



**PROMOTION OF HIGHER EFFICIENCY
ROOM AIR CONDITIONERS IN MYANMAR:
NATIONAL POLICY ROADMAP
FOR HARMONIZATION OF ENERGY
PERFORMANCE STANDARD
FOR AIR CONDITIONERS**

Endorsed by



DECEMBER 2016

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-

Contact person

Pierre Cazelles

Director – Partnerships Asia
International Copper Association China
Email: pierre.cazelles@copperalliance.asia

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Technical Advisor



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Promotion of higher efficiency room air conditioners National Policy Roadmap for Harmonization of Energy Performance Standard for Air Conditioners

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I. BACKGROUND

The **Regional Policy Roadmap to harmonize air conditioning standards in ASEAN countries by 2020**, was endorsed by the 33rd ASEAN Ministers on Energy Meeting in a Joint Ministerial Statement “Powering ASEAN towards a Greener Community” on 7 October 2015 in Kuala Lumpur, Malaysia.¹

The overall objective of the Regional Policy Roadmap is to mitigate energy demand and greenhouse gas emissions of the countries in the region by pushing to increase the market share of energy efficient air conditioners. In that regards, the Regional Policy Roadmap is in line with the aspirational goal of reducing energy intensity in ASEAN by 20% by 2020 as a medium-term target, and 30% by 2025 as a long-term target (based on the 2005 levels) stated in the ASEAN Plan of Action for Energy Cooperation (APAEC) 2016-2025.² Specifically, the APAEC within its Programme Area No.4 on Energy Efficiency and Conservation stipulates an outcome-based strategy aimed at “Harmonization and Promotion of Energy Efficiency Standards and Labelling on various kinds of energy-related products”, with targeted products listed as air-conditioning and lighting.

This National Roadmap has been developed to support and guide country-level actions with the broad objective to implement the recommendations of the Regional Policy Roadmap aimed at facilitating market transformation towards more energy efficient air conditioners.

To this end, the Regional Policy Roadmap sets the following targets for the ASEAN region:

1. Minimum Energy Performance Standards

- Adopt technology neutral and mandatory MEPS at minimum EER 2.9W/W and CSPF 3.08 W/W for all air conditioners below 3.52kW by 2020. Review of MEPS every 5 years.

2. Testing and evaluation methods

- Adopt ISO 5151-2010 by 2016 as a uniform testing standard for air conditioners. Plan for future revisions of ISO 5151-2010.
- Evaluate and report both Energy Efficiency Ratio (EER) and Cooling Seasonal Performance Factor (CSPF). Consider adoption of the CSPF method as a uniform testing standard using ISO 16358 by 2020. Consider transition to CSPF as common metrics for fixed-speed and inverter units.

¹ Clause 10, Joint Ministerial Statement of the 33rd ASEAN Ministers on Energy Meeting, 7 October 2015, Kuala Lumpur, Malaysia: <http://asean.org/wp-content/uploads/images/2015/October/statement-and-communique/JMS%2033rd%20AMEM%20-%20Final2.pdf>

² <http://www.aseanenergy.org/resources/asean-plan-of-action-for-energy-cooperation-apaec-2016-2025/>



3. Testing infrastructure and mutual recognition agreements

- Harmonize certification and accreditation for testing labs (five ASEAN nations already follow ISO/IEC 17025).
- Establish framework for round robin testing and evaluation process for testing facilities by 2020 (capacity building, improvement and further alignment of testing procedures).
- Develop Mutual Recognition Agreements on recognition of testing standards and testing results reports for air conditioners.

4. Monitoring, verification and enforcement (MV&E)

- Establish or strengthen an efficient national system for MV&E.
- Establish coordinated regional monitoring, reporting and verification regime in ASEAN.
- Set up Regional Product Database as a tool to support exchange of product information and non-compliance alerts, and to coordinate verification activities.

II. NATIONAL DEVELOPMENT POLICY FRAMEWORK AND RATIONALE FOR THE NATIONAL ROADMAP

Establishment of the national standards for energy performance for electrical appliances, and for air conditioners specifically, is an important strategy to mitigate energy consumption in the country that aims to ensure economic growth and improvement of the quality of life, at facilitating market transformation towards more energy efficient air conditioners.

1. Overall development policy framework:

The **National Comprehensive Development Plan (2011-30)** (NCDP) is at the core of Myanmar's long-term development planning process. In line with the NCDP, the present roadmap will support prosperity by helping reduce energy losses and reduce social and environmental costs associated with appliances use. The roadmap further supports the adoption of best available technologies, thus contributing to Myanmar's integration into the global economy.

2. Specific policy framework for environment and climate change:

The 1994 National Environment Policy aims "to establish sound environment policies, utilization of water, land, forests, mineral, marine resources and other natural resources in order to conserve the environment and prevent its degradation". Following on this policy, the Environmental Conservation Law was enacted on 30 March 2012 with the view to "enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially"³. Consistent with the 1994 policy and the 2012 law, the National Policy Roadmap for Harmonization of Energy Performance Standard for Air Conditioners will help to improve electricity consumption from households. This improvement will in turn have positive impacts on environment conservation and resources preservation.

³ Sustainability Roadmap for Myanmar (Environment Perspective). Presentation by Dr. San Oo, Director, Environmental Conservation Department. 20 January 2015.



3. Development rationale for the national roadmap

Currently the per capita electricity consumption in Myanmar is estimated at the level of 180 kWh per year. But as the living standards in Myanmar improve, and as the country sets further objectives to improve incomes and quality of life of the population, demand for electrical appliances and electricity is rapidly increasing. The residential and commercial sectors (the latter includes public sector) are the 2nd and the 3rd largest consumers of electricity in the country – 32% and 20% of the total electricity use in 2013 respectively. Electricity consumption by the residential and commercial sectors already saw 2- and 3-fold increase over the period of time from 2000 till 2013.⁴ Additionally, the current electrification rate of around 34% and the existing plans to achieve the electrification rate of 87% by 2030⁵ indicate that the demand for electricity in the residential sector will increase significantly in the coming years.⁶ Moreover, the forecasted growing use of appliances will increase the load on the existing power distribution infrastructure with the risk to impact the reliability of energy services provision.

Almost 71% of electricity power generation comes from hydropower and 22% is produced with natural gas.⁷ Both natural gas and electricity are important tradable goods, which are exported to the neighboring countries for foreign exchange earnings. There are plans to maintain and increase exports of electricity and natural gas, which makes domestic electricity demand management critical to the national economic development.⁸ Also, the significant reliance on hydropower for power generation makes electricity supply less reliable during the dry season.

Air conditioners in general are characterized by high level of energy consumption. Currently their use in Myanmar is limited, but given the predominant climate conditions in the country and the increasing demand for electrical appliances, their use is likely to increase in the coming years. As of now, the use of air conditioners is mostly concentrated in the cities. The primary users of air conditioners are commercial and government sectors, with the residential use also gradually increasing.

Myanmar does not have domestic manufacturers of air conditioners. All the air conditioners currently sold in Myanmar are imported from outside: China (50%), Singapore (22%), Thailand (16%), Japan (0.3%), India (0.1%).⁹ Given that an air conditioner is an appliance that has high price and long life-expectancy, allowing imports of air conditioners with poor energy performance will lock-in the resulting higher electricity demand for years to come.

III. NATIONAL POLICIES ON ENERGY, ENERGY EFFICIENCY AND CONSERVATION

In the area of energy, energy efficiency and conservation, there are a number of policies that are currently in place or in the process of development and adoption. The below table indicates how this National Roadmap fits within their framework and contributes to the achievement of their objectives:

⁴ Energy Planning Department, Ministry of Energy.

⁵ Myanmar Energy Master Plan – Myanmar Electricity Master Plan – Myanmar Electrification Plan. January 2016.

⁶ National Energy Policy (2014)

⁷ Energy Planning Department, Ministry of Energy.

⁸ National Energy Efficiency and Conservation Policy, Strategy and Roadmap for Myanmar (2016)

⁹ EECD, Ministry of Industry.



1. Coherence of the NRM with Myanmar energy policy framework

Existing National Policies		National Roadmap
Name of the policy	Contents of the policy	Specific relevance of the roadmap
The National Energy Policy (2014)	<p>An overarching national policy which provides the framework for energy development and planning in Myanmar.</p> <p>The rationale for the energy policy notably includes to «<i>Reduce energy intensity by means of energy efficiency and conservation measures so that excessive energy requirement is decoupled from GDP growth</i>»</p> <p>A specific policy under Chapter 3, Section 21 (a: Oil and Gas sector) parag. (3) is «<i>to promote energy efficiency and conservation</i>» in order to (3.1) «<i>minimize the impact of energy use on environment and to reduce wastage in energy use</i>»</p> <p>Another specific policy under Chapter 3, Section 21 (f: Renewable Energy Sector) parag. (6) is to «<i>promote energy efficiency & conservation and quality standardization activities</i>», with two specific work programs:</p> <ul style="list-style-type: none"> ■ To cooperate and coordinate with other relevant Ministries to draw up relevant laws, rules and regulations for the energy efficiency and conservation; and ■ To coordinate with other relevant Ministries in drawing up specification and standardization corresponding to National and ASEAN standard 	<p>The NRM aims at reducing energy intensity specifically for air conditioners – it will contribute to decouple electricity consumption from increased use of air conditioners due to economic growth</p> <p>The NRM promotes efficient electricity consumption thus helping minimize water use and GHG emissions impacts of electricity consumption, and addressing wastage of electrical energy use</p> <p>The NRM promotes energy efficiency conservation by supporting the alignment of Myanmar's standards with regional ASEAN ones through cooperation and coordination between the MoE, Mol, and other relevant ministries</p>
The National Energy Policy (2014) – cont.	<p>Chapter 3, Section 21, (g) is entirely dedicated to EE&C with specific policies on:</p> <ul style="list-style-type: none"> - (1) awareness raising and capacity building - (2) prescription of legal framework (laws, rules, etc.) - (4) exchange of experience with international organizations - (5) formulation of funding mechanisms <p>Besides, under Chapter 7, policy 6, stated objective is to: «<i>implement on a priority basis the energy efficiency and conservation program in accordance with ASEAN targets</i>» with a specific focus of the work program to «<i>implement energy efficiency and conservation (EE & C) programs in industrial, commercial and household energy and electrification systems</i>»</p>	<p>The NRM includes provisions for:</p> <ol style="list-style-type: none"> (1) public awareness raising (campaigns) (2) enhancement of legal framework (preparation of laws, rules, etc.) (3) exchange of experience with ASEAN organizations (c.f. MRAs) (4) creation of funding mechanisms (EE&C fund, incentives, etc.) <p>The NRM provides a planning program for rationalizing electricity consumption notably in the household and commercial sectors (room air conditioners)</p>

Coherence of the NRM with Myanmar energy policy framework (continued)

Existing National Policies		National Roadmap
Name of the policy	Contents of the policy	Specific relevance of the roadmap
<p>The Myanmar Energy Master Plan (approved 08 Jan. 2016)</p> <p>National Electricity Master Plan (approved 08 Jan. 2016)</p> <p>National Electrification Plan (approved 08 Jan. 2016)</p>	<p>Aim to increase electrification access ratio from 34% in 2014 to 87% in 2030 while firewood consumption is expected to be maintained at 17 million tons per year over the same period (i.e. higher use of electricity by households)¹⁰</p>	<p>The NRM will allow to reduce the effects associated with increased electricity consumption (GHG emissions, and resource use for power generation)</p>
<p>The National Energy Efficiency and Conservation Policy, Strategy and Roadmap for Myanmar (2016)</p>	<p>Objectives: To reduce the national electricity demand by 12% in 2020 compared to the baseline demand in 2012, and to reduce the national CO2 emissions by 78,690 tons in 2020.</p> <p>Outlines activities in each of the priority sectors. Targets air conditioners among other appliances. Stipulates development of Minimum Energy Performance Standards (MEPS), Energy Labeling Schemes and the appropriate MV&E system with the purpose to increase the share of energy efficient appliances in the market. In that it suggests to consider the experience and the trends that exist in the region.</p> <p>Stipulates development of relevant regulations and provisions, as well as the setup of the appropriate institutional framework to support implementation of the National EE&C Policy.</p> <p>The roadmap of the EE&C Policy, Strategy and Roadmap aims to phase out inefficient appliances in 2020</p>	<p>The National Roadmap aims at facilitating electricity demand mitigation through efforts to increase the share of energy efficient air conditioners in the domestic market.</p> <p>Stipulates measures to adopt and effectively implement MEPS for air conditioners, including measures to support compliance, MV&E, consumer awareness (including, labeling) and market pull (supporting policies, such as government procurement and incentives to the commercial sector). Is in accordance with the ASEAN Regional Policy Roadmap.</p> <p>Can build upon and benefit from the institutional arrangements and distribution of functions established in the National EE&C Policy, Strategy and Roadmap for Myanmar.</p> <p>The proposed NRM for air conditioners aims at voluntary MEPS until 2020 and compulsory MEPS from 2020 onwards</p>

¹⁰ Myanmar Energy Master Plan. Presentation by Jim Liston, Principal Energy Specialist, Nay PyiTaw Resident Mission Asian Development Bank. 9 March 2016.

2. Energy rationale for the national roadmap

The national policies above reflect that there is clear vision at the national level of the importance and the potential benefits of pursuing measures on energy efficiency and conservation. They establish a general supportive policy and institutional framework for taking these measures further into the implementation stage. However, the regulatory framework in Myanmar is still characterized by the lack of standards and regulations on energy performance, labeling requirements for the appliances and any other regulatory mechanisms to enforce compliance. Development of some of these regulations is in general terms stipulated within the above-mentioned policy documents.

There are no domestic state-owned or third-party testing laboratories in the country to check the energy performance of air conditioners, and there are no unilateral or multilateral (mutual recognition agreements) provisions for recognition of energy performances testing results from the accredited laboratories in the region.

All the air conditioners available in Myanmar are imported. However, countries that supply air conditioners to the domestic market already have established energy performance standards for air conditioners and are continuing to review them towards stricter requirements, notably through the ongoing regional effort to harmonize standards for testing methods (ISO 5151 and ISO 16358) for air conditioners in ASEAN, as well as the objective of increasing MEPS (Regional Policy Roadmap). As there are no domestic energy performance standards and import regulations in Myanmar for air conditioners, this leaves the domestic market vulnerable to imports of air conditioners that are within the lower range of energy performance. Given that an air conditioner is an appliance that has high price and long life-expectancy, allowing imports of air conditioners with poor energy performance will lock-in the resulting higher electricity demand for years to come.

The National Roadmap proposes policy measures in accordance with the specific national context as described above, and the challenges it creates. It is also in line with the priorities set within the existing EE&C policy framework, including the National Energy Efficiency and Conservation Policy, Strategy and Roadmap for Myanmar, albeit focusing specifically on the air conditioners.

IV. DEFINITION

The National Roadmap has been developed to support and guide country-level actions with the broad objective to implement the recommendations of *the Regional Policy Roadmap to harmonize air conditioners standards in ASEAN countries by 2020*, which is aimed at facilitating market transformation towards more energy efficient air conditioners. It targets all air conditioners (fixed-speed and inverter) with the cooling capacity of and below 3.52kW.



V. VISION

The Vision of the National Roadmap is:

“Progressively mitigate demand for electricity and significantly increase the share of high energy performance air conditioners in Myanmar through adoption of regionally harmonized Minimum Energy Performance Standards and development of an appropriate regulatory framework for their enforcement, with the long-term goals of:

- Improving national energy security and energy export potential;
- Mitigating stress on the electricity grid from increased load of new electrical appliances and improving reliability of energy services to the consumers;
- Mitigating stress on resources used for power generation (notably water)
- Protecting domestic market from imports of air conditioners with poor energy performance;
- Increasing comfort and reducing electricity bills for the users of air conditioners.”

VI. GOALS AND TARGETS

In line with the Vision above and with the goals set in the Regional Policy Roadmap, while taking into account the national context and development priorities set in the national policies, **the National Roadmap sets the following targets and goals:**

1. Minimum Energy Performance Standards

- By 2020, adopt regionally harmonized technology neutral and mandatory MEPS at minimum EER 2.9W/W and CSPF 3.08 W/W for all air conditioners below 3.52kW by 2020
- Review of MEPS every 5 years.

2. Effective compliance mechanism

Adoption of the testing and evaluation methods:

- By end of 2017 adopt ISO 5151-2010 as a uniform testing standard for air conditioners, and adjust import regulations accordingly.
- By 2020, adopt CSPF method of ISO 16358 as a uniform testing standard for all fixed-speed and inverter units, and adjust import regulations accordingly.

Recognition of the testing results from accredited laboratories in the third countries:

- By 2018, adopt provisions on recognizing testing results from laboratories certified and accredited based on ISO/IEC 17025.
- Participate in development and adoption of the regional Mutual Recognition Agreement on recognition of energy performance testing standards and testing results reports for air conditioners from properly certified and accredited testing laboratories.

3. Monitoring, verification and enforcement (MV&E)

- By 2020, establish and operationalize an efficient national system for MV&E.
- Participate in establishing a coordinated regional monitoring, reporting and verification regime in ASEAN.



- Participate in the establishment of a Regional Product Database as a tool to support exchange of product information and non-compliance alerts, and to coordinate verification activities.

VII. ACTIONS AND MEASURES

The overall responsibility of the National Roadmap implementation lies with the Ministry of Industry, and specifically with its Energy Efficiency and Conservation Division (EECD/MOI), which is part of the Energy Management Committee and the Energy Development Committee responsible for energy policy formulation in Myanmar. Other Ministries and entities that will support the implementation of the National Roadmap within the scope identified by their mandates and other relevant policies are the Ministry of Electric Power, the Ministry of Energy, the Ministry of Science and Technology, the Ministry of Electricity and Energy, Ministry of Education, Ministry of Commerce and Ministry of Finance.

Before the core implementation of the roadmap can start, preparatory activities are recommended to facilitate the actual implementation of the roadmap. These preparatory activities are listed below:

Preparatory activities:

Action	Implementing agency	Timeframe
Establish a Steering Committee / Policy Working Group and Secretariat	- EECD / Ministry of Industry (Lead) - Ministry of Commerce - Customs Department (under Min. of Finance) - Standardization Committee under former Min. of Science and Technology (newly Min. of Education)	End 2016
Developing an implementation plan – Develop national EE&C program		Early 2017
Setting up coordination mechanisms (institutional arrangements)		Mid 2017
Establish Working Group on information / database system development		Mid 2017
Create / Improve template format for data collection (as needed)		2017 onwards
Formalize institutional mechanisms for regular data / market info collection and analysis		2017

Following the preparatory activities listed above, the actual implementation of the National Policy Roadmap for Harmonization of Energy Performance Standard for Air Conditioners will take place. In line with the goals and targets of section VI, the recommended strategy builds upon four pillars as follows:

- Minimum Energy Performance Standards
- Effective compliance mechanism
- Monitoring, verification and enforcement (MV&E)

In addition, recommendations for supporting policies to promote products with better energy performance are added in order to ensure the embedding of the roadmap into relevant national legal frameworks.



1. Minimum Energy Performance Standards

National Roadmap Targets:

- By 2020, adopt regionally harmonized technology neutral and mandatory MEPS at minimum EER 2.9W/W and CSPF 3.08 W/W for all air conditioners below 3.52kW by 2020.
- Review of MEPS every 5 years.

Action	Implementing agency	Timeframe
Develop relevant regulations requiring all air conditioners imported to and sold in Myanmar to be compliant with the minimum energy performance standard of EER 2.9W/W and CSPF 3.08 W/W for all air conditioners below 3.52kW by 2020.	- EECD / Ministry of Industry (Lead) - Ministry of Commerce - Customs department (Min. of Finance) - Standardization Committee (Ministry of Education)	Draft by end 2017, official adoption by 2018-2019 and full enforcement by 2020
Develop relevant regulations requiring all air conditioners imported to and sold in Myanmar to include information on their technical and energy performance characteristics on the packaging and within the relevant product documentation.		
Develop and implement energy performance labeling programme Steps: 1. definition of labels levels and number, EE specification of each level 2. define timeline for switching from voluntary to compulsory labeling 3. Publish	Same as above	Draft by 2018, official adoption by 2019 (voluntary) and full enforcement by 2020 (mandatory)
Collect regular statistics on air conditioners imported to and sold in Myanmar (countries of origin and manufacturers, importer and distributor information, technical and energy performance characteristics of air conditioners on the market, imports and sales trends, disaggregation by types of consumers (households, public sector, businesses), air conditioner prices monitoring); Implement regular analysis of this information for inputs into the National Roadmap implementation and revision.	- Ministry of Industry: prepare format - Ministry of commerce: product registration	From 2018 and beyond
Schedule review and adjustment of MEPS for air conditioners every 5 years based on the analysis of the statistical information collected and the regional harmonization trends in ASEAN.	- EECD / Ministry of Industry (Lead) - Ministry of Commerce - Customs department (Min. of Finance) - Standardization Committee under former Min. of Science and Technology (newly Min. of Education)	From 2020 and beyond

2. Effective compliance mechanism

National Roadmap Targets:

Adoption of the testing and evaluation methods:

- By end of 2017 adopt ISO 5151-2010 as a uniform testing standard for air conditioners, and adjust import regulations accordingly.
- By 2020, adopt CSPF method of ISO 16358 as a uniform testing standard for all fixed-speed and inverter units, and adjust import regulations accordingly.

Recognition of the testing results from accredited laboratories in the third countries:

- By 2018, adopt provisions on recognizing testing results from laboratories certified and accredited based on ISO/IEC 17025.
- Participate in development and adoption of the regional Mutual Recognition Agreement on recognition of energy performance testing standards and testing results reports for air conditioners from properly certified and accredited testing laboratories.

While establishment of an accredited testing laboratory in the country requires high investment, the country can adopt policies that will allow benefiting from the testing lab infrastructure that already exists in the region through recognition of the testing results from other countries and through participation in the regional Mutual Recognition Agreements. Efforts are already underway to establish a multilateral MRA in ASEAN region. However, since it may take some time, the country will benefit from adopting provisions on unilaterally recognizing testing results from certified and accredited laboratories in the third countries (suppliers of air conditioners) as the initial step to ensure effective compliance mechanism.

Some key activities recommended for developing an effective compliance mechanism are presented in the table on next page.



Recommended actions for the establishment of an effective compliance mechanism for air conditioners in Myanmar

Action	Implementing agency	Timeframe
Develop relevant regulations requiring all air conditioners imported to and sold in Myanmar to be tested using ISO 5151-2010; require all imported air conditioners to carry documentation on test results from laboratories certified and accredited based on ISO/IEC 17025.	- EECD / Ministry of Industry (Lead) - Ministry of Commerce - Customs Department (under Ministry. of Finance - Standardization Committee (Ministry of Education)	Draft by end of 2017 and full enforcement by 2018
Develop relevant regulations requiring all air conditioners imported to and sold in Myanmar to be tested using CSPF method of ISO 16358 (conditional on the trend in regional harmonization of MEPS in ASEAN); require all imported air conditioners to carry documentation on test results from laboratories certified and accredited based on ISO/IEC 17025.		Draft by end of 2018 and full enforcement by 2020
Develop relevant regulations for the recognition of test results from laboratories certified and accredited based on ISO/IEC 17025 (unilateral measure).		Draft by end of 2017 and full enforcement by 2018
Participate in development and adoption of the regional Mutual Recognition Agreement on recognition of energy performance testing standards and testing results reports for air conditioners from properly certified and accredited testing laboratories (multilateral process conditional on the trend in regional cooperation in ASEAN)		Throughout the regional consultation process in ASEAN
Establish national testing laboratory certified and accredited / capacitate existing labs based on ISO/IEC 17025 to test air conditioners imported to and sold in Myanmar provide necessary training to the testing lab personnel, including through participation in the regional round robin testing exercises.		- Existing National labs - EECD – MOI (preparation of training curriculum, recruitment of trainers)

3. Monitoring, verification and enforcement

National Roadmap Targets:

- By 2020, establish and operationalize an efficient national system for monitoring, verification and evaluation.
- Participate in establishing a coordinated regional monitoring, reporting and verification regime in ASEAN.
- Participate in the establishment of a Regional Product Database as a tool to support exchange of product information and non-compliance alerts, and to coordinate verification activities.



Action	Implementing agency	Timeframe
Develop procedures for customs personnel to monitor compliance of imported air conditioners with the import regulations for air conditioners (checking of product information, labels, accompanying testing results, contacting distributors and manufacturers for clarifications); Train customs personnel and implement monitoring	-Ministry of Commerce - Customs department (under Ministry of Finance - EECD / Ministry of Industry	- Guidelines Draft: 2017 -Guidelines final: by end of 2018 - Training throughout: 2018-2019 and full enforcement by 2020
Develop national product registry and regulations on mandatory registration of the products by the importers ; Incorporate into it a module for open-access information provision to the business community and consumers both on the latest developments in the regulations and procedures, and on cases of non-appliance and implemented enforcement and liability measures. Note: needed registrations: > product registration with Ministry of Commerce >Company reg. with Directorate of Investment and Company Administration / Ministry of Finance >Import tax: Customs Department	-MOC -EECD - MOI -Customs Dept / Mo Finance	Consultations with relevant Ministries: 2016 – 2017 (c.f. preparatory activities) -Issue final template / format on product info: 2017 Draft procedures by end of 2018 and full enforcement by 2020
Develop procedures and allocate staff for monitoring (random spot-checking) of products on the market to ensure that they comply with the regulations above (checking of product information, labels, accompanying testing results, contacting distributors and manufacturers for clarifications); Train staff and implement monitoring.	-Standardization Committee under former Min. of Science and Technology (newly Min. of Education) -EECD / MOI	-consultations between EECD/MoI and MOST / Mo Education (c.f. preparatory activities) -Guidelines / procedures issuance -enforcement: 2020
Implement customer reporting system in case of perceived non-compliance with the technical characteristics stated in the product documentation and labels.	-MoC -Customs Department -Others (to be identified)	-Consultations with MoC: 2016-2017 (c.f. preparatory activities) -Draft by end if 2018 and full enforcement by 2020

Recommended monitoring, verification and enforcement actions (continued)

Action	Implementing agency	Timeframe
Develop enforcement mechanism and liability measures for cases where non-compliance has been established either through the customs or market monitoring procedures.	-Customs Department -Ministry of Commerce -EECD	-Consultations: 2016-2017 (c.f. preparatory activities) -Draft by end if 2018 and full enforcement by 2020



Action	Implementing agency	Timeframe
Participate in establishing a coordinated regional monitoring, reporting and verification regime in ASEAN (conditional on the trend in regional cooperation in ASEAN)	-Customs Department -Ministry of Commerce -EECD / MOI -Standardization Committee	Throughout the regional consultation process in ASEAN and full operationalization by 2020
Participate in the establishment of a Regional Product Database as a tool to support exchange of product information and non-compliance alerts, and to coordinate verification activities (conditional on the trend in regional cooperation in ASEAN)	-Customs Department -Ministry of Commerce -EECD/MOI	Throughout the regional consultation process in ASEAN and full operationalization by 2020

4. Supporting policies to promote products with better energy performance

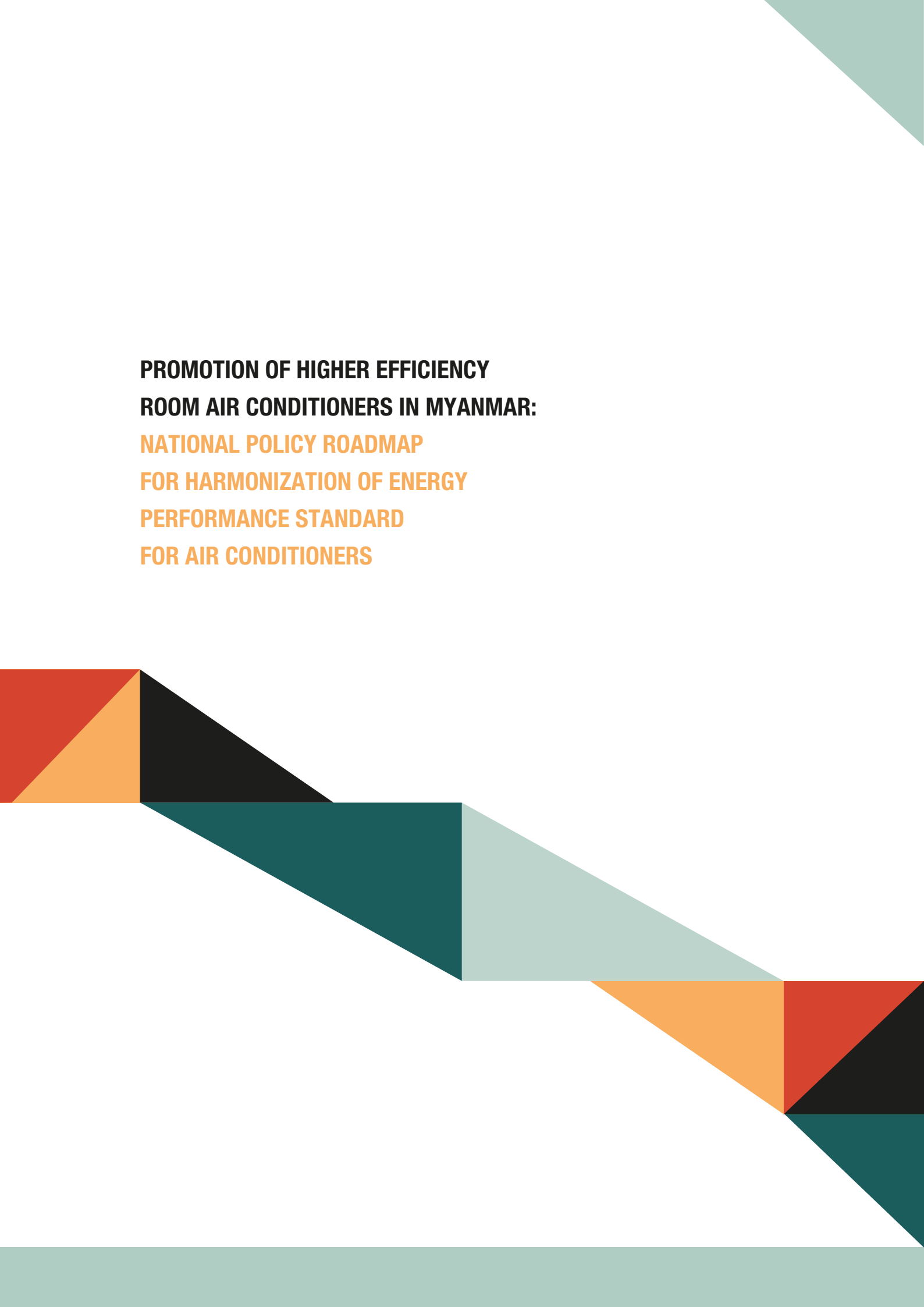
- Embedding of the roadmap into relevant legal frameworks:

Action	Implementing agency	Time frame
Recommend amendment of the National Energy Efficiency and Conservation Policy, Strategy and Roadmap for Myanmar by specifically referring to the present NRM for air conditioners	EECD - MOI	From 2019 onwards

VIII. INSTITUTIONAL AND ORGANIZATIONAL ARRANGEMENTS

Action	Implementing agency	Timeframe
Review the mandates of the relevant government entities and make revisions to incorporate their functions in implementation of the National Roadmap.	-Lead: EECD – MOI -Other ministries for consultation	By early 2017
Estimate budget and identify sources of funding allocation	-Lead: EECD – MOI -Other ministries for consultation	By 2017
Develop procedures and allocate staff for monitoring and evaluation of the National Roadmap implementation and for the regular revisions and adjustments of the National Roadmap.	-Lead: EECD – MOI -Other ministries for consultation	From 2017 and beyond





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