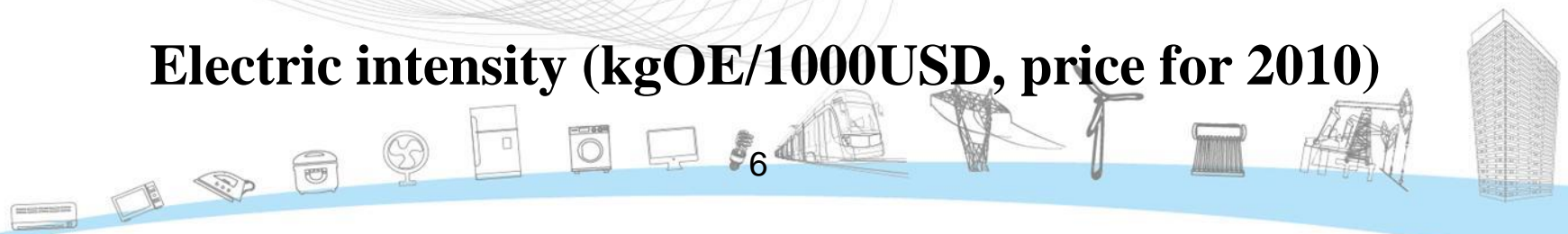
**Import-Export Energy for period 2007-2017,  
KTOE**



# I. Current status and trends of energy use in Vietnam



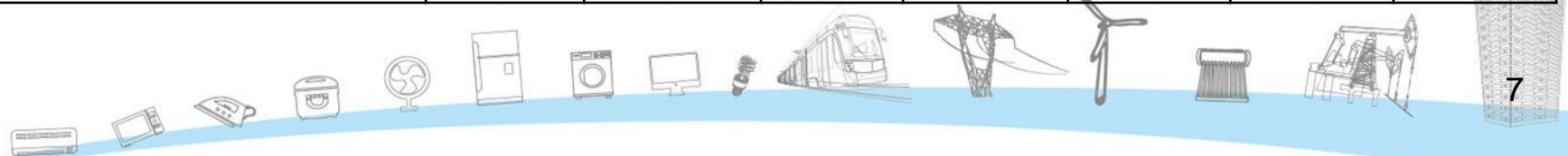
**Electric intensity (kgOE/1000USD, price for 2010)**



## II. Demand and potential for energy saving in Vietnam

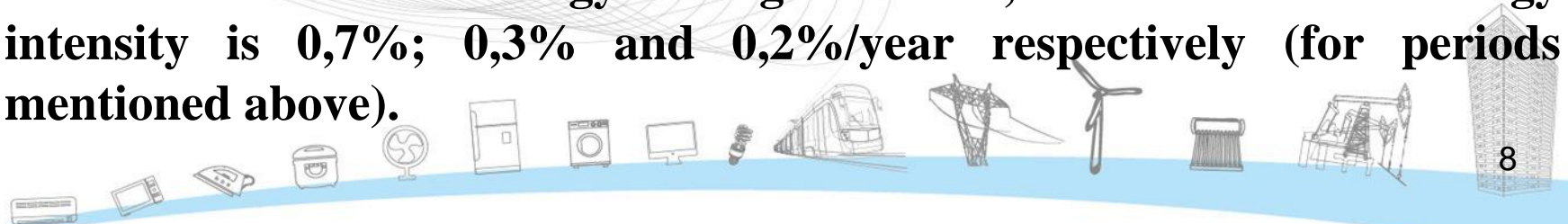
### • Forecasts of energy demand for sectors (Unit: million TOE)

Year	2015	2020		2025		2030	
		Standard	High	Standard	High	Standard	High
Industry	24,24	34,32	37,31	45,74	52,13	60,45	70,47
Agriculture	0,67	0,75	0,75	0,82	0,83	0,87	0,89
Transportation	15,29	22,81	25,25	33,31	37,90	47,56	55,62
Service – Trading	2,32	3,72	4,38	5,47	6,61	7,98	9,90
Civil	16,74	18,53	19,41	20,56	22,11	22,77	24,86
<b>Total</b>	<b>59,25</b>	<b>80,13</b>	<b>87,09</b>	<b>105,90</b>	<b>119,57</b>	<b>139,63</b>	<b>161,75</b>



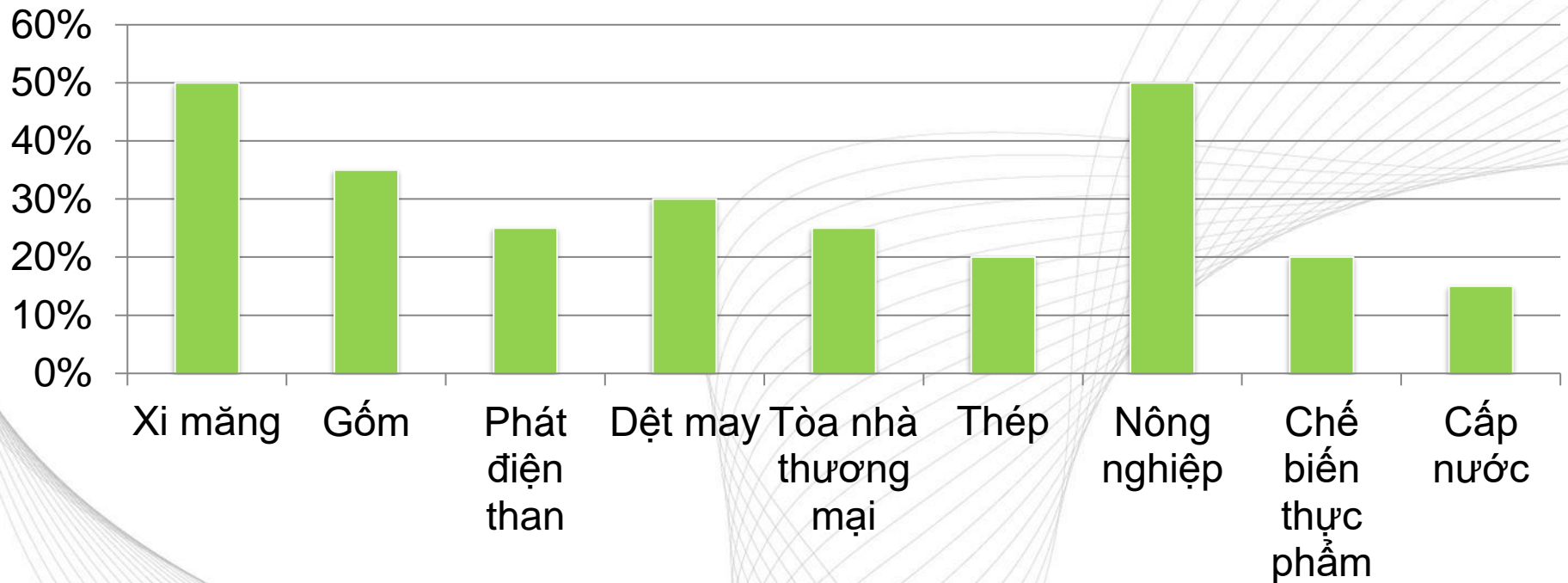
## II. Demand and potential for energy saving in Vietnam

- It is estimated that demand for Vietnam in energy increases at an average rate of 5,9%/year in the period 2014-2030, of which the service-trade sector had the highest growth rate of 8,7%/year (mainly is due to rapid increase in electricity consumption), following are transportation: 7,9%/year, industry: 6,3%/year, civil: 2,1%/year and agriculture: 1,9 %/year.
- *(it is estimated the impact of energy saving activities, in which the rate of energy saving for Industry is 2%/year and for remainin sector is 1%/year)*
- According to the forecasting results of Adjusted Electricity Planning VII, considering the impact of energy saving activities, **energy intensity will decrease each year by 0,73%, 1,18% and 1,23% in the period 2015-2020, 2020-2025 and 2025-2030**. This result maybe match with the goal for Green Growth, which is to reduce energy intensity by 1% per year.
- **If not consider the energy saving activities, the increase in energy intensity is 0,7%; 0,3% and 0,2%/year respectively (for periods mentioned above).**





# Demand and potential for energy saving in Vietnam



Source: DSM Project – Ministry of Industry - ADB

## Average:

**Potential saving energy in industry: reach over 20%;**

**Potential saving energy in construction, building, transportation: 25-35%;**

**Potential saving energy in living area and service area: 15-30%.**



## II. Demand and potential for energy saving in Vietnam

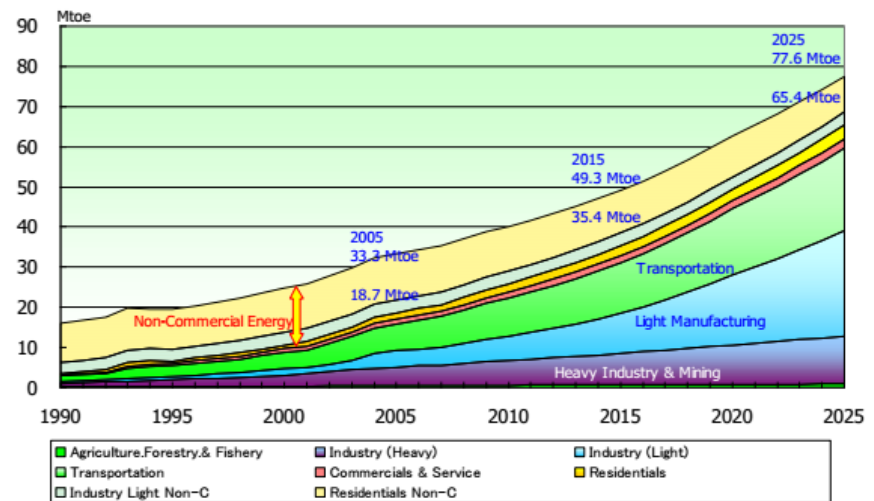
### Potential for energy saving by industry :

- Cement Industry: 50%
- Ceramic Industry: 35%
- Coal power generation: 25%
- Textile/garment: 30%
- Commercial buildings: 25%
- Steel Industry: 20%
- Agriculture: 50%
- Food Processing : 20%
- Use water: 15%

(Source: survey result from DMS Project)

- **Energy consumption in 2017: NLSC is over 78 million TOE .; Final energy consumption: 65 million TOE with the growth rate of 4,9%/year (2007-2017), especially electricity in the city increase up to 10.5% (2010-2019).**

### TỔNG QUAN NGÀNH NĂNG LƯỢNG



### III. Current status of policies and laws on economical and Efficient Use of Energy in Vietnam

#### 1. Current Policy and Law

##### **Law on economical and Efficient Use of Energy,**

*No. 50/2010/QH12 (effective from 01/01/2011)*

A legal framework has been developed and issued at the macro level (including Decrees of the Government, Decisions of the Prime Minister and Circulars of relevant ministries and agencies), forming a relatively complete legal framework in a unified direction to manage activities in the field of economical and efficient use of Energy, including:

- More than 30 MEPS Standards are applicable to target groups of equipment;
- 07 Decisions to designate testing facilities;
- More than 20 other instructional documents.



### III. Current status of policies and laws on economical and Efficient Use of Energy in Vietnam

#### 1. Current Policies and Law

- Decree No. 21/2011/ND-CP dated 29/3/2011, detailing the law on economical and efficient use of energy and measures for its implementation;
- Decree No. 134/2013/NĐ-CP dated 17/10/2013 by the Government to regulate the administrative sanctions in the field of electricity, hydropower dam safety, economical and efficient use of energy;
- Decision No. 1393/QĐ-TTg of September 25, 2012, approving national strategy on green growth,
- Decision No 403/QĐ-TTg on Approval of the National Action Plan on Green growth in Vietnam for period of 2014-2020





### III. Current status of policies and laws on economical and Efficient Use of Energy in Vietnam

#### 1. Current policy and law

- Decision No. 1855/QĐ-TTg dated 27/12/2007, approving Vietnam's National energy development strategy up to 2020, with 2050 vision
- Decision No. 79/2006/QĐ-TTg, 14/4/2006, approving National Target Program on economical and efficient use of Energy, period 2006-2011;
- Decision No. 1427/QĐ-TTg, 12/10/2012, approving National Target Program on economical and efficient use of Energy, period 2012-2015
- Decision No. 280/QĐ-TTg, 13/3/2019, approving National Target Program on economical and efficient use of Energy, period 2019 – 2030
- Decision No. 2035/QĐ-TTg, 28/10/2016 on the issuance of a plan to implement the Paris Agreement for climate change (COP21).
- Resolution No. 55- NQ/TW, 11/2/2020 on the orientation of the National Energy Development Strategy of Vietnam to 2030, with a vision to 2045



### III. Current status of policies and laws on economical and Efficient Use of Energy in Vietnam

#### 2. Advantage:

- Existing policies and legal regulations are basically in line with current state of energy management and use in Vietnam and trends in the region and the world.
- Facilitate the synchronous deployment of energy efficiency and conservation activities nationwide.
- Removing many barriers, supporting to promote activities on economical and efficient use of Energy nationwide;
- Create an open corridor for cooperation plans with international organizations and related programs of governments.



# III. Current status of policies and laws on economical and Efficient Use of Energy in Vietnam



## 3. Some difficulties and limitations

- The implementation of the current regulations on economical and efficient use of Energy is not strict: The awareness of the community and enterprises is still limited; The responsibility is not high, both on the management side (*the coordination or proactively by ministries, branches, central-local authorities or between local agencies and organizations*) and the management side (*enterprises*);
- Lack of support mechanisms for enterprises to invest in replacing outdated technology with high efficiency and energy saving technology lines; Enterprises have no capital or cannot access to ODA loans for saving energy projects; Electricity prices and energy prices are low, not encouraging enterprises to invest in energy saving solutions and technologies;
- After the VNEEP 1 & 2 program finished in 2015, activities on SDNL&TK&HQ (period 2015 - 2019) in localities had difficulty in counterpart fund, some localities did not allocate funds for SDNL&TK&HQ activities.
- Decree 21/2011 and a numbers of related legal documents still have many shortcomings and need to be revised and adjusted accordingly.





### III. Current status of policies and laws on economical and Efficient Use of Energy in Vietnam

#### 4. Recommendations:

- Complete the system of legal documents in the direction of increasing compliance and penalties for violations, adding or proposing new policy provisions that are no longer relevant or cover new developments (e.g. ESCO , technology measures...);
- Perform synchronous financial policy and preferential policies necessary to promote the development of activities on economical and efficient use of energy, attracting investment in this field;
- Research and implement appropriate financial mechanisms to attract maximum resources from different economic sectors, especially the private sector to be able to promote the energy efficiency component to have similar breakthroughs to the FIT pricing mechanism for renewable energy
- Consider by industry, transportation and buildings are often slow compared to the industry in implementation of energy saving programs, **it is necessary to integrate energy efficiency technologies in transport and buildings into energy/electricity development planning**, for example electric car, HQNL building, green building, ...



## III. Current status of policies and laws on economical and Efficient Use of Energy in Vietnam

### 4. Recommendation:

- Further strengthening the responsibilities and roles of ministries and localities:
  - + In the field of management assigned:
  - + In In coordination among ministries (MOIT, MOC, MOT, MPI, MOF, MOST, MARD ...) and ministries with provinces and cities;
  - + Coordination among management agencies at provincial and city levels;
  - + Strengthening the role of the national focal point of the Ministry of Industry and Trade.
- Implementing VNEEP3 program on a national scale, focusing on activities such as: Capacity building for central and local agencies; Compliance/enforcement of laws and regulations/standards; Promote and encourage the private sector to invest and seek financial resources from international partners; **Improve energy prices and identify appropriate financial incentives (CO2 tax, subsidy, green finance, ESCO, HQNL fund, etc.); Expand the program of Energy Label, Green Building, apply energy efficiency standards in Industry and Transport, etc.**





Thank you!



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