



MINISTRY OF ENERGY AND NATURAL RESOURCES



neo

NATIONAL ENERGY AWARDS



AKAUN AMANAH
INDUSTRI BEKALAN
ELEKTRIK (AAIBE)

NEA SECRETARIAT

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FOREWORDS



FOREWORD BY

**YB Datuk Seri Dr. Shamsul
Anuar bin Hj Nasarah**

Minister of Energy and Natural Resources



The National Energy Awards (NEA) is one of Malaysia's most coveted and prestigious awards which recognises the excellent achievements and best practices of local institutions and organisations in driving the sustainable energy agenda.

Since its inception in 2018, NEA has received overwhelming response from industry players and various organisations. A total of 417 entities had participated in NEA over the last 3 years. 54 organisations have emerged as winners of NEA and 42 of them have received accolades at the regional level in the ASEAN Energy Awards (AEA). This is indeed a remarkable achievement for the country and it is my earnest hope that NEA will continue to play its role to recognise more local players who are leaders, pace setters and game changers within the renewable energy and energy efficiency fraternity.

I would like to take this opportunity to extend my heartfelt appreciation to all who have participated in NEA 2020. Your commitment and continuous support have elevated the stature of this national award to what it is today.

I would also like to congratulate all winners of NEA 2020 and the 15 recipients of the ASEAN Energy Awards 2020. I hope that all of you will remain steadfast in furthering Malaysia's sustainable energy development agenda.

Last but not least, I would like to thank the NEA 2020 Organising Committee for their efforts and commitment in making this event a huge success.

Thank you.

FOREWORD BY

Datuk Zurinah Pawanteh

Secretary General,
Ministry of Energy and Natural Resources
Chair of NEA Executive Committee



The introduction of the National Energy Awards (NEA) is to appreciate and recognise the achievements and best practices of government and private entities in embracing energy efficiency (EE) and renewable energy (RE) initiatives, as one of their contributions to reduce the carbon footprint within the energy sector.

Coming into its third year, NEA 2020 has seen a continued growth of participations, which is a positive sign that more industry players are taking greater interest and are mindful of the need to minimise their carbon footprint. The 110 submissions received in 2020, which is the highest since its inception is a testimony to such encouraging development.

As the utilisation of energy has been central to economic development, efforts to lower our country's carbon footprint through the adoption of sustainable energy are a collective effort and can only be achieved with the support from all stakeholders. Thus, it is my utmost hope that this recognition will encourage more local businesses and corporations to embrace the "new norm" in electricity supply.

Let me extend my gratitude to the Organising Committee from the Ministry of Energy and Natural Resources, Energy Commission of Malaysia, Sustainable Energy Development Authority (SEDA), Malaysian Green Technology Corporation and all who have participated and contributed in making the National Energy Awards 2020 a success.

Congratulations to all winners! Let's continue to strive for a more sustainable Malaysia that will benefit everyone and making our nation a better place for the future generations.

FOREWORD BY

Noor Afifah Binti Abdul Razak

Deputy Secretary General [Energy],
Ministry of Energy and Natural Resources
Chair of NEA Technical Committee



The National Energy Awards (NEA) is instrumental in identifying best sustainable energy practices by Malaysian organisations, as the winners were determined through a thorough and vigorous evaluation process by panel of judges consisting of subject matter experts and representatives from the industry, academia and professional bodies. The high standard of evaluation has ensured that only the best will be selected as winners and will subsequently represent Malaysia at the ASEAN Energy Awards (AEA).

I am proud to see that in the last 3 years, Malaysian companies have received recognition each year at the regional level, which bodes well in our aspirations of being the market leader in ASEAN. The recognition has illustrated and acknowledged Malaysia's efforts in driving the sustainable energy agenda.

This year's NEA has expanded its scope by introducing the Special Awards category for Institutions of Higher Learning, Energy Performance Contracting (EPC) projects, and financial institutions that fund sustainable energy initiatives. This new category was introduced to further expand our recognition and to encourage other industry sectors to embrace the concept of sustainable

energy, improve energy performance and apply energy best practices in their business operations.

I sincerely hope NEA will evolve from a key industry platform to identify Malaysia's best organisations in implementation of RE and EE initiatives to a knowledge sharing avenue for all sectors in the region and consequently, to position Malaysia as the regional market leader in sustainable energy.

On behalf of the NEA Technical Committee, I would like to express my sincerest appreciation to the Organising Committee as well as the panel of judges and evaluators for their commitment, hard work and dedication during the evaluation process and for making NEA 2020 a success.

Last but not least I would like to thank all participants of NEA 2020 for your continuous support in our endeavour for excellence in sustainable energy. I hope NEA will continue to inspire and challenge the industry players to keep improving their business operations and to propel to new heights in Malaysia and beyond.

Thank you.



The National Energy Awards (NEA) is a platform to highlight the development of ideas and best practices in driving the country's sustainable energy sector. It is also a strategic move to promote innovation in local projects & solutions in line with the country's aspiration to spur energy sector as the new area for economic growth.

The award recognizes the efforts of the public and private sectors across Malaysia in energy innovation and shall manifest a positive impact to the Rakyat as well as to create awareness on a broad level across the different facets of society.

The award is intended to recognize best practices in Malaysia for local product and services as a national benchmark to drive the following values which represent the evaluation criteria:

- **To recognize the best implemented practices, solutions in Energy Management and Efficiency that showcase innovative, cost effective and exemplary measures.**
- **To build the "Innovation Mind" as an important aspect in product technologies and solutions to support the Energy Industry's development agenda, lead towards commercialization.**
- **To promote the best of local technology projects and create a platform for public-private partnerships for commercial activities in Renewable Energy.**

www.nationalenergyawards.com.my

NEA AWARD CATEGORIES

CATEGORY 1

ENERGY EFFICIENCY (EE)

ENERGY MANAGEMENT

BUILDINGS

Small & Medium
below 2,000 MWh/year

Large
above 2,000 MWh/year

INDUSTRIES

Small & Medium
below 30 million MJ/year

Large
above 30 million MJ/year

ENERGY EFFICIENT BUILDING

GREEN BUILDINGS

Small & Medium
GFA of 300m² - 5,000m²

Large
GFA > 5,000m²

EE DESIGNED BUILDING

RETROFITTED BUILDING

TROPICAL BUILDING

CATEGORY 2

RENEWABLE ENERGY (RE)

ON GRID - NATIONAL / LOCAL

OFF GRID - THERMAL / POWER

COGENERATION

BIOFUELS

SPECIAL AWARDS

INSTITUTE OF HIGHER LEARNING

ENERGY PERFORMANCE CONTRACTING (EPC)

SUSTAINABLE ENERGY FINANCING

Conventional Financing

Islamic Financing

Development Financing Institutions & Others



73
REPORTS
SUBMITTED

19
WINNERS



WINNER
Category 1 - Energy Efficiency
Energy Management in Small Building
Project Name
Cofreth Headquarter
Company Name
Cofreth (M) Sdn Bhd



RUNNER UP
Category 1 - Energy Efficiency
Energy Management in Small Building
Project Name
KPJ Kluang Utama Specialist Hospital
Company Name
KPJ Kluang Utama Specialist Hospital



WINNER
Category 1 - Energy Efficiency
Energy Management in Large Building
Project Name
Kompleks Ibu Pejabat JKR Malaysia
Company Name
Jabatan Kerja Raya Malaysia



RUNNER UP
Category 1 - Energy Efficiency
Energy Management in Large Building
Project Name
Kota Kinabalu International Airport
Company Name
Malaysia Airports Holdings Berhad [MAHB]



WINNER
Category 1 - Energy Efficiency
Energy Management in Small Industry
Project Name
Dutch Lady Milk Industries Berhad
Company Name
Dutch Lady Milk Industries Berhad [DLM I]



RUNNER UP
Category 1 - Energy Efficiency
Energy Management in Small Industry
Project Name
Top Glove Sdn Bhd [Factory 5]
Company Name
Top Glove Sdn Bhd



WINNER
Category 1 - Energy Efficiency
Energy Management in Large Industry
Project Name
I-Green IOI Refinery
Company Name
IOI Edible Oils Sdn Bhd



RUNNER UP
Category 1 - Energy Efficiency
Energy Management in Large Industry
Project Name
BP Petronas Acetyls Sdn Bhd
Company Name
BP Petronas Acetyls Sdn Bhd



WINNER
Category 1 - Energy Efficiency
Green Building

Project Name
Perbadanan Kemajuan Negeri Selangor (PKNS) Headquarter

Company Name
Veritas Architects Sdn Bhd



RUNNER UP
Category 1 - Energy Efficiency
Green Building

Project Name
Amanjaya Specialist Centre

Company Name
Amanjaya Specialist Centre



WINNER
Category 1 - Energy Efficiency
Energy Efficient Design

Project Name
Perbadanan Kemajuan Negeri Selangor (PKNS) Headquarter

Company Name
Veritas Architects Sdn Bhd



WINNER
Category 1 - Energy Efficiency
Retrofitted Building

Project Name
Bangunan Perdana Putra

Company Name
Bangunan Perdana Putra - KFM Holdings Sdn Bhd



RUNNER UP
Category 1 - Energy Efficiency
Retrofitted Building

Project Name
Putra Specialist Hospital

Company Name
Danish Energy Efficiency Partners Sdn Bhd



WINNER
Category 2 - Renewable Energy
Off Grid - Thermal

Project Name
Thermal Hot Water System for Scalding Process at PPNJ Poultry and Meat Sdn Bhd

Company Name
Sirim Berhad



WINNER
Category 2 - Renewable Energy
Off Grid - Power

Project Name
Kampung Sop, The Solar Village

Company Name
Suncrox Solar



WINNER
Category 2 - Renewable Energy
National Grid

Project Name
Kekayaan Biogas Power Plant

Company Name
Betatechnic Sdn Bhd



RUNNER UP
Category 2 - Renewable Energy
National Grid

Project Name
Isuriaku: A Poverty Eradication Program Through FIT Scheme

Company Name
Gading Kencana Sdn Bhd



WINNER
Category 2 - Renewable Energy
Biofuel

Project Name
FGV Palm Industries (FELDA Palm Industries)

Company Name
FGV Palm Industries Sdn Bhd



RUNNER UP
Category 2 - Renewable Energy
Biofuel

Project Name
Bright Integrity Sdn Bhd

Company Name
Bright Integrity Sdn Bhd



77
REPORTS
SUBMITTED

15
WINNERS



WINNER

Category 1 - Energy Efficiency
Energy Management In Small & Medium Building

Project Name
Menara TM MITC Melaka

Company Name
Telekom Malaysia Berhad



RUNNER UP

Category 1 - Energy Efficiency
Energy Management In Small & Medium Building

Project Name
Wisma TNB, Jalan Anson, Pulau Pinang

Company Name
Tenaga Nasional Berhad [TNB]



WINNER

Category 1 - Energy Efficiency
Energy Management In Large Building

Project Name
Menara KOMTAR, Pulau Pinang

Company Name
PDC Setia Urus Sdn Bhd



RUNNER UP

Category 1 - Energy Efficiency
Energy Management In Large Building

Project Name
Hospital Slim River, Perak

Company Name
Edgenta Mediserve Sdn Bhd



WINNER

Category 1 - Energy Efficiency
Energy Management In Large Industry

Project Name
CSC Steel Sdn Bhd

Company Name
CSC Steel Sdn Bhd



RUNNER UP

Category 1 - Energy Efficiency
Energy Management In Large Industry

Project Name
Top Glove Sdn Bhd [Factory 14],
Selangor

Company Name
Top Glove Sdn Bhd



WINNER

Category 1 - Energy Efficiency
Green Building

Project Name
Environmental Preservation and
Innovation Centre (EPIC), Negeri
Sembilan

Company Name
Kualiti Alam Sdn Bhd



RUNNER UP

Category 1 - Energy Efficiency
Green Building

Project Name
IKEA Cheras, Kuala Lumpur

Company Name
Ikano Handel Sdn Bhd

PAST AWARD WINNERS
NEA 2019



RUNNER UP
Category 1 - Energy Efficiency
Retrofitted Building

Project Name
Subang Parade Mall

Company Name
Intellisense Sdn Bhd



WINNER
Category 1 - Energy Efficiency
Energy Efficient Design

Project Name
KLIA2, Selangor

Company Name
Malaysia Airports Holdings Berhad
[MAHB]



RUNNER UP
Category 1 - Energy Efficiency
Energy Efficient Design

Project Name
Paramit Factory in the Forest, Pulau
Pinang

Company Name
IEN Consultants



WINNER
Category 2 - Renewable Energy
On Grid - National Grid

Project Name
Grid Connected Floating Solar System
on the Water Retention Dam, Negeri
Sembilan

Company Name
Cypark Resource Sdn Bhd



RUNNER UP
Category 2 - Renewable Energy
On Grid - National Grid

Project Name
Building Integrated Photovoltaic
[BIPV], Negeri Sembilan

Company Name
Mattan Engineering Sdn Bhd



WINNER
Category 2 - Renewable Energy
On Grid - Local Grid

Project Name
Rural Electrification from Renewable
Energy [Biogas] for UMAS Community

Company Name
FGV Palm Industries Sdn Bhd



RUNNER UP
Category 2 - Renewable Energy
Off Grid - Power

Project Name
Centre for Renewable Energy, Faculty
of Engineering, Universiti Malaysia
Sarawak

Company Name
Universiti Malaysia Sarawak



MERIT AWARD
Category 1 - Energy Efficiency
Green Building

Project Name
Menara Ken TTDI

Company Name
Ken TTDI Sdn Bhd



MERIT AWARD
Category 2 - Renewable Energy
On Grid - National Grid

Project Name
KUB Berjaya Energy

Company Name
KUB Berjaya Energy Sdn Bhd



MERIT AWARD
Category 2 - Renewable Energy
On Grid - National Grid

Project Name
FIAH Application

Company Name
Gan Teng Siew Realty Sdn Bhd



MERIT AWARD
Category 2 - Renewable Energy
On Grid - National Grid

Project Name
6MW Perting Hydro Project, Bentong

Company Name
Amcorp Perting Hydro Sdn Bhd



MERIT AWARD
Category 2 - Renewable Energy
On Grid - National Grid

Project Name
Advance-Project-Management Sdn
Bhd - Mattan

Company Name
Mattan Engineering Sdn Bhd



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NATIONAL ENERGY
A W A R D S 2020



110
REPORTS SUBMITTED

31
WINNERS





CATEGORY 1

ENERGY EFFICIENCY



WINNER

ENERGY MANAGEMENT
IN LARGE BUILDING

1ST RUNNER-UP



Menara Korporat Persada PLUS

COMPANY NAME

Projek Lebuhraya Usahasama Berhad (PLUS Berhad)

DESCRIPTION

The project undertook an Energy Audit alongside the Energy Audit Grant from Sustainable Energy Development Authority (SEDA) in March 2017 before implementing any Energy Management measures. The Energy Management Committee led by the Chief Operating Officer and an Energy Policy was established to indicate top management's commitment for energy management.

With these measures, they were able to achieve energy savings of 15%; equivalent to 886.771 kWh from the baseline for the period from 2017 to 2019. They also achieved a carbon emission reduction of 615.4 tonnes per year over this period.

Investments for energy management measures undertaken from 2017 to 2019 had a payback period of 3.5 years. The measures complied with requirements of Environmental Management System, ISO14001 and saw a reduced Building Energy Index from 269.45 kWh/m²/year in 2016 to 230.32 kWh/m²/year in 2019.

Menara TM HQ

COMPANY NAME

Telekom Malaysia Berhad

DESCRIPTION

Established an Energy Management System (EMS) which includes having an Energy Management team and Energy Policy, to increase building efficiency, reduce operational costs and reduce environmental impact. The project has been certified to meet the following standards:

- Quality Management System, ISO 9001
- Environmental Management System, ISO 14001
- Green Building Index (GBI) and
- Energy Management System, ISO 50001

Investments for energy management measures undertaken from 2017 to 2019 had a payback period of 1.5 years. The implementation of the EMS has successfully reduced energy consumption by 21.6% or 13,156,229 kWh over this period whilst also reducing CO₂ emissions by 7,696.39 tonnes over the same period.

RUNNER UP

ENERGY MANAGEMENT
IN LARGE BUILDING





WINNER
ENERGY MANAGEMENT
IN SMALL & MEDIUM
BUILDING

TM Node Skudai, Johor

COMPANY NAME
Telekom Malaysia Berhad

DESCRIPTION
With rectifiers and related equipment being significant energy users accounting for 79% of total energy consumption, the immediate goal of the Energy Management was to suppress the consumption of electrical energy which was a consequence of higher telecommunications traffic and speed. The Power Usage Effectiveness (total building energy consumption per unit of energy consumed by the telecommunications equipment in the building), as a measure of energy efficiency index, reduced from 2.64 in 2016 to 1.27 in 2019.

Investments for Energy Management measures undertaken from 2017 to 2019 had a payback period of 2.8 years. The implementation of the Energy Management measures has successfully reduced building energy consumption by 33.9% over this period whilst also reducing CO2 emissions by 489.58 tonnes over the same period.

Top Glove F29

COMPANY NAME
Top Glove Corporation Berhad

DESCRIPTION
The implementation of energy management measures over the period 2017 to 2019 have reduced energy consumption by 10.5%. Internal meetings such as Quality Efficiency Improvement Meeting (QEIM) and General Department Meeting (GDM) have been organised to review the progress of energy management measures. The energy management measures comply with requirements of Environmental Management System, ISO14001.

The consumption of natural gas has reduced by 432,194 MMBTU/year and electrical energy consumption reduced by 5,015,149 kWh/year from 2017 to 2019 which has resulted in a carbon emission reduction of 28,083 tonnes per year over the same period.

The natural gas savings is achieved by, among others, the control of oven temperature via former temperature, 3R Heat Recovery and thermal insulation.

WINNER
ENERGY MANAGEMENT
IN LARGE INDUSTRY





WINNER
GREEN BUILDING
SMALL



PAM Centre

COMPANY NAME

Primetech Engineers Sdn Bhd on behalf of
Pertubuhan Arkitek Malaysia

DESCRIPTION

The PAM Centre serves to demonstrate that a top end green building can be designed without the need for sophisticated or expensive cutting edge technologies. This 8-storey office building is sited on a once-abandoned 4-storey former diamond workshop, and its construction retains all of the existing structural elements.

All public and circulation spaces are naturally ventilated while the centre staircase spanning from top to bottom allows constant daylighting from the roof skylights through grated voids on every floor.

Active sustainable features incorporated include high-COP VRF air-conditioners complemented with energy efficient thermal displacement air-conditioning for the auditorium, T5 and LED lighting, and a 25kWp PV system. Rainwater harvesting, vertical greenery and herb gardens add a functional dimension to the building landscape.

The building has a GBI Platinum rating with 5-EE star rating and a BEI of 76 2000hrs.

Honda BHS Auto Showroom and Car Centre

COMPANY NAME

Green Quarter Sdn Bhd on behalf of Ban Hoe Seng (Auto) Sdn Bhd

DESCRIPTION

The building achieved a GBI Gold rating with a BEI of 55 2000 hrs. The use of low-e laminated glass with SC 0.54 for the Showroom and a VLT of 60% meets Honda's requirements for visibility. It has an impressive LED lighting load of 6.2 W/m², augmented by the maximum use of daylighting covering 60% of the net floor area. 41% of total GFA is naturally ventilated through use of both cross and stack ventilation.

Active sustainable features incorporate high-COP (up to 5.24) VRF air-conditioners, heat recovery for pre-cooled outdoor air system, CO₂ sensor for demand control of outdoor air intake, and 40.25 kWp solar PV system. Rainwater harvesting and condensate water recovery has been implemented for irrigation, general cleaning and car washing. The building also incorporates wide aspects of sustainable building construction with CUI of 0.38, IBS of 63%, use of recycled content materials, sustainable timber products, water efficient fittings, extensive greenery covering 16.7% of total site area and vertical greenery covering 17.8% of facade area.

RUNNER UP
GREEN BUILDING
SMALL





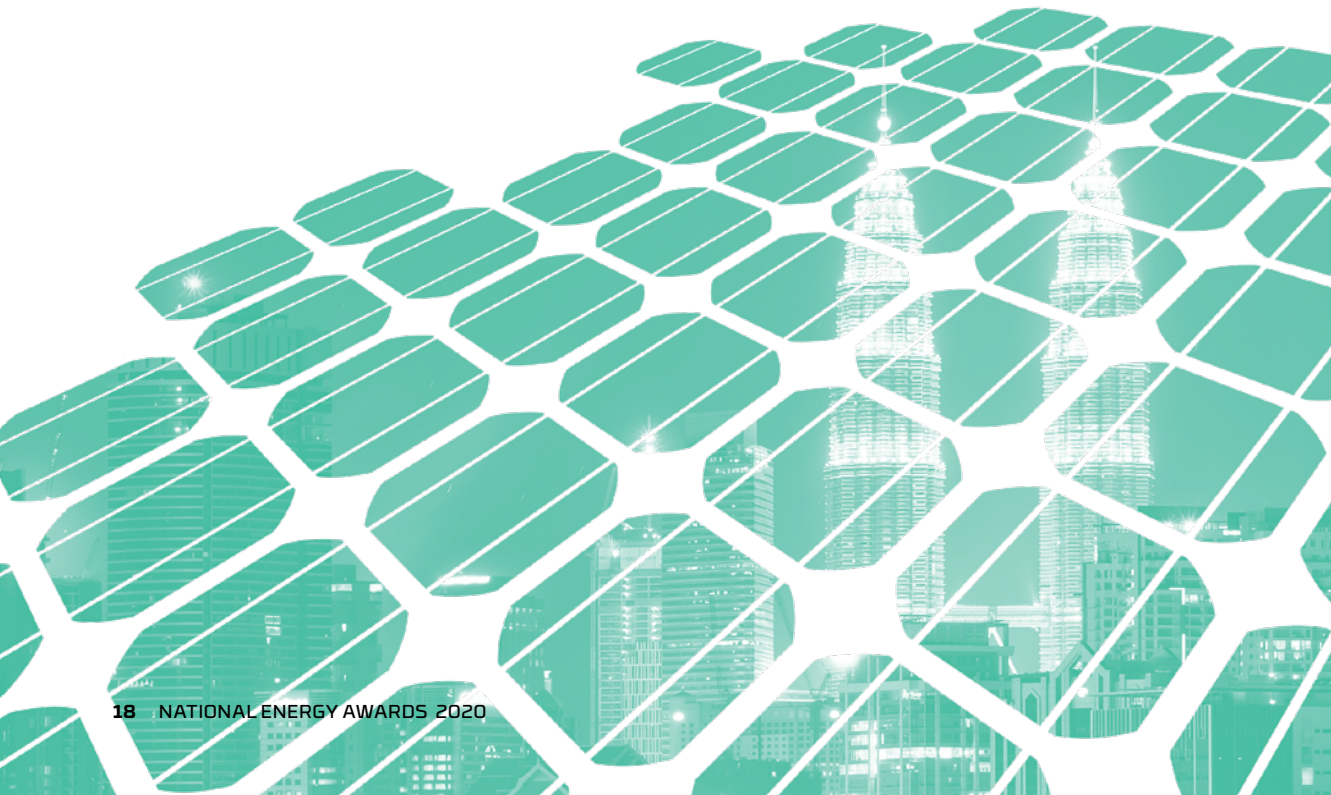
**MERIT
AWARD**
GREEN BUILDING
SMALL

Wisma REHDA

COMPANY NAME
REHDA

DESCRIPTION
The design promotes minimal exposure of direct sunlight from east and west direction. 100% of its parking areas and corridors make use of Natural Ventilation and Natural Daylighting. While the air-conditioning system uses York Digital Variable Multi Air Conditioner with COP 3.31. Motion sensors and timers for lighting are installed along the corridor area, toilet, staircases and basement parking.

The total capacity of the installed Solar Photovoltaic (PV) is 71kWp. The total renewable energy generation per year is around 83,038kWh with 19,163 kWh and 63,875 kWh generated from the 21 kWp and 50 kWp systems, respectively.





WINNER
GREEN BUILDING
LARGE



Menara KEN TTDI

COMPANY NAME

Ken TTDI Sdn Bhd

DESCRIPTION

A 13-storey office building adopting green passive and active design principles. Sustainable features include 138 kWp solar PV, low-e glazing facade, daylighting, natural ventilation for full height atrium, CO2 sensors for outside air modulation, roof garden, ultra-efficient air-conditioning system, condensate water harvesting and 3R practices.

The building has an excellent lighting load of only 5.5 W/m² and achieving BEI of 69 2000hrs and has obtained LEED Platinum, Green Mark Platinum, GreenRE Platinum ratings.

LCDA Tower

COMPANY NAME

Primetech Engineers Sdn Bhd on behalf of LCDA Holdings Sdn Bhd

DESCRIPTION

The 11-storey state-owned LCDA headquarters building designed to be energy efficient, water efficient, have good IEQ, vast greenery and minimising waste.

Sustainable features incorporated include optimum building orientation, efficient building envelope, super-efficient water-cooled package air-conditioners representing industry's first COP of 5.5 and equipped with state-of-the-art electronically commutated (EC) fans, demand control ventilation system, low VOC materials, water efficient fittings and rainwater harvesting.

The implementation of a low lighting load of 9W/m², use of regenerative lifts, advanced Electrostatic Precipitator air filters, non-chemical water treatment system, conservation of existing softscape, 22.7% of total site area landscaped and conscious recycling practice all serve to enhance the building sustainable use.





WINNER
RETROFITTED
BUILDING



Menara Weld and The Weld Shopping Centre

COMPANY NAME

Primetech Engineers Sdn Bhd on behalf of Great Eastern Life Assurance (M) Bhd

DESCRIPTION

A 26-storey office tower sitting on top of a 6-storey retail mall built in the late 1980s, the tower and mall were served by separate chiller plants. The retrofit exercise combined the cooling load under a common tower plant with the mall plant converted into a standby plant. Replacement chiller capacities were optimised to suit the load profile of the 2 building entities and variable speed pumps and cooling towers were fitted. The air-conditioning retrofit resulted in an overall energy savings of 23.12%. Savings from re-lamping with LED including for the car parking levels contributed to another 15.58% energy savings with an impressive total combined energy savings of 38.7%.

The indoor environment quality was enhanced to meet MS 1525 and ASHRAE STD 55 standards. After retrofitting, the BEI achieved were Office 97.6 and Mall 116.6 respectively.

Angsana Johor Bahru Mall

COMPANY NAME

Taiace Engineering Sdn Bhd on behalf of UDA Angsana Sdn Bhd

DESCRIPTION

Active energy improvement measures were implemented for the replacement and reconfiguration of aging chillers with magnetic oil free chillers and conventional centrifugal chillers, followed by retro-commissioning, and retrofitting air-side equipment including adding VSDs; relamping T8 with LED and installing 2 units of power quality device.

Additionally, passive energy improvement measures were also implemented through installation of tinting film for high volume podium glass façade, adding external horizontal shading device for parking levels, introducing air curtain and sliding door at main entrances, and improving glass roof top for daylighting.

The active and passive improvement measures resulted in an energy savings of 23%.

RUNNER UP
RETROFITTED
BUILDING





WINNER
ENERGY EFFICIENT
BUILDING



LCD Tower

COMPANY NAME

Primetech Engineers Sdn Bhd on behalf of LCDA Holdings Sdn Bhd

DESCRIPTION

The 11-storey state-owned LCDA headquarters building designed to be energy efficient, water efficient, have good IEQ, vast greenery and minimising waste. Passive EE features include optimizing the building orientation, and ensuring an efficient building envelope. This is complemented by reduced heat island impact by conserving existing softscape, greening 22.7% of the total site area, extensive use of grasscrete for hardscaped areas and a roof with high solar reflectance index of 69.

By taking the application of super-efficient water-cooled package air-conditioners to a new global benchmark with the industry's highest COP of 5.5 and equipped with state-of-the-art electronically commutated (EC) fans. The EE air-conditioners are aptly supported with demand control ventilation system, a VAV airside system for close comfort control and the probably the country's first variable condenser flow system. Other EE installations include low lighting load of 9W/m², regenerative lifts, advanced Electrostatic Precipitator air filters, non-chemical water treatment system, water efficient fittings and rainwater harvesting.

IKEA Tebrau

COMPANY NAME

Saturn Pyro Sdn Bhd on behalf of Ikano Handel Sdn Bhd

DESCRIPTION

Retail mall with extensive green features and GBI Gold rated with a BEI of 154.

The micro climate is addressed by conserving existing natural areas and maximising space to provide habitat and promote biodiversity with vegetated open spaces exceeding local zoning requirements. This is complemented with the use of high efficiency chillers with high delta-T, efficiency pumps, fans and motors. Also implemented were LED lighting throughout with lighting load of 7.5 W/m² and warehouse lighting controlled by motion sensors. Provisions were also made to account for the demand of ventilation control for outside air. The mall also installed 1.3 MW of solar PV generating 1,511 Megawatt hours annually to account for over 20% of total energy consumption.

**RUNNER
UP**
ENERGY EFFICIENT
BUILDING





CATEGORY 2

RENEWABLE ENERGY



WINNER

ON-GRID
(NATIONAL GRID)

2ND RUNNER-UP



ASEAN ENERGY
AWARDS 2020

A Real-Life Renewable Energy Business Model by Developing Biogas Plant Capable to Export 1.5 MW Power to National Grid at FGV Lepar Hilir, Gambang, Pahang

COMPANY NAME

Concord Green Energy Sdn Bhd

DESCRIPTION

The facility captures biogas from POME and generates 1.5MW of electricity (commissioned in Dec 2018) under the FiT mechanism. This form of renewable energy has clear benefits and positively impacts the user, community and ecosystem. Report submission on the project is good with sufficient information and data available.

Sungai Liang 2 x 10MW Sungai Mini Hydro Project, Raub, Pahang

COMPANY NAME

Ancorp Power Sdn Bhd

DESCRIPTION

The 2x10MW mini hydro plant (run-of-the-river hydroelectricity) was commissioned in August 2018 and now supplies 85% of Raub town's energy. The plant has also contributed to flood control (flood mitigation) in the area. Additionally, the plant has created job opportunities for locals and the company has been involved with CSR for the local communities. Report submission on the project is good with all required information and data available.

RUNNER UP

ON-GRID
(NATIONAL GRID)

WINNER



ASEAN ENERGY
AWARDS 2020





WINNER

ON-GRID
[LOCAL GRID]

2ND RUNNER-UP



ASEAN ENERGY
AWARDS 2020

Captive Power Generation for KKS Merotai from Renewable Energy Palm Oil Mill Effluent at Merotai Biogas Power Plant

COMPANY NAME

Sime Darby Plantation Berhad

DESCRIPTION

1MW biogas plant to supply electricity to KKS Merotai which includes milling stations, a waste water treatment plant and estate's housing. The captive power from the biogas plant has reduced the need for diesel fuel by 96.2%. Improvements have also been made to the quality of the effluent treatment process which eliminates bad odour and smell. The facility has also collaborated with SIRIM for R&D trials to utilise biogas and be converted into concentrated biomethane. The facility has also created employment opportunities for locals. Report submission on the project is good with sufficient information and data available.

Solar Thermal Hot Water System

COMPANY NAME

Hospital Sungai Buloh

DESCRIPTION

The installation has reduced the consumption of LPG by 50-60%. The installation is expected to have a payback period of 8.5 years. This proof of concept aims to promote the thermal application in Malaysia.

RUNNER UP

OFF-GRID
[THERMAL]





WINNER

OFF-GRID
(POWER)

Sarawak Energy CSR Solar Project for Rh Andah, Nanga Sumpa 2018 & Rh Bada, Nanga Talong 2019 at Batang Ai Lubok Antu

COMPANY NAME

Sarawak Energy Berhad

DESCRIPTION

The facility provides basic round-the-clock off grid power supply for communities in the area. The centralised solar power system (CSPS) with 1kWp per household, 3 days battery autonomy and 3kWh/day per household for basic electricity. Additionally, the company provided new internal wiring with 5 lighting points and 4 power sockets for each household. The implementation has reduced the diesel consumption. Report submission on the project is good with all required information and data available

Centralized Off Grid Photovoltaic Design & Knowledge Transfer Program for Kampung Orang Asli Kuala Woh, Intake, Tapah Perak (CSR Project with Bank Islam Malaysia Berhad)

COMPANY NAME

Universiti Teknologi Malaysia

DESCRIPTION

The project is an initiative under the Bank Islam CSR Program with UTM as the implementer. The project implemented a Centralized solar PV program for 15 orang Asli households (4kWp). They also provided for the community (PV edukit) and maintenance. Each household was fitted with 2 LED lights and 1 high efficiency wall fan. The installation also included a protection system and energy limiter.

RUNNER UP

OFF-GRID
(POWER)





WINNER

BIOFUEL

1ST RUNNER-UP



Biohydrogen and Biomethane Production from Palm Oil Mill Effluent with Carbon Capture

COMPANY NAME

UKM-YSD Chair for Sustainable Development

DESCRIPTION

This is a pilot scale research project on the implementation of zero waste technologies for palm oil mills. The introduction of these technologies is to promote sustainable practices such as the following:

- Biomass pre-treatment for Bio-hydrogen production
- Utilisation of POME & EFB hydrolysate for biohydrogen production
- Hydrogen for power generation
- Algae CO₂ sequestration & effluent treatment
- Water recycling & reuse

Sahabat Biomass Cogeneration Plant, Lahad Datu, Sabah

COMPANY NAME

FGV Palm Industries Sdn Bhd

DESCRIPTION

The plant has the capacity of EFB to generate 7.2MW electricity and 16 t/hour steam generation. This has reduced diesel usage which has also reduced GHG emissions which improves the quality of wastewater discharged into public waterways. This has also been complemented by the installation of pollution control equipment to minimise the emissions from particulates and other pollutants. The project has shown improvement in technology has clear benefits and positively impacts the user, community and ecosystem. Report submission on the project is good with sufficient information and data available.

WINNER

COGENERATION





SPECIAL AWARDS





SPECIAL AWARD
INSTITUTE OF HIGHER LEARNING

Multimedia University, Melaka

DESCRIPTION
MMU Melaka Campus has been operating since 1997 using the existing building. The total building energy consumption in 2019 has decreased by 23.27% based on baseline year 2011. The key initiatives implemented are energy saving campaign, monthly email to all staff, induction light & LED retrofitted lighting, replacement of chiller, chiller plant optimization, installation of VRF system, digital timer, motion sensor, energy monitoring system, daily & night round. The used chemicals from engineering and biochemical laboratories are treated and are kept inside the Hazardous Water Disposal Facility while awaiting for Kualiti Alam collection. The BEI improved from 132.92kWh/m²/year to 101.99kWh/m²/year.

Sunway University

DESCRIPTION
Sunway University has taken the initiative to utilise the available roof on top of South Building and Main Building with solar photovoltaic system. This generates green energy from the sun of up to 672,000 kWh per year, reducing its carbon footprint and carbon emissions. Transmission and Distribution Losses (T&D Losses) is 4% and generation side loss is 55%, so the total energy offset at generation side will be 672.00.0.41= 1639 MWh equivalent, Sunway University Solar System is always operational, 24 hours a day, 365 days a year and is being monitored by an Energy Monitoring System (EMS)

SPECIAL AWARD
INSTITUTE OF HIGHER LEARNING





SPECIAL AWARD
ENERGY PERFORMANCE CONTRACTING

Politeknik Merlimau Campus

OWNER
Politeknik Merlimau Campus

ESCO
Taice Engineering Sdn Bhd

DESCRIPTION
The Renewable Energy - Solar Project is a collaboration between JKR, TNB, Hydroelectric Power Plant and UG Power Sdn Bhd. The aim of the project is to ensure all green projects in PMM will acquire Sustainable (Green) Project Management Association (IPMA) and the United Nation Global Compact certification. The project also seeks to expand the focus areas based on Smart Green POLYCC that will help to reduce carbon emissions via waste, water, transportation, research & procurement.

TM Node Bandar Tun Razak

OWNER
Telekom Malaysia Berhad

ESCO
Lotus West Sdn Bhd

DESCRIPTION
TM Node Bandar Tun Razak is one of telecoms exchanges that serves all telecoms services for Bandar Tun Razak and its nearby area. With a total space area of 39,690 square feet consisting of 4 storeys, electrical load apportionment for TM Node Bandar Tun Razak and 50% of the load is consumed by cooling requirement for the equipment room.

Energy saving measures proposed by ESCO is focused on the cooling aspects whereby all cooling requirement of equipment rooms is analysed in terms of heat load requirement, equipment rack orientation as well as existing air-conditioning units used. ESCO will retrofit and replace old air conditioning units with highly efficient air conditioning units, together with dedicated environmental optimisation control systems. Support systems to the main EPC program such as real-time energy monitoring, equipment temperature monitoring and alarm escalation management have enhanced further reliability and resiliency of power and cooling systems in TM Node Bandar Tun Razak.



SPECIAL AWARD
ENERGY PERFORMANCE CONTRACTING



**SPECIAL
AWARD**

ENERGY
PERFORMANCE
CONTRACTING

International Islamic University Malaysia, Gombak Campus

OWNER

International Islamic University Malaysia, Gombak Campus

ESCO

Cenergi EE Sdn Bhd

DESCRIPTION

Cenergi has implemented numerous energy efficient measures at The International Islamic University Malaysia (Gombak Campus) that has managed to result in energy savings average of up to 22%. The total average energy savings has been 22.56% per year since implementation. The chilled and condenser water pumps are fitted with Variable Speed Drives (VSD) systems and control solutions to regulate water flow. More than 40,000 units of T8 LED lights were retrofitted which resulted in almost 2% improvement from the total energy bills. Additionally, trees and potted plants are planted all around to absorb CO2 and produce O2.

SPECIAL AWARD SUSTAINABLE ENERGY FINANCING

Conventional Financing

UOB Bank



OCBC Bank



Islamic Financing

Affin Islamic



Maybank Islamic



Development Financing Institutions & Others

Malaysia Debt Ventures Berhad



SME Bank





MALAYSIAN WINNERS AT ASEAN ENERGY AWARDS





MALAYSIAN WINNERS AT ASEAN ENERGY AWARDS 2018

HELD IN SINGAPORE

CATEGORY		OUTCOME	COMPANY NAME
Green Building Awards 2018	Large Building	Winner	PKNS HQ
		2 nd Runner-up	Amanjaya Specialist Centre Green Hospital
Energy Management for Buildings & Industry Awards 2018	Small & Medium Building	1 st Runner-up	Cofreth HQ
	Large Building	Winner	Public Works Department
	Small & Medium Industry	2 nd Runner-up	Top Glove F05
	Large Industry	2 nd Runner-up	IOI Edible Oils
Energy Efficient Building Awards 2018	Retrofitted Building	1 st Runner-up	Prime Minister's Office
Renewable Energy Awards 2018	Off-Grid - Thermal Category	1 st Runner-up	Solar Thermal Hot Water System For Scalding Process At Poultry And Meat
	On-Grid - National Grid	1 st Runner-up	Innovative And Sustainable Poverty Eradication Program Using Solar PV Feed-In Tariff (FIT) Mechanism: SURIAKU
	Special Submission	Winner	ABB Fast EV Charger Using Solar PV
Excellence in Energy Management by Individuals 2018	1. Dato Roslina Zainal, Vice President Regulatory Economics and Planning, Tenaga Nasional Berhad		
	2. Ir. Azhar Omar, Chief Executive Officer Energy Commission (Suruhanjaya Tenaga)		



MALAYSIAN WINNERS AT ASEAN ENERGY AWARDS 2019 HELD IN THAILAND

CATEGORY		OUTCOME	COMPANY NAME
Green Building Awards 2019	Small & Medium Building	Winner	Environmental Preservation and Innovation Centre [EPIC]
	Large Building	Winner	IKEA Cheras
Energy Management for Buildings & Industry Awards 2019	Small & Medium Building	1 st Runner-up	Wisma TNB Penang
		2 nd Runner-up	Melaka TM Tower
	Large Building	2 nd Runner-up	KOMTAR Penang
	Small & Medium Industry	2 nd Runner-up	Idaman Pharma Manufacturing Sdn Bhd
	Large Industry	2 nd Runner-up	CSC Steel Sdn Bhd
Energy Efficient Building Awards 2019	New and Existing Building	1 st Runner-up	Kuala Lumpur International Airport [KLIA2]
		1 st Runner-up	Paramit Factory in the Forest
	Retrofitted Building	1 st Runner-up	Subang Parade Mall
Renewable Energy Awards 2019	Off-Grid - Power Category	Winner	Development of Micro Hydro Project for Kampung Assum, Padawan, Sarawak
		1 st Runner-up	Sarawak Alternative Rural Electrification Scheme [SARES]
	On-Grid - National Grid	1 st Runner-up	Building Integrated Solar PV with Agriculture and Aquaculture Activities [Mushroom Farm and Fish Farming] Solar Project [1MWp] to TNB 11 Kv Distributions in Chembong, Negeri Sembilan
	On-Grid - Local Grid	2 nd Runner-up	Rural Electrification from Renewable Energy Biogas for UMAS Community
	Special Submission	Winner	Compressed Bio-natural Gas [CBG] for Green Mobility and Power Generation in Oil Palm Industry
Coal Awards 2019	Power Generation - Large Scale	1 st Runner-up	TNB M5 Sharing of Best Practices in Clean Coal Use and Technology Innovations
Excellence in Energy Management by Individuals 2019	1. Ir. Dr. Sanjayan Velautham, Chief Executive Officer of Sustainable Energy Development Authority [SEDA]		
	2. Datuk Wira Roslan Ab. Rahman, Chief Corporate Officer of TNB		
	3. Abdul Rahim bin Ibrahim, Senior Director of ST		



ASEAN ENERGY
AWARDS 2020

MALAYSIAN WINNERS AT ASEAN ENERGY AWARDS 2020 HELD IN VIETNAM

CATEGORY		OUTCOME	COMPANY NAME
Green Building Awards 2020	Small & Medium Building	Winner	PAM Centre
		2 nd Runner-up	Honda Showroom and Care Centre
	Large Building	Winner	Menara Ken TTDI
Energy Management for Buildings & Industry Awards 2020	Small & Medium Building	1 st Runner-up	Hospital Jelebu, Negeri Sembilan
	Large Building	1 st Runner-up	Menara Korporat, Persada PLUS
	Large Industry	2 nd Runner-up	Top Glove Factory 29
Energy Efficient Building Awards 2020	New and Existing Building	Winner	LCDA Tower
	Retrofitted Building	Winner	Menara Weld and The Weld Shopping Centre
		2 nd Runner-up	UDA Angsana Mall, JB
Renewable Energy Awards 2020	On-Grid - National Grid	Winner	Amcorp Power Sdn Bhd Amcorp Sungai Liang 2 x 10 MW Sungai Mini Hydro Project, Raub, Pahang
		2 nd Runner-up	Concord Green Energy Sdn Bhd A Real-Life Renewable Energy Business Model by Developing a Biogas Plant Capable to Export 1.5MW Power to National Grid at FGV Lepar Hilir, Gambang, Pahang
	On-Grid - Local Grid	2 nd Runner-up	Sime Darby Plantation Berhad Captive Power Generation for KKS Merotai from Renewable Energy Palm Oil Mill Effluent at Merotai Biogas Power Plant
	Biofuel	1 st Runner-up	UKM-YSD Chair for Sustainable Development Biohydrogen and Biomethane Production from Palm Oil Mill Effluent with Carbon Capture
	Special Submission	Winner	Indah Water Konsortium Sdn Bhd Reuse of Biogas from Sewage Sludge to Generate Renewable Energy at Pantai 2 Regional Sewage Treatment Plant
Special Submission 2020*	ZEB Ready	Winner	Malaysia Green Technology Corp (MGTC)

* Special Submission Category is not under NEA 2020.

SAVE 2.0



Jimat Wang • Jimat Tenaga • Selamatkan Alam Sekitar

Apakah Manfaat Program SAVE 2.0?



Faedah penjimatan kos pembelian peralatan cekap tenaga 4 dan 5 bintang dengan e-Rebat RM 200 dan penjimatan bil elektrik bulanan kepada orang awam



Menyokong aspirasi Kerajaan dalam proses pengalakkan inisiatif penjimatan dan kecekapan tenaga, rendah karbon dan tenaga lestari



Memberikan kesedaran kepada masyarakat awam mengenai kepentingan pengurusan dan kecekapan tenaga

Maklumat lanjut di

www.saveenergy.gov.my



