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REPLICABLE NAMA CONCEPT – PROMOTING THE USE OF ENERGY EFFICIENT MOTORS IN INDUSTRY

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INTRODUCTION

NAMAs are a relatively new concept under the international climate policy framework to channel finance, technology and capacity building support to developing countries to drive climate change mitigation. Many countries are currently engaged in the development of NAMA proposals and readiness activities, and there is an expectation that NAMAs will become one of the cornerstones of the international climate finance architecture, dedicated to reducing greenhouse gas (GHG) emissions and fostering development.

Currently the development of NAMA concepts and proposals does not follow common approaches or methodologies. NAMA proposals are being developed in a range of different sectors by countries individually. There is an increasing exchange of knowledge and experience between countries and practitioners which leads to some convergence, however, generally the bottom-up process has resulted in little replication so far.

At the same time it is clear that countries face similar issues and many policy interventions and technologies are relevant for many countries. So there is likely to be value in developing common approaches for NAMAs which can be replicated in different countries, adapted to specific local circumstances.

Efforts to increase industrial energy efficiency and the use of efficient motor systems face similar barriers across different countries. Equally (policy) interventions to remove barriers to energy efficiency are broadly similar in many countries, albeit the design of instruments may be different. Hence the sector is well suited for the development of a replicable NAMA concept. Any replicable concept to be developed though will need to allow for sufficient flexibility to adapt it to the specific local context.

STRUCTURE OF THIS DOCUMENT

The document is set out in two parts, a background section and a NAMA concept section. The background section presents some general information on energy efficient motors and key barriers to industrial energy efficiency as well as potential policy interventions and measures. The barriers and catalogue of measures provide the basis for the development of the NAMA concept as, generally speaking, NAMAs remove barriers to mitigation by creating effective programmes of measures to address them

The NAMA concept section presents key information on the proposed structure and design of the NAMA itself. The concept is relatively broad, outlining the key aspects of the NAMA. This will provide the starting point for any country interested to follow this approach and could be the backbone of a future NAMA proposal. To get there, a detailed country assessment and stakeholder consultation process should follow to allow for the broad concept to be adapted to the individual national context.

BACKGROUND

Electric motors present a compelling opportunity for manufacturers and industry to reduce GHG emissions while potentially achieving significant savings in electricity costs. Motors consume a major share of electricity in industry and are present ubiquitously in manufacturing and industrial equipment. The International Energy Agency (IEA) estimated that electric motor driven systems (EMDS) consume around 4,488 Terawatt hours of electricity in the industrial sector, representing around 69% of the electricity consumed by the sector (Paul Waide and Conrad U. Brunner 2011). Achieving marginal improvements in the efficiency of motors can thus yield significant reductions in electricity consumption and its associated GHG emissions. The fact that energy costs can be reduced while improving the GHG footprint of industry in a cost-efficient manner presents a compelling reason to focus on energy efficient motors (EEMs) as a mitigation option for the sector.

TABLE 1 ELECTRICITY CONSUMPTION OF MOTORS IN VARIOUS SECTORS (SOURCE: PAUL WAIDE AND CONRAD U. BRUNNER 2011)

Sector	Electricity Consumption	% of all EMDS electricity	% of sector electricity
Industrial	4 488 TWh/year	64%	69%
Commercial	1 412 TWh/year	20%	38%
Residential	948 TWh/year	13%	22%
Transport and agriculture	260 TWh/year	3%	39%

In order to realise the energy savings potential three main options have been identified (ibid, 2011):

- Using energy efficient motors that are properly sized for purpose
- Using adjustable speed drives where appropriate.
- Optimising the complete system including motors, pipes, ducts, efficient gears, transmissions and efficient end use equipment (e.g. fans, pumps, handling systems etc.) to reduce energy loss in the system

In addition to technology solutions proper energy management and monitoring as well as regular maintenance are important to realise the full savings potential.

BARRIERS TO ENERGY EFFICIENCY

The efficiency of motors has improved substantially in the last two decades. Technologies have improved greatly and significant mitigation opportunities are available through the wider adoption of existing technologies. Countries wishing to incentivize EEMs through a NAMA can start by evaluating existing barriers to understand the factors that prevent wider adoption of EEMs and what policy interventions and activities could be used to lift these barriers.

Table 2 shows the common barriers observed. These are categorized as financial barriers, regulatory, knowledge and information barriers, market barriers and organisational barriers.

TABLE 2 COMMON BARRIERS TO WIDER ADOPTION OF EFFICIENT ELECTRIC MOTORS

Category	Example barriers
Financial barriers	• Higher capital costs of energy efficient equipment • Alternative investment opportunities with higher returns/ shorter paybacks • Difficult access to loans for energy efficiency investment (perceived as too small by commercial banks) • Hidden costs (e.g. additional management time)
Regulatory barriers	• Lack of policy standards and regulatory guidance • Lack of institutional skills and processes to support policy development and implementation • Lack of enforcement of regulation • Lack of international harmonisation of standards and testing
Knowledge/ information barriers	• Lack of knowledge of technology options and energy management of site operators/ company management • Lack of awareness of energy efficiency benefits and cost savings • No use of life cycle costing approaches for investment decisions
Market barriers	• Limited availability of (high quality) efficient technology option in the country (e.g. due to low demand at the wholesale level) • Inefficient equipment already integrated into systems produced by OEMs • Limited availability of skilled energy auditors, energy service companies
Organisational barriers	• Lack of energy management systems at site level • Lack of capacity of site operators/ management to focus on energy management • Corporate culture and values • Separation of energy management and investment decision processes

Potential policy interventions and measures

A range of policy interventions and measures are available to address the different barriers identified above. These include regulatory, financial, capacity building and information measures. An overview of the interventions by type and target groups is provided in Table 3 below.

TABLE 3: POLICY INTERVENTIONS AND MEASURES FOR INDUSTRIAL ENERGY EFFICIENCY

Type	Measure	Target group
Regulatory	• Minimum performance standards (MEPS)	• Site owner/ operator • Equipment manufacturer/ OEM, distributor/ importer
	• Mandatory reporting on energy performance	• Site owner/ operator
	• Energy efficiency targets (voluntary agreements or mandatory)	• Site owner/ operator • Equipment manufacturer/ OEM
Financial	• Replacement programme • Tax rebate scheme • Other investment incentive/ loan scheme	• Site owner/ operator • (commercial banks)
Capacity building	• Training programme & tools (energy management) • Energy audit programme	• Site owner/ operator • Energy services industry
Information/ Awareness	• Knowledge networks • Information campaigns • Demonstration/ pilots (best practice) • Demand side management programmes	• Site owner/ operators • Industry associations • Equipment manufacturer/ OEM • Utilities • Government

Depending on the identified barriers a set of policy interventions and measures will be selected. These will be at the heart of the NAMA.

NAMA Concept

This section presents a generic NAMA concept for industrial energy efficiency. The concept is deliberately broad. This will allow individual NAMAs to be adapted to the specific national contexts and circumstances. The NAMA concept is meant as a guide. Further analysis of barriers and consultation with national stakeholders will be required to select specific objectives and activities and to develop the concept into a fully-fledged, fundable NAMA proposal.

The structure is based on key information typically included in a NAMA proposal and requested by institutions interested in supporting/ funding NAMA implementation. Annex I also includes an annotated template which may be used by the NAMA developer (typically a government entity of a developing country) to present key information.

The information included here and in the annexed template will also provide sufficient basis to present the NAMA to the international UNFCCC NAMA Registry to seek funding for further preparation of the NAMA or for its implementation.

Objective & Scope

The objective of the NAMA is to increase energy efficiency across the industrial sector. A specific quantitative target may be defined according to specific national priorities and circumstances.

In addition the NAMA seeks to improve the competitiveness of the industrial sector by reducing operational energy costs.

The NAMA is targeted at industrial energy end-use. It covers the entire industrial sector. The target group for the NAMA are industrial manufacturing sites where motors are deployed as well as energy efficiency technology and service companies in the host country.

NAMA Components

The NAMA includes a comprehensive set of interventions and activities which are designed to address specific national barriers to energy efficiency in the industrial sector. The activities are grouped into three components: regulatory, incentives and capacity and awareness components. All three components are important to constitute a comprehensive package to stimulate energy efficiency and the use of efficient motors and motor systems across industry. Instruments on their own are unlikely to be effective and need to be combined to reinforce each other.

An overview of the NAMA concepts and its key elements is presented in Figure 3 below. The NAMA (green elements) will be linked to national policy objectives, including, for example, national energy and climate policy as well as development and specific industrial sector policy objectives. This will ensure that the NAMA is fully embedded into national policy and processes.

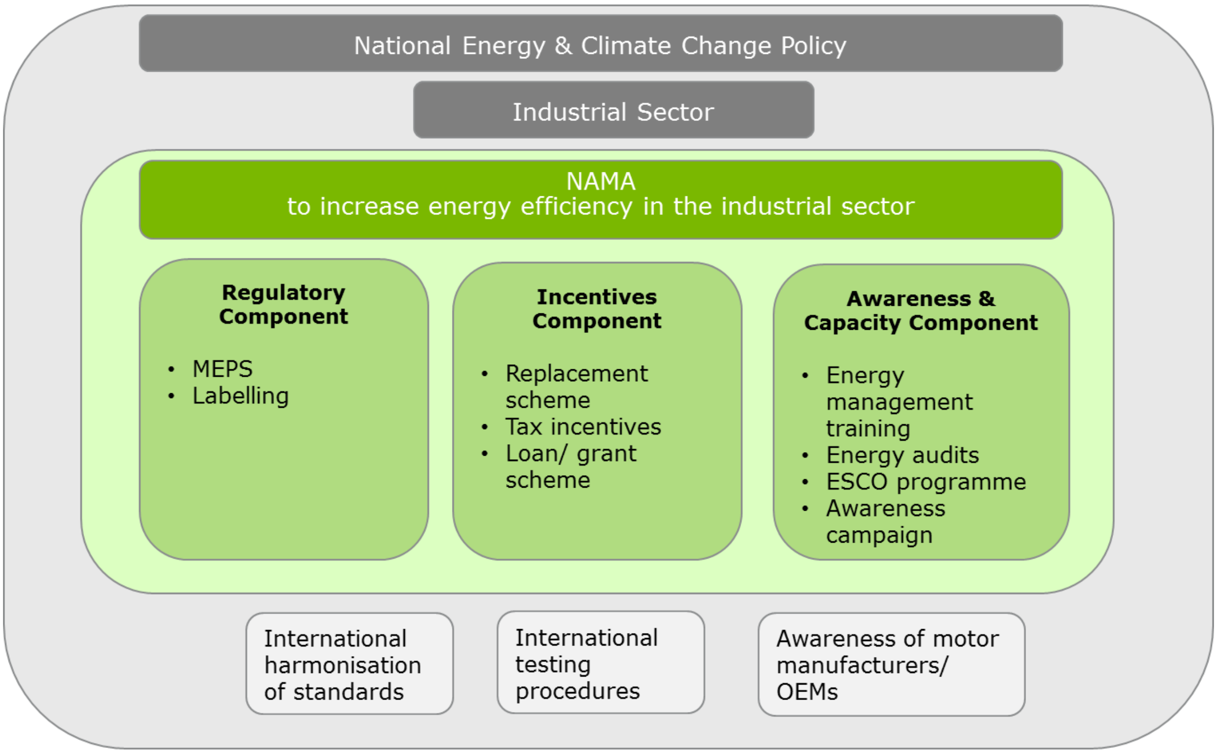

FIGURE 1: NAMA CONCEPT INDUSTRIAL ENERGY EFFICIENCY

For each country-specific NAMA a set of activities will be selected. In this sense the list of activities can be considered as a toolbox from which a specific set of measures can be selected. Each activity will also be designed according to specific local requirements. The choice of activities under each component will be based on a detailed assessment of barriers and a consideration of stakeholder needs, market structure and the institutional and political environment in the target country. Comprehensive stakeholder consultation is a good way to ensure the views of different stakeholders are taken into account and to secure the support of different stakeholder groups for future implementation of the NAMA. Stakeholders to consult include industry representatives, business sector associations, energy service providers, technology providers, government entities and the research community.

In addition to specific national activities (the NAMA components) a number of other activities are relevant. These are driven at the international level and are therefore outside the scope of the NAMA (shown here in grey). However, national policy makers and stakeholders may be able to influence and drive such initiatives further. Examples include efforts to harmonise standards at the international level, development and implementation of international testing procedures and awareness campaigns targeted at the international supply chain, ie motor manufacturers and OEMs.

In the following section, a more detailed description of each activity is provided including specific country examples of their implementation.

REGULATORY COMPONENT

Minimum energy performance standards (MEPS)	
Description	A minimum energy performance standard (MEPS) is used to specify the minimum conversion efficiency of electric motors and drives. MEPS can be used for all major classes of electric motors and can also include the motor plus the drive system in pre-packaged applications. If used properly, MEPS have been shown to be highly effective in increasing the efficiency of electric motors in the marketplace.
Types of barriers it addresses	Regulatory and market barriers
Examples	Mexico has had a MEPS for electric motors since 2002. A new standard that came into effect in 2010 specifies that the minimum energy efficiency level of new electric motors must be IE2 or higher according to International Electrotechnical Commission (IEC) classification. All motors must display a rating plate with their efficiency classification and there are penalties for failure to comply.
Special considerations	The efficiency classes of the motors and any additional categorization applied must be first defined by policymakers and industry. Domestic standards can be drafted in conjunction with manufacturers, importers and distributors. International standards such as the International Electrotechnical Commission (IEC 60034-30:2008) or the National Electrical Manufacturers Association (NEMA) standard are being increasingly adopted as they are widely known and recognized in the marketplace. Harmonisation of standards at the international level is desirable. Dialogue and partnerships with industry are very important to ensure standards can be smoothly deployed. Negotiations around ambition levels and timeframe for implementation will be an important part of this process. MEPS may be set for a range of types and sizes of motors. A phased approach may be most appropriate in some countries to ensure feasibility and stakeholder support.

Labelling	
Description	Labelling allows end users to compare the energy efficiency of motors in a transparent manner, facilitating the incorporation of energy efficiency considerations in a purchasing decision.
Types of barriers it addresses	Knowledge/information barriers
Examples	The International Electrotechnical Commission (IEC) developed an international efficiency classification, test standards and labels for electric motors. The IEC classification distinguishes four efficiency levels with the label IE1 for the least efficient motors and IE4 for the highest efficiency motors. These classes are increasingly being adopted as a basis for national labelling and MEPS schemes around the world (UNIDO 2011). See: http://www.iec.ch/etech/2012/etech_0712/ca-1.htm Labelling can also be applied to devices that include electric motors as a component such as pumps and compressors. For example, a group of pump manufacturers in Europe developed a voluntary labelling scheme for circulators used in residential and commercial heating applications in Europe. See: http://europump.net/energy-policy/ecopump
Special	Motors can be bought stand-alone or as a component in machinery and

considerations	appliances. Labelling should be targeted to the right end consumer. For MEPS as well as labelling schemes motor efficiency classes need to be defined. Many countries have done this which resulted in a diversity of national standards. International harmonisation would be important to streamline the global supply chain and motor market.

(Economic and fiscal) Incentives component

Equipment replacement scheme	
Description	Replacement schemes offer participants energy efficient equipment at no or reduced cost in return for an older less efficient equipment. Replacement schemes are common for example in the efficient lighting or vehicle sector but can also be applied to other technologies.
Types of barriers addressed	Technology costs
Examples	tbc
Special considerations	It is important to ensure that the inefficient technologies are removed from the market place to reduce the risk of a rebound effect.

Soft loan schemes	
Description	A soft loan is a loan with special terms and conditions and an interest rate that is lower than what is available commercially. Soft loans are widely used as a policy instrument to increase access to capital and lower the costs of undertaking energy efficiency measures.
Types of barriers addressed	Access to capital, technology costs
Examples	ProCredit Bank in Nicaragua launched a new “Green Credit” scheme with the aim of financing energy efficiency, renewable energy and environmental protection projects in small and medium sized enterprises (SMEs). The programme provides low interest rates, extended loan terms and access to specialized technical support. Among the various types of projects that can be financed are investments that utilize energy efficient motors in air conditioning, refrigeration and industrial processes. See: http://www.procredit.com.ni/?page_id=1234 (In Spanish)
Special considerations	Local financial institutions are important partners to consider as their involvement can help reach more customers and builds local capacities and experience in financing energy efficiency projects.

Tax incentives	
Description	A tax incentive is a special provision in the tax code that is designed to incentivize an economic activity. Tax incentives are a popular type of instrument to promote energy efficiency in all sectors of the economy and can be applied at the individual or corporate level.
Types of barriers addressed	Technology costs

Examples	Enhanced Capital Allowances (ECAs) used in the United Kingdom enable businesses to buy energy efficient equipment using a 100% rate of tax allowance in the year of purchase. Motors and drives as well as products where motors are a key component, such as air compressors, are included in the eligibility list. For further information, see: https://etl.decc.gov.uk/etl/site.html
Special considerations	Tax incentives should be designed to be transparent, predictable and easy to administrate.

Grants	
Description	A grant is an award of financial assistance provided by a government or other organization. A grant may be provided to support the purchase of energy efficient technology or to (co) finance energy audits.
Types of barriers addressed	Technology costs
Examples	The state of Washington in the United States is providing custom retrofit grants to provide funding of up to 70% for efficiency measures that include electric motors such as Heating, Ventilation and Air Conditioning Systems, variable speed drives, compressed air systems and industrial processes. See: http://www.pse.com/savingsandenergycenter/ForBusinesses/Pages/Custom-Grant-Programs.aspx
Special considerations	Grant schemes are well suited to kick start a programme or initiative. In the interest of long term sustainability an exit strategy is recommended to phase out grants over time.

Awareness and capacity building component

Energy management training	
Description	Courses and professional development programmes that train managers and operators on efficient management of energy and the opportunities to realize improvements in energy efficiency across a wide variety of processes and industries.
Types of barriers addressed	Knowledge/information barriers
Examples	The Chilean Agency for Energy Efficiency (AChEE by its initials in Spanish) launched a “Certified Energy Manager” programme with the aim to develop professional capacities in energy management in Chilean industry. The courses train professionals to diagnose and identify energy efficiency projects and conduct measurement and verification of energy savings. See: http://www.acee.cl/programa/capacitaci%C3%B3n (In Spanish)
Special considerations	Trainings can be directed at a range of different audiences and stakeholders including energy/ operations managers, professionals in the energy services industry or commercial banking agents.

ESCO programmes	
Description	Energy Service Companies (ESCOs) are special companies that operate under performance-based contracts to implement measures which reduce energy consumption and costs. ESCOs have four fundamental features: • ESCOs guarantee energy savings and/or the provision of the same level of energy service at a lower cost through the implementation of an energy efficiency project. The performance guarantee can revolve around the actual flow of energy savings from a project. • The compensation of the ESCO is directly tied to the energy savings achieved. • An ESCO typically finances, or assists in arranging financing, for the installation of the efficiency or energy project to be implemented by providing a savings guarantee. • ESCOS retain an on-going operational role in measuring and verifying the savings over the financing term. Source: (EPA 2013)
Types of barriers addressed	Knowledge/information barriers, Access to capital
Examples	In an initiative financed by the Inter-American Development bank and the Chilean Economic Development Agency (CORFO) and supported by Fundación Chile, a National Association of Energy Service Companies (ANESCO) was formed to support the development of an ESCO market in Chile and promote the ESCO business model. Today, more than 26 companies have joined the national association and are actively pursuing energy savings opportunities in all sectors of the economy, including in industry. See: http://www.anescochile.cl/?p=163 (In Spanish)
Special considerations	Industry associations are important partners in the development of NAMAs and can help align mitigation goals with industry goals to identify win-win situations.

Energy auditing schemes	
Description	Energy audits evaluate the consumption and supply of energy in a given system. They help identify reduction opportunities and discover inefficiencies and energy losses. Audits can be made mandatory (as part of regulation) or voluntary combined, for example, with subsidies.
Types of barriers addressed	Knowledge/information barriers
Examples	The Argentinean government implemented an audit scheme for the SME sector which provided part funding of energy audits supported by the Global Environment Facility (GEF). The scheme was implemented through the Industrial Union (UIA) ensuring effective access to the relevant industry sectors. http://www.uia.org.ar/eficienciaenergetica/

Special considerations	Energy audits may be combined with financial incentive schemes where audits are fully financed or co-financed (full or partial grant) leading to preferential loans. Depending on the national context capacity building measures to ensure availability of skilled auditors may be required.

Information/ Awareness campaigns	
Description	Information/awareness campaigns can be employed to raise awareness of the benefits of EEMs and influence the purchasing decisions of end users. Such a campaign can include activities such as: - Marketing and public relations initiatives - Road shows and technology demonstrations - Publishing marketing and educational materials such as support tools, brochures and industry studies. Awareness activities can be targeted at multiple audiences including energy and operation managers at the site level, executive decision makers, procurement officers, as well as decision makers throughout the supply chain (e.g. wholesalers, motor manufacturers, OEMs).
Types of barriers it addresses	Knowledge/information barriers
Examples	Motor Decisions Matter SM is an awareness campaign sponsored by electric utilities, industry trade associations, manufacturers and others in the United States. It provides support for companies interested in motor management with a vision of achieving significant energy savings in properly designed, configured, and operated motor systems. The campaign encourages: - Awareness of motor management opportunities - Demand for motor management services - Implementation of motor management practices See: http://www.motorsmatter.org/index.asp
Special considerations	none

Expected NAMA impacts

A thorough and transparent assessment of the potential impacts (positive and negative) of a NAMA is important to facilitate decision-making. Impacts of NAMAs can be grouped broadly into GHG mitigation impacts and co benefits, social, economic and other environmental benefits as shown in Figure 2 below.

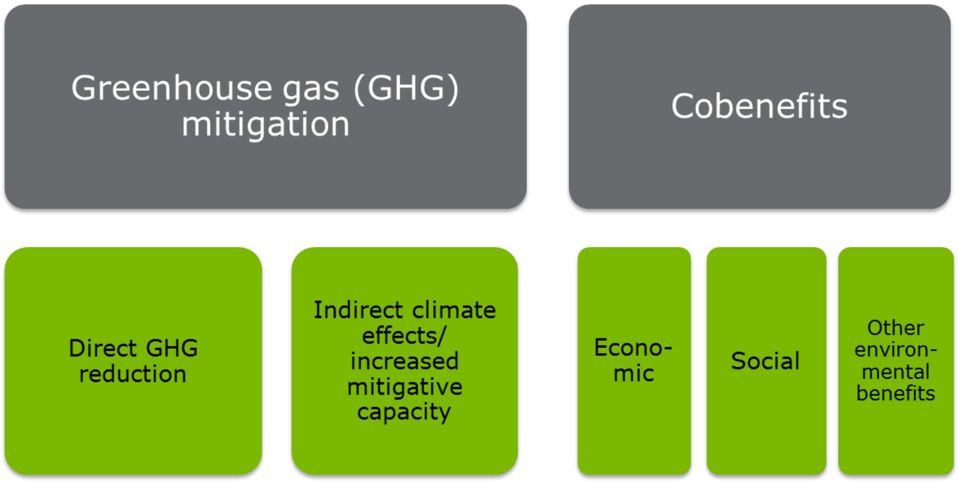

FIGURE 2: IMPACT DIMENSIONS OF NAMAS

An estimation of the impacts of the efficient motors NAMA can only be made in the country specific context. A more general description of the impact dimensions and how an estimation can be approached is provided in the following.

Direct GHG mitigation

GHG mitigation is the main objective of the NAMA and hence it is the most important impact dimension to consider. The mitigation impact includes directly measurable GHG emission reductions as well as indirect emission reductions over the longer term. For the estimation and monitoring of GHG benefits it is important to set a timeframe responding to the timeframe of the NAMA.

The NAMA increases the adoption of energy efficient motors and helps decrease electricity consumption, thus eliminating its accompanying GHG emissions. These are the direct impacts which can be estimated by developing a business-as-usual (BAU) and a mitigation scenario. The BAU scenario considers current trends in motor adoption and electricity consumption in the particular country context. The mitigation scenario forecasts new trends in motor adoption and electricity consumption if the NAMA components and activities are undertaken.

The following data can be used to construct a GHG mitigation scenario for an energy efficient motors NAMA at the *sectoral level*:

1. Annual sales, running stock of motor equipment (reference scenario)
2. Average size, efficiency, running hours, load factor of the motor stock in the sector (reference scenario) to determine electricity consumption of the sector
3. Structure of electricity generation matrix for the grid emission factor
4. Future motor efficiency and other technology-specific data such as performance parameters and average lifetime.
5. Expected technology penetration rates if activities within the NAMA are undertaken.

It has been estimated that the cost effective reduction potential is about 20 to 30% of total global electric motor demand through the use of efficient EMDS. If all countries adopted MEPS for industrial motors by 2030 around 207 Mt of CO2 emissions could be saved (Paul Waide and Conrad U. Brunner 2011).

Indirect impacts and mitigative capacity

Indirect impacts may include additional efficiency gains through the increased awareness of energy efficiency of energy managers and other site staff, as well as an increased awareness of energy efficiency along the entire industrial supply chain. These indirect impacts may only be described in qualitative terms as their quantification is difficult due to uncertainties associated with establishing clear causal chains.

Increases in mitigative capacity typically relate to a change in the framework conditions and underlying factors which enable emission reductions in the longer term, thus leading to a transformation of the sector. In the case of the industrial efficiency NAMA this may include improved regulatory frameworks and governance, improved data management systems and improved technical knowledge amongst stakeholders in the sector.

Other impacts and co-benefits

It is expected that an energy efficient motor NAMA will have significant co-benefits. Co benefits are an important driver for NAMAs and may in some cases actually be the starting point for a mitigation action.

Below are some of the potential impacts according to three categories: social, economic and environmental. These are representative and will vary depending on specific country contexts.

Economic

- *Improved competitiveness* **–** Increased sector competitiveness is a stated objective of the NAMA. Improving motor efficiency by just a few percentage points could significantly decrease electricity costs for industry users.
- *Energy security* **–** More efficient electric motors will decrease the amount of electricity consumed and can help improve the security of energy supply. Lowering electricity demand can improve the capacity margin in the electricity network and decrease the need for building additional generating capacity. Countries that rely heavily on imported sources of energy for electricity generation could see improvements in their balance of trade and a decreased reliance on energy imports.

Social

- *Job creation* – Depending on the specific activities undertaken, the NAMA can create jobs such as energy auditors, motor installers and engineers.

Environmental

- *Reduction of pollutants* – Reduction of other pollutants such as sulphur dioxide and mercury from electricity generation.

Monitoring, Reporting and Verification (MRV)

The MRV system is a key part of the NAMA to enable to track progress towards reaching the NAMA objectives and make corrections if these are not being met. The MRV system will monitor the impacts of the NAMA as related to the NAMA objectives. These include GHG related impacts, improvements in mitigative capacity and sustainable development benefits. The MRV system will also track the progress of implementation of the various components to ensure that these are on track to meet the objectives. The framework MRV system for the NAMA is presented in Figure 3 below.

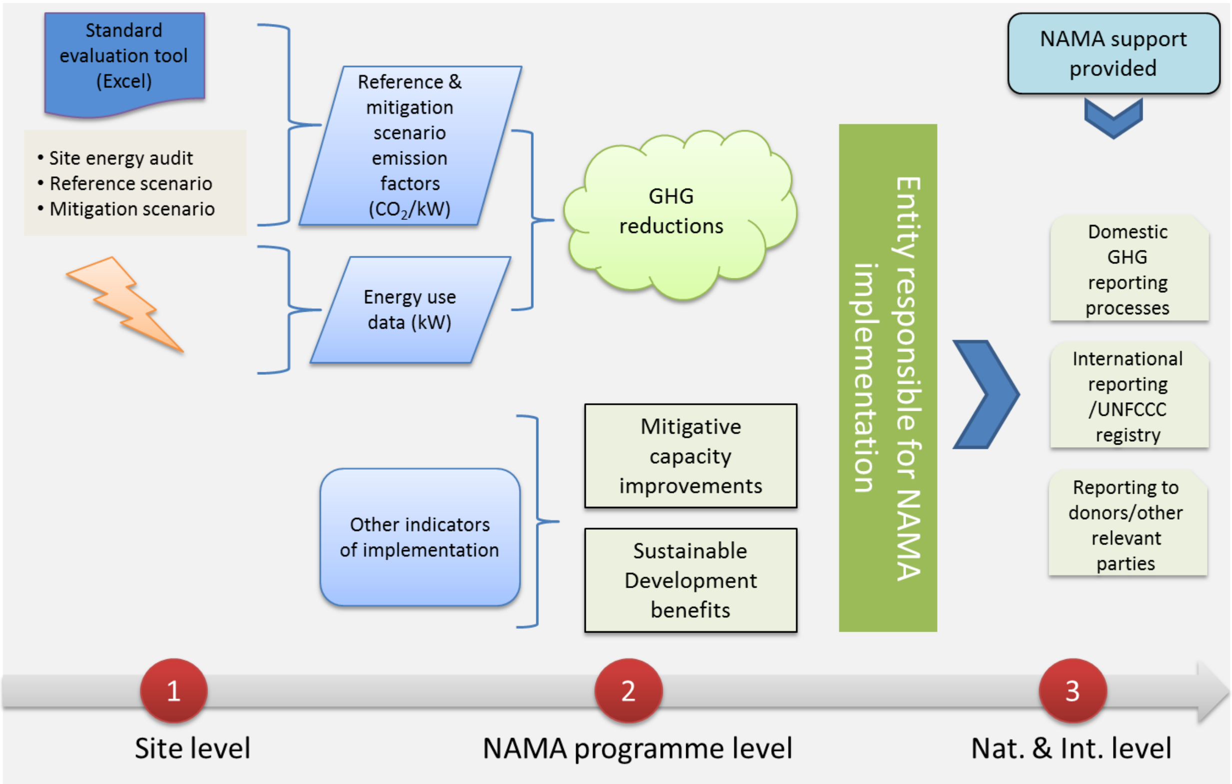

FIGURE 3: OVERVIEW OF MRV SYSTEM

An important step is to set the boundary of the system which will include all installations or sites within the target sector, ie. the industrial sector of the country.

MRV will take place at three different levels:

- Installation level - sites where efficient motor systems are installed
- Programme level - validation and aggregation of site level data at the NAMA programme office, collection of programme-level indicator data, reporting of compiled data
- National and international level:
  a) Reporting at national level as required
  b) Reporting at the international level related to the UNFCCC through the UNFCCC registry and Biennial Update Reports/National Communications and (potentially) verification in the form of ICA.
  c) Reporting and potentially verification at the international level related to donors and based on their specific requirements.
  d) Aggregation of data on NAMA support provided

Indicators

Indicators are quantitative or qualitative variables that serve as a standard for measuring, reporting and verifying the attainment of the objectives of a NAMA. Indicators for the NAMA are formulated in a SMART manner (Specific, Measurable, Accepted, Realistic and Timely). For each indicator a baseline will be set against which progress is monitored.

Two types of indicators are considered:

- *Impact indicators* which measure the attainment of the objectives of the NAMA
- *Progress indicators* which measure the progress of activities being implemented

Both quantitative and qualitative indicators will be used as appropriate. For each indicator monitoring modalities including data collection, timing and responsibilities will be indicated. This information can only be country and NAMA specific and will not be included at this stage.

Potential impact indicators for the NAMA are presented in the Table 4 below.

TABLE 4: IMPACT INDICATORS - EXAMPLES

Impact dimension	Objective measured	Example Indicator
GHG Emission Reduction	Reduce emissions by x $MtCO_2e$	tCO2eq reduced under the NAMA
Improved Mitigative Capacity	Improved technical capacity related to industrial energy efficiency	Number of auditors/ technology service companies trained Number of auditors/ companies still active 3 years after the training
	Improved financing conditions for energy efficiency	Number of commercial banks still offering suitable loans for energy efficiency 3 and 5 years after the end of the NAMA Volume of energy efficiency related loans granted 3 and 5 years after the end of the NAMA
Sustainable Development Benefits	Job creation related to energy efficiency technologies and services	Number of new companies Number of employees in new and existing companies
	Reduction of energy costs	% of reduction in the energy costs for participating companies

TABLE 5: PROGRESS INDICATORS – EXAMPLES

NAMA Component	NAMA activities	Example Indicators
Regulatory component	MEPS	Number of MEPS adopted, in progress; % of motor stock covered
	Labelling	Number of labelling schemes adopted, in progress
Incentive component	Replacement scheme	Replacement scheme implemented; Number of companies participating in the scheme
	Tax incentives	Tax incentive scheme adopted; Number of companies benefitted
	Loan/ grant scheme	Number of banks participating; Number of loans/ grants disbursed; Size of loans/ grants disbursed
Capacity & awareness component	Energy management training	Number of people trained; Number of trainings conducted
	Energy audits	Number of audits conducted; % of sector covered; % savings identified
	ESCO programme	Number of new ESCOs in the market
	Awareness campaign	Number of campaigns run; Number of people/ organisations targeted

COSTS AND SUPPORT NEEDS

Costs and support needs for the NAMA will need to be determined on a case by case basis depending on the specific scope of the NAMA, the activities to be undertaken and the country context. The NAMA may require support from the international community in terms of financing, technology transfer and capacity building. The NAMA host country will also bear part of the costs, be it through in kind administrative and regulatory support or direct financial support. In addition, the private sector may also provide support to the implementation of the NAMA. This may include, for example:

- Using private sector equity finance for energy efficiency projects that expect to see a financial return
- Leveraging commercial lending through the use of a NAMA guarantee fund that reduces risks preventing commercial banks from lending.
- Employing innovative business models like Energy Service Companies (ESCOs) to invest in energy efficiency projects.

The NAMA proposal will include information on the total costs of delivering the NAMA by component and activity. This may also include the pre implementation phase, ie full NAMA preparation, economic and feasibility studies etc. In addition, it will be specified which part of the cost will be covered by national government or the private sector. The type of support required, ie. financial support (in the form of grants, loans, guarantees), capacity and technology support will also be specified.

International support should only cover incremental costs. Generally these are defined as the difference in cost between a baseline scenario and a mitigation scenario as shown in Figure 3 below.

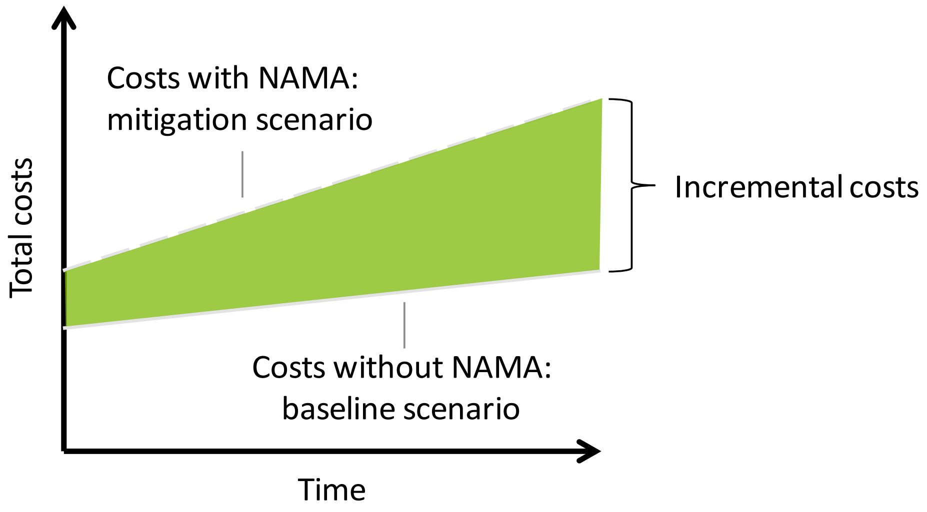

FIGURE 3: INCREMENTAL COSTS (OWN ELABORATION)

For the NAMA incremental costs may be defined as the difference between the cost of delivering the service under BAU, with conventional motor systems and the additional cost of more efficient motor systems (including technology, operation etc.). In practice this may be difficult to establish.

Alternatively incremental costs could constitute the public funding necessary to leverage a given amount of private investment into more efficient motor systems.

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