Energy Management System (EnMS) based on ISO 50001

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National Project Coordinator-PIEE Project

Seminar on Energy Efficiency in Government

11 October 2018
Grand Xing Imperial Hotel, Iloilo City

Outline

1. What is energy management system (EnMS)
    - 1.1 Six (6) Key concepts of EnMS
    - 1.2 Energy Management Standard (ISO 50001:2011)
    - 1.3 What are the benefits of EnMS → Energy Efficiency

2. Who is UNIDO?
    - 2.1 UNIDO's EnMS/ISO 50001 Programme
    - 2.2 What is PIEEP?

Energy management system is….

- A systematic approach to the management of energy use based on facts and prevailing conditions as against to ad-hoc reaction
- Not a piece of software nor a technical or equipment solution
- An application of good management practice which combines:
  - Behaviour change among all employees
  - Behaviour change among management
  - Objective use of data to show performance
  - Technical improvement
  - Low cost operation and maintenance of existing equipment

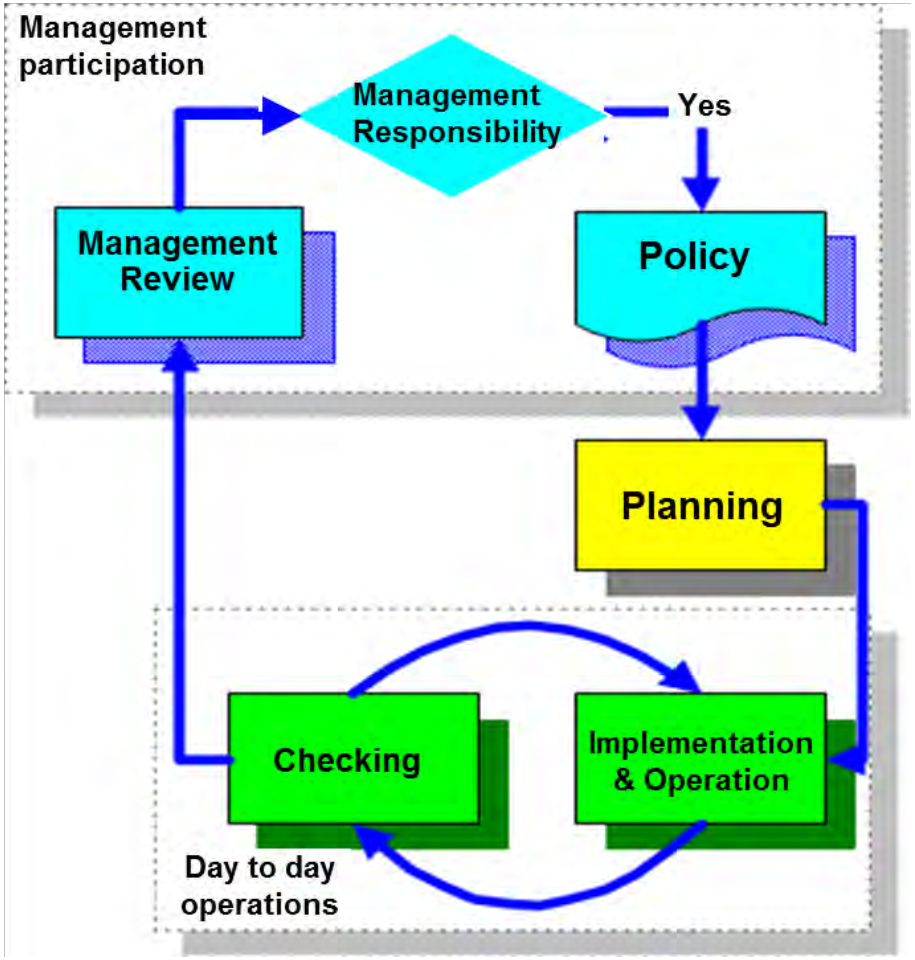
ISO 50001:2011 Energy Management Standard

- Specifies requirements for establishing, implementing, maintaining and improving an **energy management system**, whose purpose is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance, including energy efficiency, energy use and consumption

- International standard adopted by the Philippine National Standard (PNS) in 2011

- Provides a framework of requirements for organizations to:
  - Develop a policy for more efficient use of energy
  - Fix targets and objectives to meet the policy
  - Use data to better understand and make decisions about energy use
  - Measure the results
  - Review how well the policy works, and
  - Continually improve energy management

Six Key Concepts of EnMS



1. Commitment
   - Roles and Responsibilities
2. Significant Energy Users (SEUs)
3. Energy Performance Indicators (EnPIs)
4. Opportunities List
5. Operational Control
6. Review

1. Commitment

The **energy policy statement** is an official document with which top management demonstrates its commitment and support to the energy management system for achieving continual energy performance improvement.

EXAMPLE:

The Roles and Responsibilities of top management will be as follows:

- Establish the Energy Policy
- Designate an Energy Management Representative
- Ensure adequate resources are available for the EnMS to be implemented and maintained
- Communicate to the rest of the organization the importance of implementing the EnMS

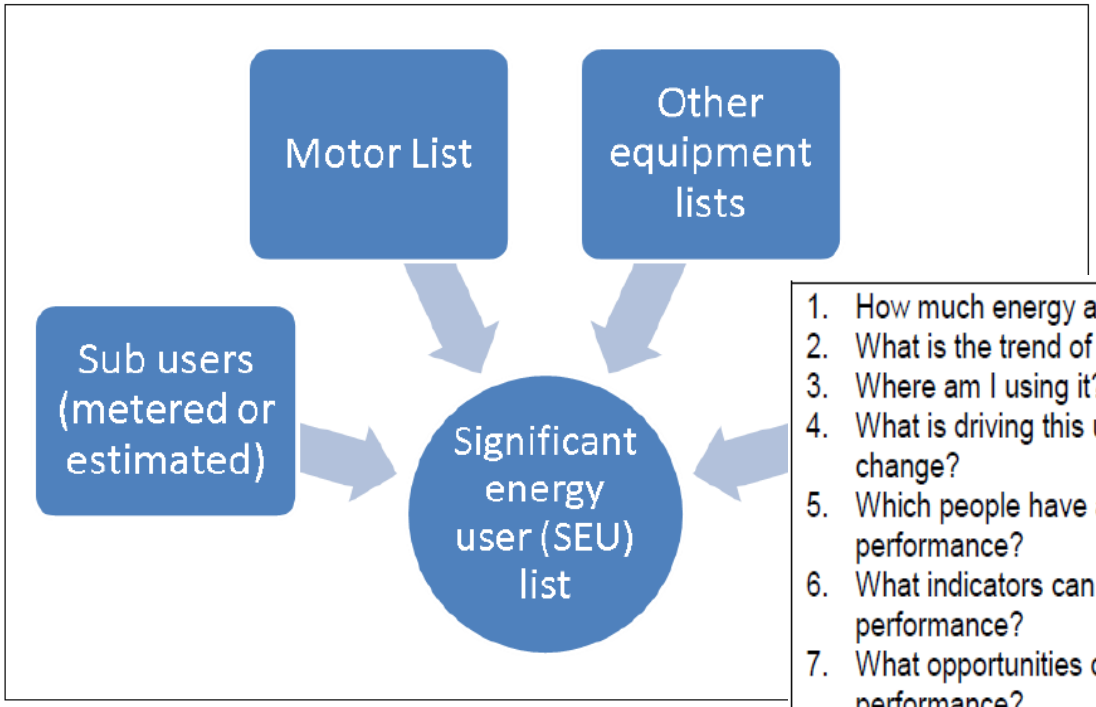
The Energy Management Representative and Energy Team will be responsible for:

- Identifying resources required to implement the EnMS
- Ensuring that the EnMS is implemented and maintained
- Reporting on the performance of the system at the management review
- Providing recommendations for improvement at the management review

Production Staff will be responsible for:

- Participating in the successful implementation of Action Plans
- Participating in available training to improve energy management skills
- Follow-through on resulting changes in operations and procedures to improve energy performance
- Making recommendations for further improvements to the EnMS

2. Significant Energy Users (SEUs)

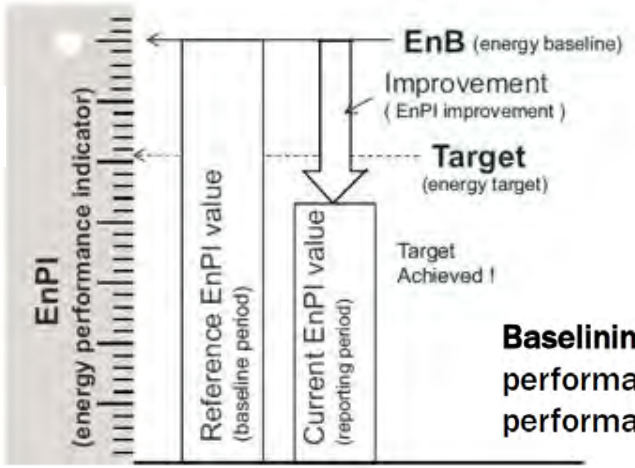


1. How much energy am I using?
2. What is the trend of this usage?
3. Where am I using it? This tells which are the most significant users.
4. What is driving this usage, i.e. what variable is causing energy use to change?
5. Which people have a significant impact on the organization's energy performance?
6. What indicators can I use to measure and manage the organization's energy performance?
7. What opportunities do I have to improve the organization'senergy performance?
8. What are the organization's energy performance improvement objectives and targets?
9. What are the organization's energy performance action plans for the coming period?

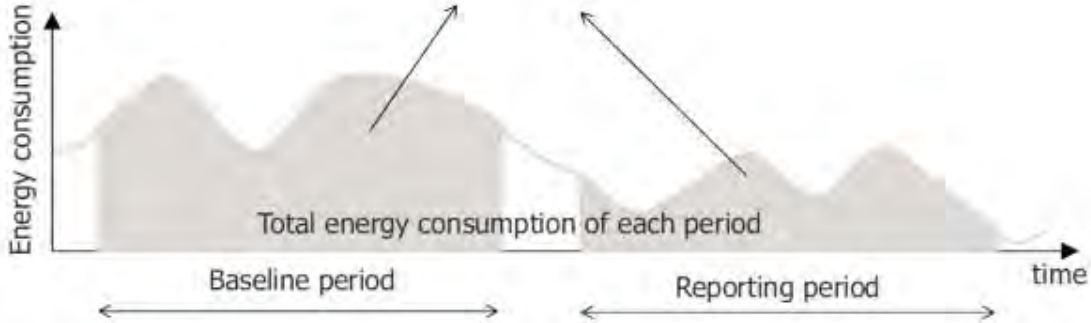
3. Energy Performance Indicators (EnPIs)

Easily understood quantitative measure of performance

EnPIs, as indicators of performance, should be at the core of your communication efforts to senior management as well as production staff.

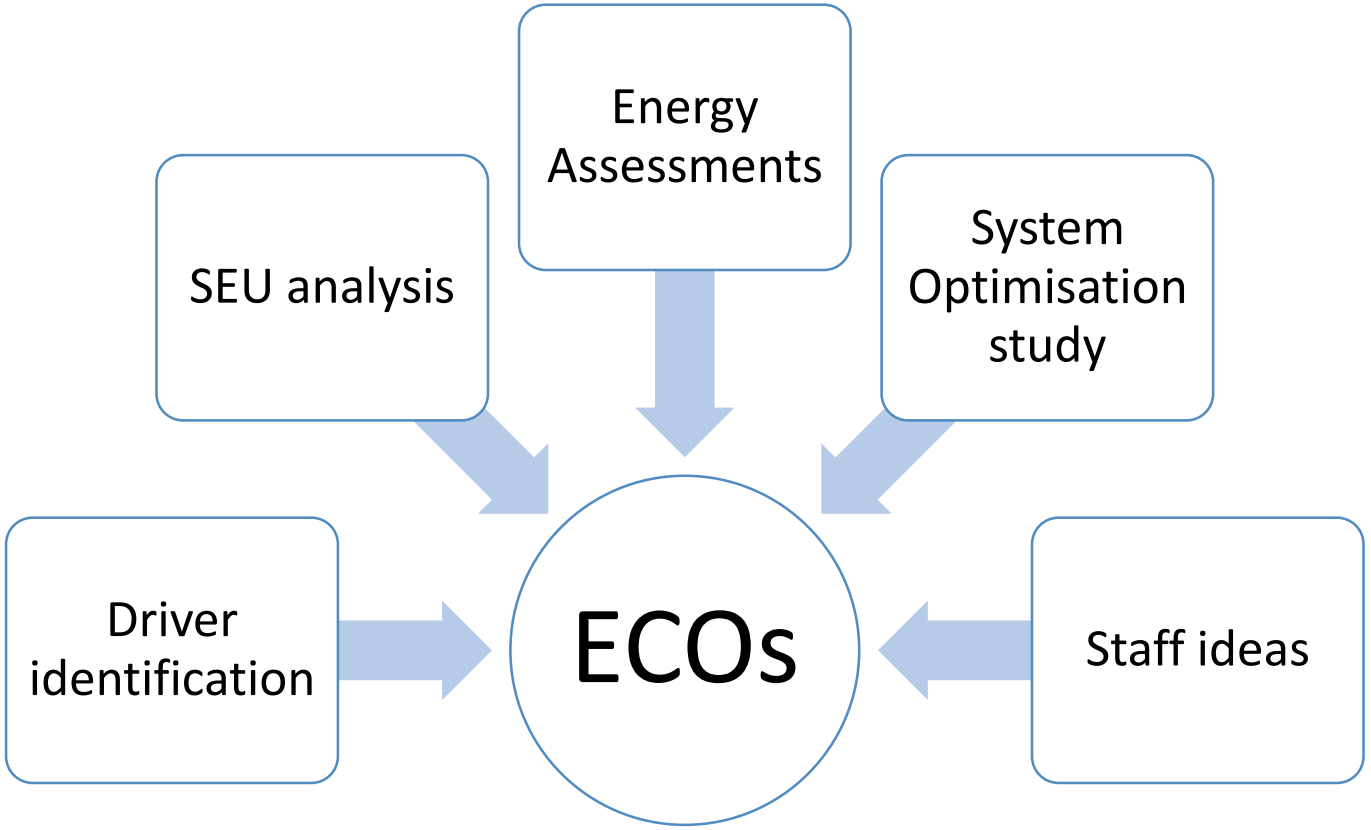


Baselining - comparing plant or process performance <u>over time</u>, relative to its measured performance in a specific (i.e. baseline) year.



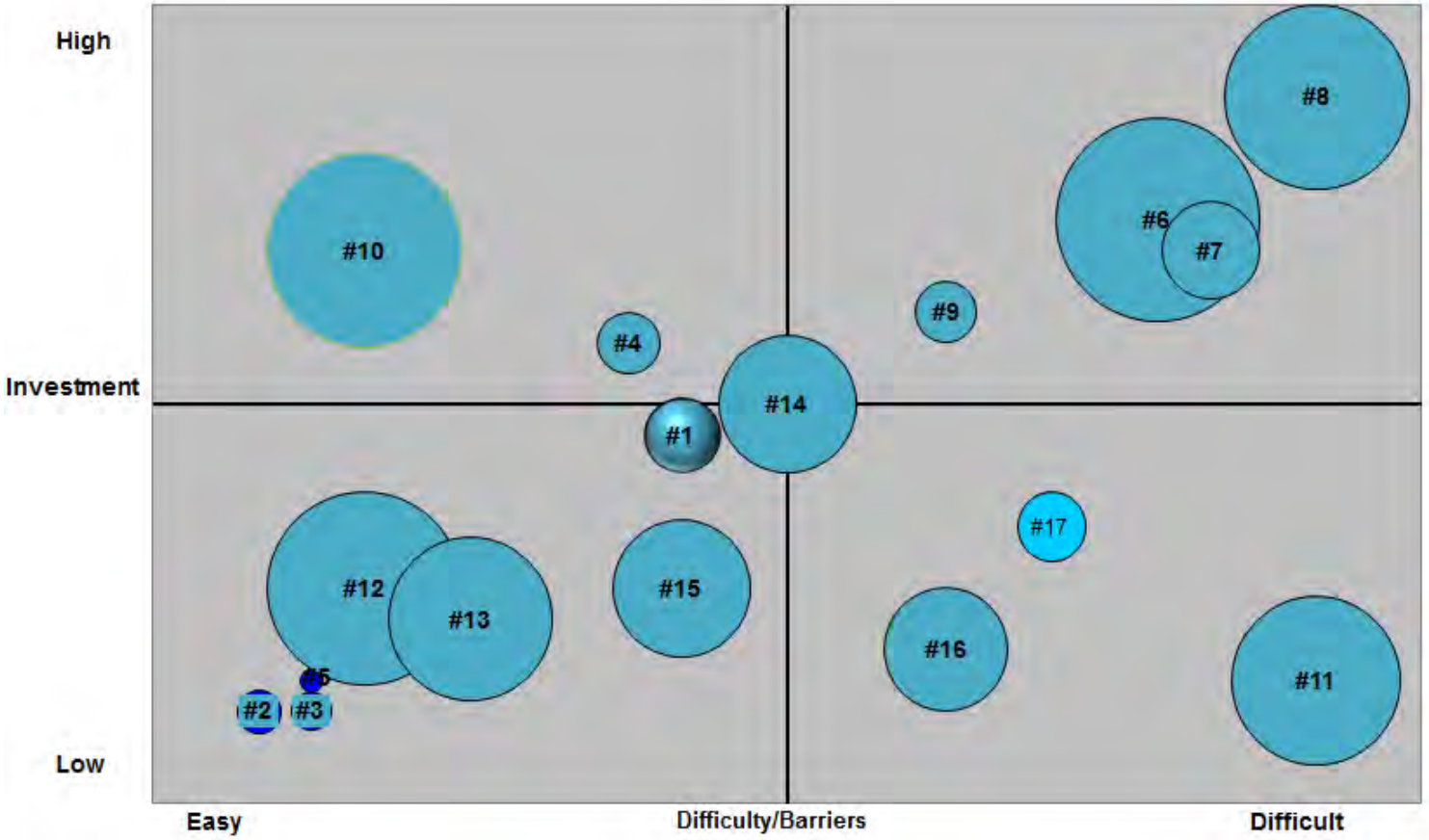
Energy Performance Indicators (EnPIs) – a measure of energy intensity used to gauge effectiveness of your energy management efforts.

4. Opportunities List



ECO = Energy Conservation Opportunity

Which opportunities to implement?



5. Operational Control: A critical element of the EnMS for energy savings

Steps in achieving effective operational control:

1. Determine and establish maintenance and operational criteria
2. Communicate operational controls
3. Operate according to the criteria

Leads to:

SIGNIFICANT ENERGY SAVINGS & BENEFITS
WITHOUT CAPITAL EXPENDITURE!

Developing Criteria

Sources of Criteria

- Manufacturer's recommendations
- System operational manuals, including automated controls
- Service personnel suggested operating settings
- Service personnel suggested maintenance practices
- Internal expert's suggestions
- Guidance from energy system experts
- Benchmarking performance of similar equipment
- Past issues or problems

Operational Criteria

- Temperature
- Pressure
- Residence time
- Humidity
- Control schemes
- Others

Implementation of Criteria = Controls

Procedures Based

- Procedures or work instructions
- Equipment logbooks
- PM Schedule

Technology Based

- Control systems
- Alarm/alert systems
- Computer automated activities
- Preventive maintenance system

Training Based

- Maintenance training
- Operations training
- Contractor training

May already have many operational controls in place!

6. Review

Remember, it's all about energy performance!

- SEUs
- Energy data systems
- Energy action plans
- EnPIs
- Objectives and targets

- Regular presentation
  - Frequency based on requirements
- How are we getting on?
  - Is performance improving as targeted?
  - Problems and barriers to overcome?
  - Achievements
- What is the plan for next year?
  - What do we need to achieve this plan?

Then you start all over again!!!!

What are the benefits of EnMS → Energy Efficiency

- Management focus → can offer attractive financial and economic returns
- Systematic activity → increases security of supply
- Identify and focus on biggest users → reduces production and product costs
- Identify and focus on key people at all levels → Training
- Focus on data and numerical methods → Reduces risk/exposure to rising energy prices
- Integrated approach → positive effect on productivity and competitiveness
  - ✓ People
  - ✓ Departments
  - ✓ Budgets
- Continuity through changes of personnel → increase reliability of operations
- Continual improvement → **saves industrial firms money**

INTRODUCING THE ISO 50001 FAMILY OF STANDARDS

- ISO 50002:2014 Energy audits: Requirements with guidance for use
- ISO 50003:2014 Energy management systems — Requirements for bodies providing audit and certification of energy management systems
- ISO 50004: 2014 Energy management systems — Guidance for the implementation, maintenance and improvement of an energy management system
- ISO 50006: 2014 Energy management systems — Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) — General principles and guidance
- ISO 50015:2014 Energy management systems — Measurement and verification of energy performance of organisations — General principles and guidance

UNIDO is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability.

3 Thematic areas

Advancing economic competitiveness

Creating shared prosperity

Safeguarding the environment

UNIDO's EnMS/ISO 50001 Programme

30 Countries

Armenia
Belarus
Burkina Faso
Chad
Chile
China
Colombia
Ecuador
Egypt
Georgia
Kazakhstan
India
Indonesia
Iran
Macedonia
Malaysia
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South Africa
Thailand
Tunisia
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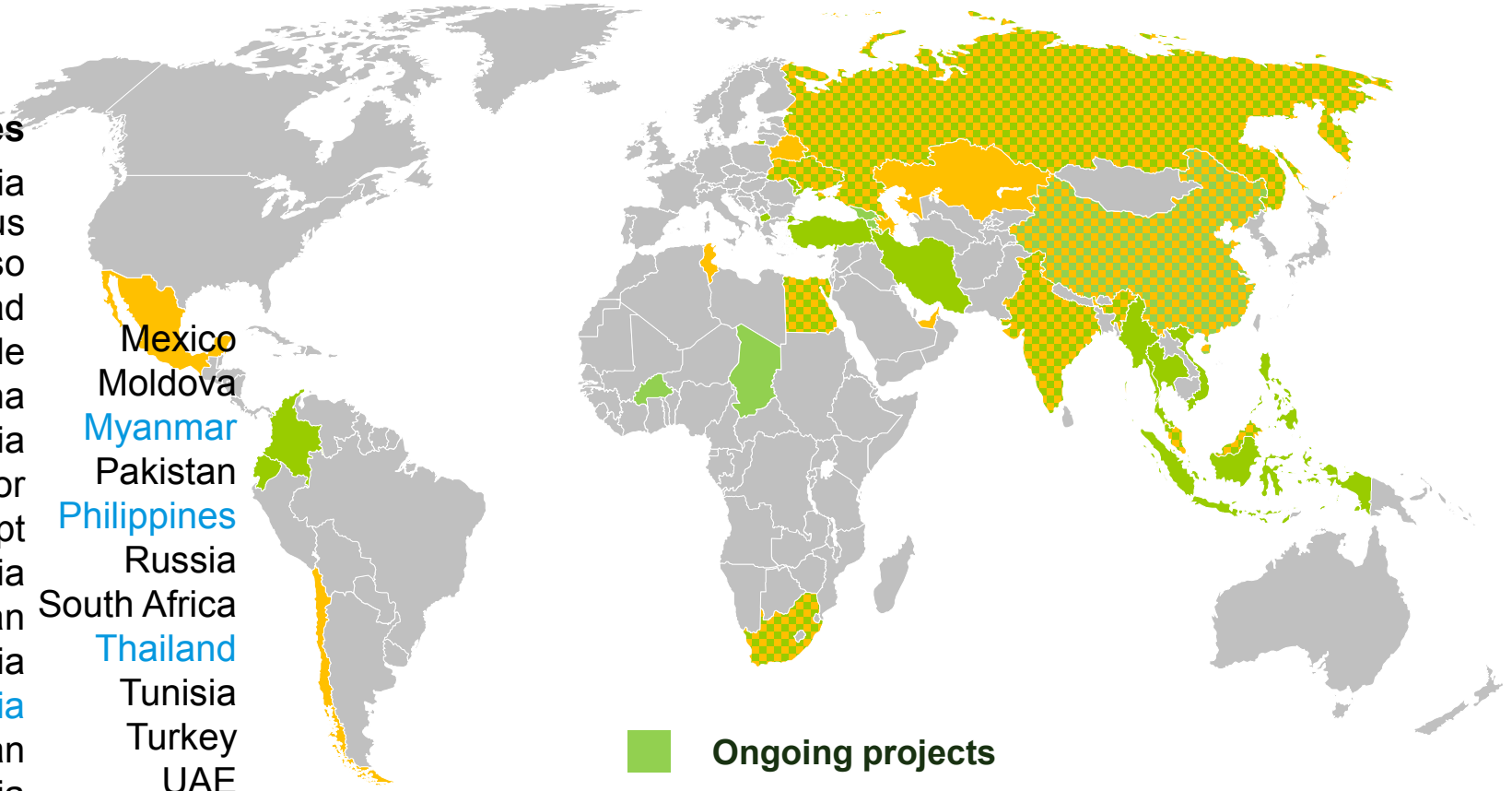


Philippine Industrial Energy Efficiency Project

Project Objective

" Introduce ISO 50001 Energy Management Standard along with Systems Optimization Approach for improvement of industrial energy efficiency in the Philippines "

Project Components

Energy Management System → ISO 50001

Systems Optimization → Steam + compressed air + pumps

Enhancement of Financing Capacity → DBP, BPI, LANDBANK

Expected Benefits:

Electricity Savings 2,057,755 MWh
Fuel Savings 6,071,000 GJ

Estimated Direct Environmental Benefits

261,754 tCO_2

equivalent emissions reduction from fuel and electricity savings.

Focus Sectors

Food & Beverage

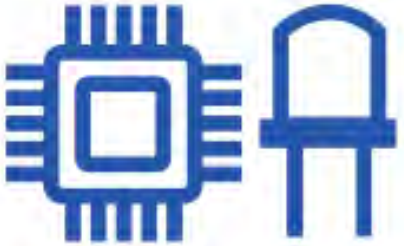
Basic Metals & Steel

Cement

Water Utility

Chemicals

Pulp & Paper Products



Semiconductor & Microelectronics

Project Deliverables

- 40 local experts on Energy Management System (EnMS)
- 40 local pool of experts on Systems Optimization
- Awareness Training on EnMS delivered to 500 factories
- 40 factories implemented EnMS ISO 50001
- 400 trained factory personnel on Systems Optimization
- 40 equipment vendors trained on Systems Optimization
- 40 Systems Optimization Projects implemented
- 100 Factory Managers trained on financing Energy Efficiency projects

EnMS TRAINING PROGRAMS

Half-Day Awareness Workshop
for Top Management

Two-Day User Training
for Managers/factory personnel on EnMS Tools

Training
for National Experts

SO TRAINING PROGRAMS

Two-Day User Training

for Managers/factory personnel on UNIDO Tools

Training

for National Experts

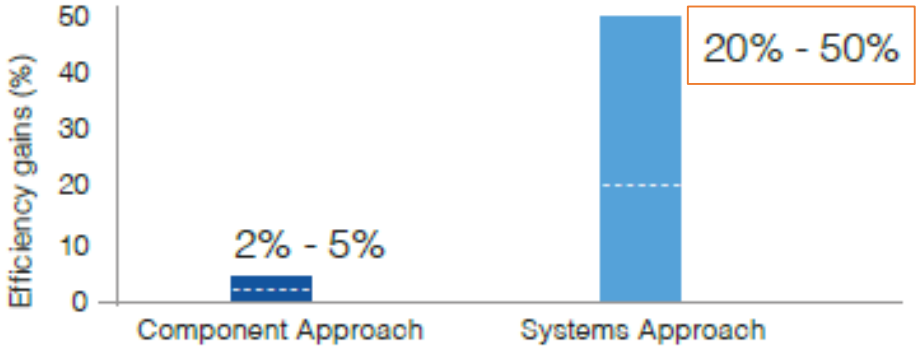
Systems Optimization

Component Approach

- Involves segregating components and analyzing their performance in isolation
- Focuses on the efficiency of one component rather than of an entire system
- Provides no assurance that energy savings will be attained if the system of which the component is part of is not properly designed and operated

Systems Approach

- Involves looking at how the whole group of components function together
- Requires attention to the whole production scheme and considers how one component can impact the whole system
- Offers significantly higher energy and cost savings than a component level analysis



Systems Optimization

Compressed Air

An average of up to 30% can be saved from improving compressed air system

Steam

Efficiency improvements for steam systems optimization could reach as high as 30%

Pumps

Up to 30% - 50% of the energy consumed by pump systems can be saved through equipment or control system changes

FINANCING CAPACITY TRAINING PROGRAMS

Training
for banks/financial institutions personnel

Training
for factory managers/engineers

Training
for National Experts

Project Achievements

- 44 trained and certified local experts on Energy Management System (EnMS)
- 90 trained but only 42 local experts passed/certified on Systems Optimization
- Awareness Training on EnMS delivered to 912 factories
- 34 factories implemented EnMS based on ISO 50001
- 1,122 trained factory personnel on Systems Optimization
- 28 equipment vendors trained on Systems Optimization
- 14 Systems Optimization Projects implemented
- 164 Factory Managers trained on financing Energy Efficiency projects

A summary of the 2015 results is shown below:

Standard	Number of certificates in 2015	Number of certificates in 2014	Change	Change in %
ISO 9001**	1033936	1036321	-2385	-0.2%
ISO 14001***	319324	296736	22 588	8%
ISO 50001	11985	6765	5 220	77%
ISO 27001	27536	23005	4 531	20%
ISO 22000	32061	27690	4 371	16%
ISO/TS 16949	62944	57950	4 994	9%
ISO 13485	26255	26280	-25	-0.1%
ISO 22301	3133	1757	1 376	78%
ISO 20000-1	2778		2 778	
TOTAL	**1519952**	**1476504**	**43 448**	**3%**

* Accredited certification bodies are those that have been independently evaluated by accreditation body members of the IAF, the world association of conformity assessment accreditation bodies
**ISO 9001:2008 (=1029746) + ISO 9001:2015 (=4190)
***ISO 14001:2004 (=318377) + ISO 14001:2015 (=947)

Source: ISO

https://www.iso.org/files/live/sites/isoorg/files/standards/conformity_assessment/certification/doc/survey_executive-summary.pdf

ISO 50001 - East Asia and Pacific

Year	2011	2012	2013	2014	2015
Country	49	191	478	693	1035
Australia			10	20	22
Brunei Darussalam			1	1	1
Cambodia				2	13
China		3		60	262
Hong Kong, China	1	4	12	24	40
Macau, China		1	1	1	1
Taipei, Chinese	11	50	137	176	262
Indonesia			4	24	27
Japan	8	32	38	59	44
Korea, Republic of	19	48	111	102	117
Lao People's Democratic Republic					1
Malaysia		2	12	25	34
Philippines		1	1	1	2
Singapore		4	12	14	26
Thailand	10	41	132	168	138
Viet Nam		5	7	16	45

Source: ISO

In the Philippines (ISO 50001-certified) as of June 2017

ADB

MANILA WATER
CARE IN EVERY DROP

SHIMANO

Assisted by the GEF-UNIDO IEE Project

Continental TEMIC

Maynilad

2017 Clean Energy Ministerial (CEM) Energy Management Leadership Awards

CEMEX

APO and SOLID Plants

Philippine companies that have implemented Energy Management System in partnership with DOE GEF-UNIDO IEE Project

Basic Metals & Steel

Steel Asia – Batangas Plant
Steel Asia – Bulacan Plant
Steel Asia – Carcar Plant
Pag Asa Steel Works – Pasig Plant
Rowell Lithography & Metal Closure Inc-Pasig Plant
Canlubang Preforms & Caps- Laguna Plant
Metro Dragon Steel Corp – Valenzuela Plant

Pulp & Paper Products

Newtech Pulp Inc – Iligan Plant
Mindanao Corrugated Fiber Inc – Davao Plant

Food & Beverage

San Miguel Yamamura Asia Corp – Cavite Plant
San Miguel Yamamura Packaging Corp - Rightpak Plant
Limketkai Mfg Corp – Cagayan de Oro Plant
Cebu Glass Plant
Manila Glass Plant
Nestle – Lipa Plant
Chow King – Sucat Plant
Chow King – Muntinlupa Plant
Universal Robina Corp – Biñan Plant
CP Kelco – Cebu Plant
Central Azucarera Don Pedro Inc – Nasugbu Plant
Lopez Sugar Corp – Sagay Plant
Coca Cola FEMSA – Canlubang Plant
Coca Cola FEMSA – Misamis Oriental Plant
RDF Feed Mill – Pampanga Plant

Philippine companies that have implemented Energy Management System in partnership with DOE GEF-UNIDO IEE Project

Cement

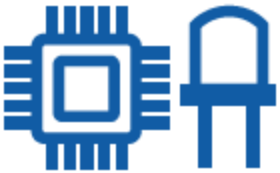
CEMEX – Solid Plant
CEMEX – Apo Plant

Chemicals

Ramcar Batteries Inc – Bulacan Plant
Air Liquide - Laguna Plant
Unilever Phils Inc – Manila Plant

Water Utility

Manila Water Company Inc
Maynilad Water Services Inc
Laguna Aquatic Resources Corp



Semiconductor & Microelectronics

Continental Temic Phils Inc – Laguna Plant
Tong Hsing Electronics Phils Inc - Laguna Plant
Funai Electric Cebu Inc – Cebu Plant

CLEAN ENERGY MINISTERIAL
Accelerating the Transition to Clean Energy Technologies

Dear RAMONCITO S. FERNANDEZ,

Thank you for submitting your high-quality case study to the 2017 Energy Management Leadership Awards program of the global Clean Energy Ministerial (CEM), a high-level global forum of 24 countries and the European Commission that promotes policies and programs to advance clean energy.

We are pleased to inform you that Maynilad Water Services, Inc. is a recipient of an Energy Management Insight Award in recognition for contributing valuable insights on the diverse benefits of certifying energy management systems to the global ISO 50001 standard. An independent panel of international experts determined that your case study shows how an energy management system can be successfully integrated into existing business systems to better manage resources, sustain achieved savings, and continuously improve energy performance.

The awards program is organized by the CEM Energy Management Working Group (EMWG), in which government officials worldwide collaborate to create high-impact national programs that accelerate the use of energy management systems. The EMWG includes representatives from Australia, Canada, Chile, China, Denmark, the European Commission, Finland, Germany, India, Indonesia, Japan, Mexico, the Republic of Korea, Saudi Arabia, South Africa, Sweden, United Arab Emirates, and the United States.

As an Energy Management Insight Award recipient, we will notify your country's energy ministry of your award and broadly distribute a press release, report, and slide deck that highlight your organization and the other award recipients. Furthermore, your case study will be posted on the CEM website as an inspiration and resource for businesses, governments, and other organizations seeking a cost-effective way to align corporate targets with national climate and energy goals.

Your energy management leadership is important at this critical time. At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally-binding global climate deal. With two-thirds of the world's GHG emissions resulting from energy production and use, energy management has an important role in accelerating climate action to support of the new agreement. Analysis shows that implementation of ISO 50001 across the commercial and industrial sectors globally could drive cumulative energy savings of approximately 62 exajoules by 2030, saving nearly $600 billion in energy costs and avoiding 6,500 million metric tons of CO_2 emissions.

The CEM invites you to expand your leadership role by joining its Energy Management Campaign. For this campaign, governments and businesses are making commitments towards the goal of 50,001 global ISO 50001 certifications by 2020. We welcome your participation in this community as well.

Congratulations and we wish you continued success!

Sincerely,

Graziella Siciliano
Coordinator, Energy Management Working Group
Clean Energy Ministerial

Business

EDITOR: MARIANNE V. GO ASSISTANT EDITOR: CONRADO H. DIAZ JR.

MONDAY | JUNE 19, 2017

to boost exports – DTI D2

• PHI hosts first Asean e-vehicle summit D2

HATID TINIALA

Senate mulls 'fairer, more reasonable' SSB tax

By PAOLO ROMERO

Sen. Sonny Angara said he is considering "a fairer and more reasonable" excise tax on sugar-sweetened beverages (SSB) that will be more effective in curbing the prevalence of diabetes and obesity in the country.

The tax reform measure passed by the House of Representatives includes a provision imposing a P10 excise tax on every liter of sugar-sweetened beverages containing locally produced sugar, while others will be taxed P20 per liter.

Instead of taxing P10 every liter, Angara, who chairs the Senate Committee on Ways and Means, is looking to impose excise tax depending on the sugar content of the beverage.

"According to experts, if we're talking about health and want to reduce the sugar consumption of Filipinos, the tax must be based on the sugar content of the beverage," Angara said.

He noted a P10 excise tax might be too high, as this would jack up the prices of some sugary drinks by 50 percent.

Based on the latest price survey of the Department of Finance (DOF), the retail prices of a one-liter of Coca Cola will increase from P22 to P34; sachet prices of powdered drinks Nestea, Tang or Eight O' Clock will increase from P9 to P20; and 3-in-1 coffee mixes from P5 to P8.

Under the bill pending in the committee, sugar-sweetened beverages include sweetened juice drinks, tea and coffee; all carbonated beverage with added sugar; flavored water; energy drinks; sports drinks; powdered drinks not classified as milk, juice, tea and coffee; cereal and grain beverages; and other non-alcoholic beverages that contain sugar.

"Majority of the consumers of such drinks are ordinary Filipinos who will feel the effects of increased prices. We might be unfairly targeting the poor," the lawmaker said.

He said the same consumers may not be able to deduct income taxes because as minimum wage earners, they are already exempted from income tax.

The House-approved tax reform package aims to lower income taxes of middle-income earners, while limiting value added tax (VAT) exemptions and adjusting excise taxes on oil, automobiles and sugar-sweetened beverages.

According to the Philippine Association of Stores and Carinderia Owners (Pascii), 80 percent of the consumers of these products are low-income earners.

Data from Pascii also showed 30 to 40 percent of the income of sari-sari store owners comes from the sale of coffee, juice and carbonated drinks.

Meanwhile, the Beverage Industry Association of the Philippines (BIAP) warned such move would result in a P20-billion decline in sales of sugar-sweetened beverages.

While the DOF estimates that additional revenue can range from P40 billion to P47 billion, Finance Undersecretary Karl Chua stressed the inclusion of sugar tax is not primarily intended to generate more revenues but it is a health measure meant to discourage consumers in buying unhealthy drinks.

According to the Department of Health, consumption of sugar-sweetened beverages increases the risk of developing health problems such as blood sugar disorders, obesity, diabetes, and other related diseases like bone fractures, hypertension, tooth decay and heart problems.

...lad president and chief executive officer Ramoncito Fernandez holds the 2017 Energy Management ...nsight Award given by the Clean Energy Ministerial (CEM) in recognition of the company's ...le insights on the process and benefits of setting up an energy management system certified ...global ISO 50001 standard. With Fernandez is Maynilad's Energy Management System core ...nembers.

Maynilad bags top global energy mngm't award

By LOUISE MAUREEN SIMEON

West Zone concessionaire Maynilad Water Services Inc. bagged a global award for its energy efficiency from the Clean Energy Ministerial (CEM), a worldwide forum that promotes transition to a greener economy.

The Manuel V. Pangilinan-led company was awarded the 2017 CEM Energy Management Insight Award for its excellent case study on the process and benefits of setting up an energy management system certified to the International Organization for Standardization (ISO) 50001.

As a global benchmark for climate and clean energy action, ISO 50001 is based on the management system model of continual improvement also used for other well-known standards such as ISO 9001 or ISO 14001, which allows for easier integration of energy management into companies' overall efforts to improve quality and environmental management.

Maynilad president and CEO Ramoncito Fernandez said the company's efforts to enhance its energy efficiency enabled it to register reductions in greenhouse gas emissions and other related environmental impacts.

Maynilad was also able to generate savings in its electricity consumption because of energy-reduction programs.

"The award is a validation of Maynilad's efforts to efficiently manage its energy systems. We hope that other businesses will also implement process improvements to meet global energy and climate goals," Fernandez said.

Maynilad's ISO 50001-certified sites are its headquarters, La Mesa treatment plant, La Mesa, Villamor, Pasay and Pasay pumping station.

2017 Energy Management Insight Award

2017 Insight Award

For Leadership in Energy Management

Is presented to

Maynilad Water Services, Inc.

for sharing useful insights on the benefits of certifying energy management systems to the global ISO 50001 standard. Sites:

- La Mesa Treatment Plant 1
- La Mesa Treatment Plant 2
- La Mesa Pump Station and North C Annex
- Villamor Pump Station
- PAGCOR Pump Station
- Pasay Pump Station
- Tondo Sewage Pumping Plant

Graziella Siciliano
Energy Management Working Group Secretariat
Clean Energy Ministerial

May 19, 2017
Date

CLEAN ENERGY MINISTERIAL
Accelerating the Transition to Clean Energy Technologies

In the NEWS
cemex
THE PHILIPPINE STAR
January 30, 2016

In photo are (from left) Sanjaya Man Shrestha, UNIDO Industrial Energy Efficiency Program manager; Fakhruddin Azizi, UNIDO representative – Philippines; Eduardo Pons, Cemex Philippines energy director; Ernesto Felix, Cemex Philippines vice president for operations and technology; Energy Secretary Alfredo Cusi and Energy Undersecretary Jesus Cristino Posadas.

DOE recognizes Cemex for its ISO 50001 certification

The Department of Energy (DOE) through its Philippine Industrial Energy Efficiency Project (PIEEP) recognized Cemex Philippines for its implementation of ISO 50001 Energy Management System (EnMS) in its cement plants.

Cemex Philippines' subsidiaries, Solid Cement Corp. and Apo Cement Corp., are the first cement plants in the country to be certified by SGS Philippines for EnMS.

"We at Cemex make every effort to proactively contribute to the growing demand for positive change in our resource-constrained world. Having our cement plants certified for EnMS ensures that we are operating sustainably by optimizing our energy use in a systematic and environmentally sound way. This recognition is a testament to Cemex's commitment in building a better future now," Cemex Energy Director Eduardo Pons said.

The recognition was given during the Don Emilio Abello Energy Efficiency Awards ceremony at the Maxim Hotel, Resorts World Manila.

PIEEP is jointly implemented by DOE, Department of Trade and Industry, and United Nations Industrial Development Organization, with funding from the Global Environment Facility.

Awarding of certificate

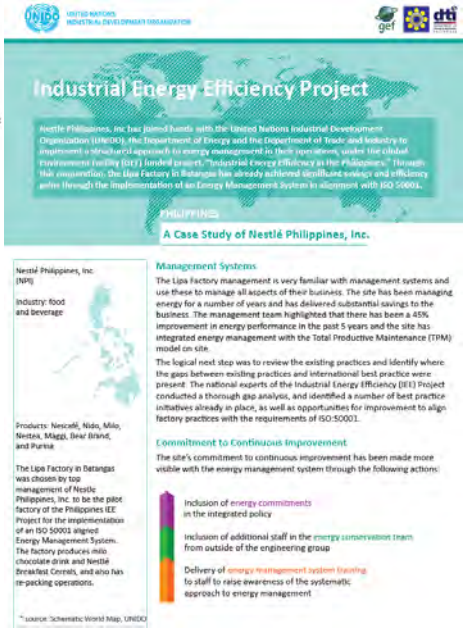
Continental Temic Plant Calamba, LISP I, Calamba City, Laguna

March 7, 2016

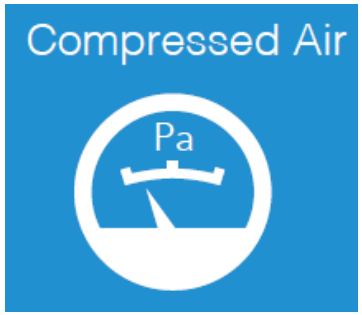
We also publish case studies of the companies that have implemented EnMS….

About improved energy efficiency performance that these companies achieved on a continuous basis!

And disseminate them to our stakeholders so that the industry will know about the huge savings!

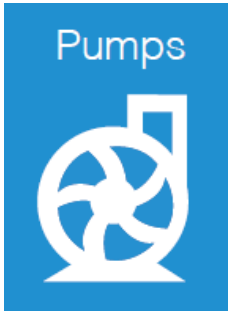


Philippine companies that have implemented Systems Optimization projects in partnership with DOE GEF-UNIDO IEE Project



Pag Asa Steel Works–Pasig Plant
United Laboratories Inc-Mandaluyong Plant
San Miguel Yamamura Asia Corp–Cavite Plant
MEPZ Mixed Gases Corp- Mactan Plant
Newtech Pulp Inc – Iligan Plant
Trust International Paper Corp-Pampanga Plant
Philippine Sinter Corp-Cagayan de Oro Plant
Funai Electric Cebu Inc-Cebu Plant
Del Monte Phils Inc-Cagayan de Oro Plant

Wyeth Phils Inc–Canlubang Plant
Lonbisco International Food Corp-Cebu Plant
Newtech Pulp Inc – Iligan Plant
San Carlos Bio-Energy Inc- San Carlos Plant
Central Azucarera de Tarlac– Tarlac Plant
Alaska Milk Corp- San Pedro Plant
Central Azucarera Don Pedro Inc-Nasugbu Plant
United Pulp and Paper Corp-Bulacan Plant
URC SONEDCO-Kabankalan Plant



Manila Water Company Inc
Maynilad Water Services Inc
Manila Plastics Plant
Steel Asia-Bulacan Plant
TIPCO-Pampanga Plant
SMYPC-Laguna Plant

CarbonBrief
CLEAR ON CLIMATE

THE PARIS CLIMATE AGREEMENT

Country emissions pledges

*of greenhouse gases in 2012 excluding international aviation and shipping

Has submitted climate pledge
Yet to submit pledge
Submitted but exiting the deal

Signed last 22 April 2016, ratified in 23 March 2017 and took effect last 22 April 2017

Philippines

Declaration:

"THAT it is the understanding of the Government of the Republic of the Philippines that its accession to and the implementation of the Paris Agreement shall in no way constitute a renunciation of rights under any local and international laws or treaties, including those concerning State responsibility for loss and damage associated with the adverse effects of climate change;

THAT, the accession to and implementation of the Paris Agreement by the Republic of the Philippines is for the purpose of supporting the country's national development objectives and priorities such as sustainable industrial development, the eradication of poverty and provision of basic needs, and securing social and climate justice and energy security for all its citizens."

Senate OKs bills on energy efficiency, system loss cap

By Danessa Rivera (The Philippine Star) | Updated February 7, 2018 - 12:00am

MANILA, Philippines — The Senate has passed two bills that will advance energy efficiency and conservation practices in the country and reduce the amount of system loss being passed on to electricity consumers.

The two measures, Energy Efficiency and Conservation Act of 2018 (Senate Bill 1531) and Recoverable System Loss Act (Senate Bill 1623), were sponsored by Sen. Sherwin Gatchalian who chairs the Committee on Energy.

Senate Bill 1531 lays down a solid foundation for a comprehensive energy efficiency and conservation policy that would mandate the efficient and judicious use of energy resources and promote the development and utilization of both new and alternative sources of energy efficient technologies and systems.

"We are helping shape the consciousness of our consumers, including the government, through a change in the policy regime regulating energy consumption. The strategies detailed in this measure are all poised to provide not only savings for the government but also more money in people's pockets," Gatchalian said.

He said if the country's energy efficiency reaches half as that of Germany — one of the most energy efficient countries in the world – then the country could save around P1.6 trillion from 2018 to 2030 or P126.4 billion on the average annually.

Reaching fully similar energy efficiency standards with that of Germany could result, on the other hand, in estimated savings of P420 billion yearly or around P5.5 trillion over the same period.

The measure mandates the creation of a National Energy Efficiency and Conservation Plan that defines national targets, details feasible strategies, and imposes a regular monitoring and evaluation system. It will also create a National Energy Efficiency and Conservation Database which will store all relevant information about energy consumption and the application of energy efficient and renewable energy technologies.

Groups/Entities Implementing the PIEEP

PEZA

LUNGSOD QUEZON
PILIPINAS

Philippine Association of Water Districts
1974

LEED and ISO 50001 ACPs: Recognizing leadership in energy management

Published on **8 May 2014** Written by Emily Loquidis Posted in LEED

USGBC has released a new pathway in LEED by recognizing ISO 50001: 2011- *Energy Management Systems* in USGBC's LEED rating system for existing buildings.

ISO 50001 is an international standard for energy management, providing a framework for integrating energy performance into organizational management practices. This standard allows companies to develop policies for the efficient use of energy and to fix targets to meet energy goals through energy benchmarking, data analysis and performance improvement. The goals of ISO 50001 align to the energy goals of many credits within LEED.

To help with this effort, Alternative Compliance Paths (ACPs) were developed in conjunction with key leaders in the green building market, including the LEED International Roundtable, energy management experts, and ISO 50001 practitioners such as DEKRA Sustainability, Intel and JW Marriott.

Source: www.usgbc.org

Join Us and Reap the Benefits!

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