

Global ISO 50001 Achievements:

Reducing costs, energy use, and CO₂ emissions



2022 ENERGY MANAGEMENT LEADERSHIP AWARDS



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In 2022, 29 organizations received global recognition.

This booklet highlights their successes using the ISO 50001 energy management system standard.

Clean Energy Ministerial

The **Clean Energy Ministerial (CEM)** is a high-level international forum that brings together the world's largest and leading countries, international organizations and companies to achieve a single mission: accelerate clean energy transitions.

The CEM has been driving the global dialogue on quality ISO 50001 implementation since 2010.

Energy Management Leadership Awards

To showcase leading organizations and share their ISO 50001 energy management successes, the CEM offers the Energy Management Leadership Awards.

To qualify for these awards, organizations prepare case studies to share a high-quality and replicable description of their ISO 50001 implementation and certification, resulting business benefits, and useful advice on lessons learned and keys to success.

An independent panel of international energy management experts select the winners.

2022 Awards Program

In 2022, three organizations received the top honor, the Award of Excellence in Energy Management. Another 26 organizations received Energy Management Insight Awards for helping to build global insight on the benefits of energy management systems.

This booklet showcases these leading organizations and highlights the business benefits achieved through use of ISO 50001 (currency for cost savings are listed in United States dollars).

All awardees are listed on pages 5-6. To see the awardees listed by country, region, or sector, see pages 39-41.

www.cleanenergyministerial.org/EMAwards

Why ISO 50001?

ISO 50001 is a framework to help organizations of all sizes and in diverse sectors continually improve their energy performance and reduce emissions.

Countries and organizations are looking for strategies to reduce energy and carbon emissions. A strategic approach to energy management has demonstrated value. Energy efficiency is the least expensive, most quickly deployable, and cleanest of all energy resources.

ISO 50001 Energy management systems – Requirements with guidance for use (or simply “ISO 50001”) is the international energy management standard that represents the efforts of over 50 countries from around the world to develop an international best practice to help organizations better manage energy.

Leading organizations around the world are achieving their energy and carbon reduction goals by using the ISO 50001 standard. These organizations are proving the business value of ISO 50001 and paving the way for its broad implementation.

The CEM Energy Management Leadership Awards highlight the clear, environmental, energy, and business benefits achieved by the diverse types of organizations that invest in energy efficiency.

The awards also underscore ISO 50001’s flexibility and applicability across sectors, as award winners represent diverse organization types. Within the 2022 class of awardees, twenty recipients are from the industrial sector, four from the commercial sector, and five from the public sector.

Collectively, all 29 of the 2022 winners (representing 173 facilities in 20 countries and regions) reported annual energy cost savings of over \$121 million, and emissions reductions of over 2.2 million metric tons of carbon dioxide, the equivalent of taking 476,383 passenger vehicles off the road.

CEM 2022 AWARDS OF EXCELLENCE IN ENERGY MANAGEMENT

Grupo Libertad
Argentina: Córdoba

Tyndall National Institute
Ireland: Cork

PT. ISM Bogasari Flour Mills Tbk.
Indonesia (2 sites): Jakarta; Surabaya

CEM 2022 ENERGY MANAGEMENT INSIGHT AWARDS

3M Company

Australia: Guildford
Belgium: Zwinjndrecht
Brazil (4 sites): Itapetininga, Manaus, Ribeirao Preto, Sumare
Canada (6 sites): Brockville, ON; London, ON (2); Montreal, QC; Morden, MB; Perth, ON
France: Tilloy Lez Cambrai
Germany (7 sites): Hilden; Juechen; Kamen; Kempten; Neuss; Seefeld; Wuppertal
Mexico (2 sites): Edumex-Juarez, CI; San Luis Potosi
Panama: Panama Pacifico
Poland (2 sites): Wroclaw (2)
South Korea (3 sites): Hwaseong (2); Naju-si
Taiwan: Tainan
United States of America (27 sites): Aberdeen, SD; Alexandria, VA; Ames, IA; Brookings, SD; Brownwood, TX; Clinton, TN; Columbia, MO; Cordova, IL; Corona, CA; Cottage Grove, MN; Cynthiana, KY; Decatur, AL; Guin, AL; Hartford City, IN; Hutchinson, MN; Little Rock, AR; Menomonie, WI; Midway, TN; Nevada, MO; New Ulm, MN; Moncure, NC; Prairie du Chien, WI; Rockland, MA; Springfield, MO; Tonawanda, NY; Valley, NE; Wausau, WI

Abu Dhabi Sewerage Services Company – ADSSC
United Arab Emirates: Abu Dhabi

ADNOC Gas Processing
United Arab Emirates (7 sites): Abu Dhabi (7)

ADNOC LNG
United Arab Emirates: Abu Dhabi

ADNOC Logistics & Services
United Arab Emirates: Abu Dhabi

ADNOC Offshore
United Arab Emirates (11 sites): Abu Dhabi (11)

ADNOC Onshore
United Arab Emirates: Abu Dhabi

ADNOC Refining
United Arab Emirates (7 sites): Abu Dhabi; Musaffah; Sas Al Nakhil (2); Ruwais (3)

ENOC Corporate Real Estate
United Arab Emirates: Dubai

ENOC Retail LLC
United Arab Emirates (36 sites): Dubai (36)

General Motors do Brazil
Brazil: São Jose dos Campos/São Paulo

Laboratorios Farmacéuticos ROVI S.A.
Spain: Granada

Loreal Argentina S.A.
Argentina: Benavidez

Maynilad Water Services, Inc.
Philippines (10 sites): Manila City; Muntinlupa City (2); Paranaque City; Pasay City (2); Quezon City (4)

NTPC Simhadri
India: Visakhapatnam

NTPC Sipat
India: Bilaspur

CEM 2022 ENERGY MANAGEMENT INSIGHT AWARDS (CONTINUED)

**PT Kilang Pertamina Internasional Refinery Unit IV
Cilacap**
Indonesia: Cilacap

PT Pamapersada Nusantara
Indonesia: Sekako

PT Pertamina Hulu Energi West Madura Offshore
Indonesia: Gresik

Ras Al Khaimah Municipality
United Arab Emirates (10 sites): Ras al Khaimah (10)

Raymond Limited
India: Khadki

Roads & Transport Authority Dubai
United Arab Emirates (9 sites): Dubai (9)

SABIC Polyolefine GmbH
Germany: Gelsenkirchen

Schneider Electric
France: Rueil Malmaison

Yanbu National Petrochemical Company - YANSAB
Saudi Arabia: Yanbu

CEM Energy Management Leadership Awards

Congratulations to the 2022 Award Recipients!



شركة أبوظبي لخدمات الصرف الصحي
Abu Dhabi Sewerage Services Company



بلدية رأس الخيمة
Ras Al Khaimah Municipality

هيئة الطرق والمواصلات
ROADS & TRANSPORT AUTHORITY





In 2022, the Clean Energy Ministerial honored three organizations with the Award of Excellence in Energy Management:

Grupo Libertad

Grupo Libertad is a brand of superstores and malls, with 15 facilities across Argentina. Libertad set a goal to reduce its energy costs, not only as a business strategy but also as a reinforcement of its commitment to reduce its carbon footprint. Key energy-saving projects included repairs to refrigeration camera doors, optimizing refrigeration compressors, updating lighting across the superstore, and setting up automated controls for air conditioning. As a result of Libertad's efforts, the company's Rivera Indarte location improved its energy performance 12% over two years, for a total energy cost savings of USD 45,000.

PT. ISM Bosgari Flour Mills Tbk.

Bogasari's integrated flour mills operate with a total annual capacity of around 4.4 million tonnes and serve industrial and retail customers domestically in Indonesia and worldwide. The company saw ISO 50001 as a means of maintaining competitive advantage (in terms of costs and prices) without impacts on the labor force or product quality. During the first three years of energy management system implementation, the company improved its energy performance by 16.6%, and realized energy cost savings of USD 3,671,800. The Jakarta site was Bogasari's first facility certified to ISO 50001, and they developed standard operating procedures that the company replicated at other Bogasari plants.

Tyndall National Institute

Energy management and decarbonization are part of the fabric of this European research center, which delivers multidisciplinary energy system research across energy saving, production, and storage technologies, as well as policy, regulation, and business models. A core objective of Tyndall's research strategy is to develop innovative technologies to help address some of the most pressing sustainability challenges facing society today. Energy-focused projects at Tyndall have saved 7,591 GJ of energy, translating into cost savings of USD \$152,373. Beyond the energy and cost savings, Tyndall's sustainability credentials have attracted high-quality staff, grant funding, and onsite company tenants.

Grupo Libertad



ISO 50001 Certified:

Sucursal Rivera Indarte

Cost savings: \$45,000 over 3 years
CO₂ reduction: 243,000 metric tons

PT. ISM Bogasari Flour Mills Tbk.

ISO 50001 Certified:

Bogasari Jakarta and Bogasari
Surabaya

Cost savings: \$3,671,800 over 3 years

CO₂ reduction: 27,520 metric tons



Tyndall National Institute



ISO 50001 Certified:

Tyndall National Institute

Cost savings: \$152,373 over 3.5 years

CO₂ reduction: 510 metric tons



In addition, 26 organizations received Energy Management Insight Awards in 2022 for helping to build global insight on the benefits of energy management systems in industrial, commercial, and public-sector facilities.

3M Company – Global



ISO 50001 Certified:

56 sites across 12 countries and regions

Cost savings: \$24,000,000 over 6 years

CO₂ reduction: 301,000 metric tons

3M Company – Latin America

ISO 50001 Certified:

6 sites across Brazil, Mexico, and Panama

Cost savings: \$3,984,000 over 6 years

CO₂ reduction: 20,000 metric tons



Abu Dhabi Sewerage Services Company – ADSSC



ISO 50001 Certified:

Al Mafraq STP

Cost savings: \$545,757 over 4 years

CO₂ reduction: 2,660 metric tons

ADNOC Gas Processing

ISO 50001 Certified:

7 sites in Abu Dhabi

Cost savings: \$64,900,000 over 6 years

CO₂ reduction: 1,420,000 metric tons



ADNOC LNG



ISO 50001 Certified:

Das Island

Cost savings: \$42,000,000 over 7 years

CO₂ reduction: 202,000 metric tons

ADNOC Logistics & Services

ISO 50001 Certified:

Shipping Fleet

Cost savings: \$33,500,000 over 3 years

CO₂ reduction: 183,000 metric tons



ADNOC Offshore



ISO 50001 Certified:

11 sites in Abu Dhabi

Cost savings: \$55,000,000 over 8 years

CO₂ reduction: 864,000 metric tons

ADNOC Onshore

ISO 50001 Certified:

ADNOC Onshore

Cost savings: \$55,230,396 over 11 years

CO₂ reduction: 1,065,386 metric tons



ADNOC Refining



ISO 50001 Certified:

7 sites across United Arab Emirates

Cost savings: \$24,740,000 over 2 years

CO₂ reduction: 239,506 metric tons

Emirates National Oil Company Limited (ENOC) L.L.C. (ENOC Corporate Real Estate)

ISO 50001 Certified:

ENOC Complex

Cost savings: \$418,232 over 3 years

CO₂ reduction: 2,446 metric tons



ENOC Retail LLC



ISO 50001 Certified:

36 sites across the United Arab Emirates

Cost savings: \$1,146,220 over 3 years
CO₂ reduction: 4,866 metric tons

General Motors do Brazil complex São José dos Campos

ISO 50001 Certified:

GMB SJC

Cost savings: \$95,346.90 over 3 years

CO₂ reduction: 144.67 metric tons



Laboratorios Farmacéuticos ROVI S.A. - Granada



ISO 50001 Certified:

Laboratorios ROVI GRANADA

Cost savings: \$38,160.13 over 2 years

CO₂ reduction: 3,363 metric tons

Loreal Argentina S.A. – Distribution Center

ISO 50001 Certified:

Centro Logistico L'Oréal Norlog

Cost savings: \$11,264 over 1 year

CO₂ reduction: 144 metric tons



Maynilad Water Services, Inc.



ISO 50001 Certified:

10 sites across the Philippines

Cost savings: \$1,698,413 over 5 years

CO₂ reduction: 10,513 metric tons

NTPC Simhadri

ISO 50001 Certified:

Simhadri Super Thermal Power
Station

Cost savings: \$11,960,000 over 6 years

CO₂ reduction: 100,661 metric tons



NTPC Sipat



ISO 50001 Certified:

NTPC Sipat

Cost savings: \$8,300,000 over 4 years

CO₂ reduction: 570,000 metric tons

PT Kilang Pertamina Internasional Refinery Unit IV Cilacap

ISO 50001 Certified:

RFCC Plant

Cost savings: \$2,797,027 over 1 year

CO₂ reduction: 26,934 metric tons



PT Pamapersada Nusantara



ISO 50001 Certified:

PAMA SMMS

Cost savings: \$12,241,971 over 2 years

CO₂ reduction: 13,922 metric tons

PT Pertamina Hulu Energi West Madura Offshore

ISO 50001 Certified:

Poleng Processing Platform (PPP),
Central Processing Platform (CPP),
and Onshore Receiving Facility (ORF)

Cost savings: \$931,986 over 1 year
CO₂ reduction: 48,095 metric tons



Ras Al Khaimah Municipality



ISO 50001 Certified:

10 sites in Ras Al Khaimah

Cost savings: \$57,700 over 2 years

CO₂ reduction: 472 metric tons

Raymond Limited – Vapi, Textile Division

ISO 50001 Certified:

Raymond Limited

Cost savings: \$40,381 over 1 year

CO₂ reduction: 380 metric tons



Roads & Transport Authority Dubai



ISO 50001 Certified:

9 sites in Dubai

Cost savings: \$80,724,729 over 8 years

CO₂ reduction: 313,610 metric tons

SABIC Polyolefine GmbH

ISO 50001 Certified:

SABIC Polyolefine GmbH

Cost savings: \$200,000,000 over 12 years

CO₂ reduction: 51,300 metric tons



Schneider Electric



ISO 50001 Certified:

Le Hive

Cost savings: \$282,000 over 12 years

CO₂ reduction: 5,814 metric tons

Yanbu National Petrochemical Company - YANSAB

ISO 50001 Certified:

YANSAB

Cost savings: \$23,264,482 over 11 years

CO₂ reduction: 1,123,040 metric tons



2022 Participating Organizations, by Industry

Automotive

General Motors do Brazil

Education

Tyndall National Institute

Electronics and Electrical Equipment

Schneider Electric

Food Processing

PT. ISM Bogasari Flour Mills Tbk.

General Manufacturing

3M Company

Government

Roads & Transport Authority Dubai

Mining & Minerals Processing

PT Pamapersada Nusantara

Municipality

Ras Al Khaimah Municipality

Oil & Gas

ADNOC Gas Processing

ADNOC LNG

ADNOC Logistics & Services

ADNOC Offshore

ADNOC Onshore

ADNOC Refining

ENOC Corporate Real Estate

ENOC Retail

PT Kilang Pertamina Internasional Refinery Unit
IV Cilacap

PT Pertamina Hulu Energi West Madura Offshore

Petrochemical

SABIC Polyolefine GmbH

Yanbu National Petrochemical Company -
YANSAB

Pharmaceuticals

Laboratorios Farmacéuticos ROVI S.A.

Power Generation

NTPC Simhardri

NTPC Sipat

Retail

Grupo Libertad

Loreal Argentina S.A.

Textile

Raymond Limited

Water and Wastewater Treatment

Abu Dhabi Sewerage Services Company – ADSSC

Maynilad Water Services, Inc.

2022 Participating Organizations, by Country & Region

Argentina

Grupo Libertad, Córdoba, Córdoba

Loreal Argentina S.A., Benavidez, Buenos Aires

Australia

3M Company*, Guildford, New South Wales

Belgium

3M Company*, Zwinjndrecht

Brazil

3M Company*, Itapetininga; Manaus; Ribeirão Preto; Sumaré

General Motors do Brazil, São Paulo, São José dos Campos

Canada

3M Company*, Brockville, Ontario; London, Ontario; Montreal, Quebec; Morden, Manitoba; Perth, Ontario

France

3M Company*, Tilloy Lez Cambrai

Schneider Electric, Rueil Malmaison

Germany

3M Company*, Hilden; Jüchen; Kamen; Kempen; Neuss; Seefeld; Wuppertal

SABIC Polyolefine GmbH, Gelsenkirchen

India

NTPC Simhadri, Andhra Pradesh

NTPC Sipat, Bilaspur, Chattisgarh

Raymond Limited, Khadki, Gujarat

Indonesia

PT. ISM Bogasari Flour Mills Tbk., North Jakarta, Jakarta; Surabaya, East Java

PT Kilang Pertamina Internasional Refinery Unit IV Cilacap, Cilacap, Central Java

PT Pamapersada Nusantara, Sekako, Central Borneo

PT Pertamina Hulu Energi West Madura Offshore, Gresik, East Java

Ireland

Tyndall National Institute, Cork

Mexico

3M Company*, Edumex, Juárez; San Luis Potosí

Panama

3M Company*, Panama Pacifico

Philippines

Maynilad Water Services, Inc., Quezon City; Pasay City; Paranaque City; Manila City; Muntinlupa City

Poland

3M Company*, Wrocław

Saudi Arabia

Yanbu National Petrochemical Company - YANSAB, Industrial Yanbu

Spain

Laboratorios Farmacéuticos ROVI S.A., Granada

South Korea

3M Company*, Hwaseong; Naju-si, Jeollanam-do

Taiwan

3M Company*, Tainan

2022 Participating Organizations, by Country & Region (Continued)

United Arab Emirates

Abu Dhabi Sewerage Services Company – ADSSC, Abu Dhabi, Al Mafraq

ADNOC Gas Processing, Abu Dhabi

ADNOC LNG, Abu Dhabi

ADNOC Logistics & Services, Abu Dhabi

ADNOC Offshore, Abu Dhabi

ADNOC Onshore, Abu Dhabi

ADNOC Refining, Abu Dhabi; Sas Al Nakhl; Musaffah; Ruwais

ENOC Corporate Real Estate, Dubai

ENOC Retail LLC, Dubai

Ras Al Khaimah Municipality, Ras Al Khaimah

Roads & Transport Authority Dubai, Dubai

United States of America

3M Company*, Aberdeen, SD; Alexandria, VA; Ames, IA; Brookings, SD; Brownwood, TX; Clinton, TN; Columbia, MO; Cordova, IL; Corona, CA; Cottage Grove, MN; Cynthiana, KY; Decatur, AL; Guin, AL; Hartford City, IN; Hutchinson, MN; Little Rock, AR; Menomonie, WI; Midway, TN; Nevada, MO; New Ulm, MN; Moncure, NC; Prairie du Chien, WI; Rockland, MA; Springfield, MO; Tonawanda, NY; Valley, NE; Wausau, WI

*Indicates sites included in an organization's global or broader regional submission

Clean Energy Ministerial

Energy Management Leadership Awards

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