ALL-IN-ONE ABOUT SEDA

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SUSTAINABLE ENERGY
DEVELOPMENT AUTHORITY (SEDA) MALAYSIA
www.seda.gov.my

WHO ARE WE?

We are the Sustainable Energy Development Authority (SEDA) Malaysia.

We are a statutory body established since September 2011 under the Sustainable Energy Development Authority Act 2011 [Act 726].

We are governed by the Ministry of Energy Transition and Water Transformation (PETRA).

WHAT DO WE DO?

We consult all functions under the laws related to Sustainable Energy

Advise law policies

Provide technical facilitations

Promote sustainable energy in the country

OUR LOGO

SEDA Malaysia's logo was inspired by the environment such as the earth, plants, water, and the sun.

Why SEDA Malaysia is Established?

Since the Ninth Malaysia Plan (2006-2010), Malaysia has started numerous initiatives to increase the share of non-fossil fuel energy. This scheme was outlined in the National Renewable Energy Policy and Action Plan (NREPAP) which was approved by the Cabinet in April 2010.

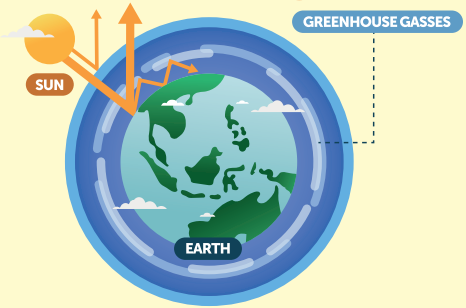
Hence, the NREPAP underpins the establishment of SEDA Malaysia and its core functions which include advising the Minister and Government entities on matters concerning sustainable energy and implementing the Feed-in-Tariff (FiT) scheme.

Established in 2011, SEDA Malaysia is a statutory body tasked to drive and support the nation's sustainable energy (SE) agenda.

SEDA Malaysia is also responsible for providing technical facilitation as well as promoting sustainable energy in Malaysia.

THE CLIMATE CHANGE

Global Warming



Greenhouse Gasses

Carbon Dioxide	**76%**	**Nitrous Oxide**	**6%**
Methane	**16%**	**F-Gasses**	**6%**

Source: IPCC 2014

Global CO_2 Emissions by Sector

Energy	**43.8%**	Agriculture/ Forestry/Fishing and non-specified final energy consumption	**1.9%**
Transport	**25.7%**		
Industry	**19.7%**		
Buildings	**8.7%**		

Source:
www.iea.org/data-and-statistics/charts/global-co2-emissions-by-sector-2019

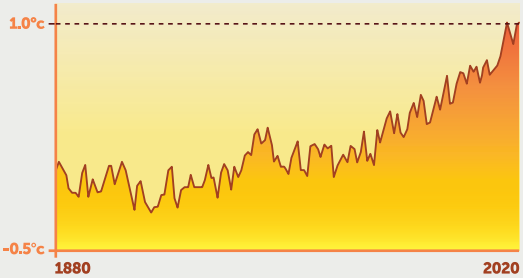
A harmful phenomenon where the Earth is warming up faster than any other period in known history.

Largely due to deforestation, burning fossil fuels, and farming, which increase greenhouse gases in our atmosphere.

The greenhouse gases trap heat from the sun, making our planet get warmer over time.

Among other human activities, burning fossil fuels for energy is the most significant activity that increase greenhouse gases (primarily carbon dioxide) in our atmosphere.

Global Surface Temperature

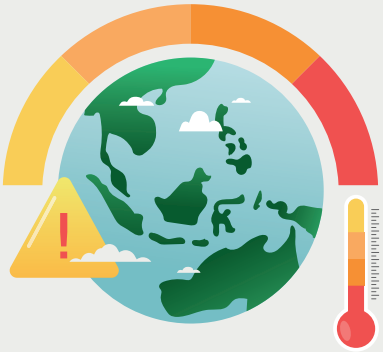


Source: https://climate.nasa.gov/resources/global-warming-vs-climate-change/

Climate Change is Harmful!

Some of the effects that have been happening in Malaysia are:

- Frequent Floods
- Rise in Sea Level
- Coral Reef Destruction
- Droughts
- Frequent Wildfires
- Heatwaves



Climate change can cause loss of life and property.

In turn, it affects the economy of the affected area.

Globally, countries have pledged their Intended Nationally Determined Contribution (INDC) at the 21st Conference of Parties (COP) in Paris at the end 2015 to reduce their carbon emissions.

Malaysia intends to reduce its greenhouse gasses emission intensity of GDP by 45% by 2030.

ENERGY SECURITY, WHY WE SHOULD BE CONCERNED?

Energy security reduces the country's dependency on the use of fossil fuels in energy generation, simultaneously stabilising the country's economy.

Even though the planet has 500 years of coal reserves, life on Earth cannot survive the extreme climate change caused by global warming.

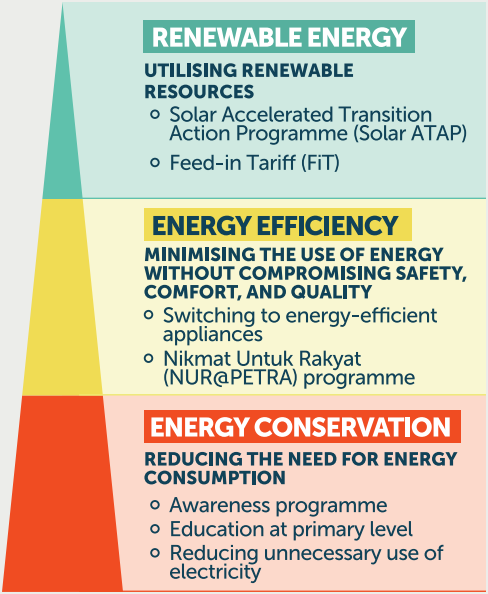
LET'S TRANSITION TO RENEWABLE ENERGY FOR OUR EARTH!

How Can We Make the Transition?

The Hierarchy of Energy Management shows the classification of the energy options to assist progress in the energy transition.

The hierarchy will help you to use energy more efficiently and sustainably for a better future!

HIERARCHY OF
ENERGY MANAGEMENT



View the hierarchy of energy above, along with some of the initiatives that we are doing at each level.

SUSTAINABLE ENERGY

Energy that is produced from sources that can be used repeatedly without it depleting and does not cause long-term damage to the environment. Some examples include solar, wind, biomass, biogas and hydro.

Solar

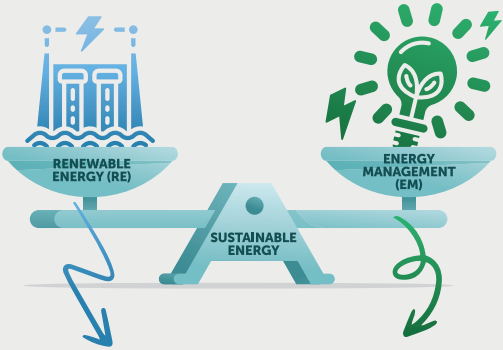
Wind

Biomass

Biogas

Hydro

Sustainable energy needs both renewable energy (RE) sources and energy conservation & efficiency (EE) to combat climate change and protect the environment.

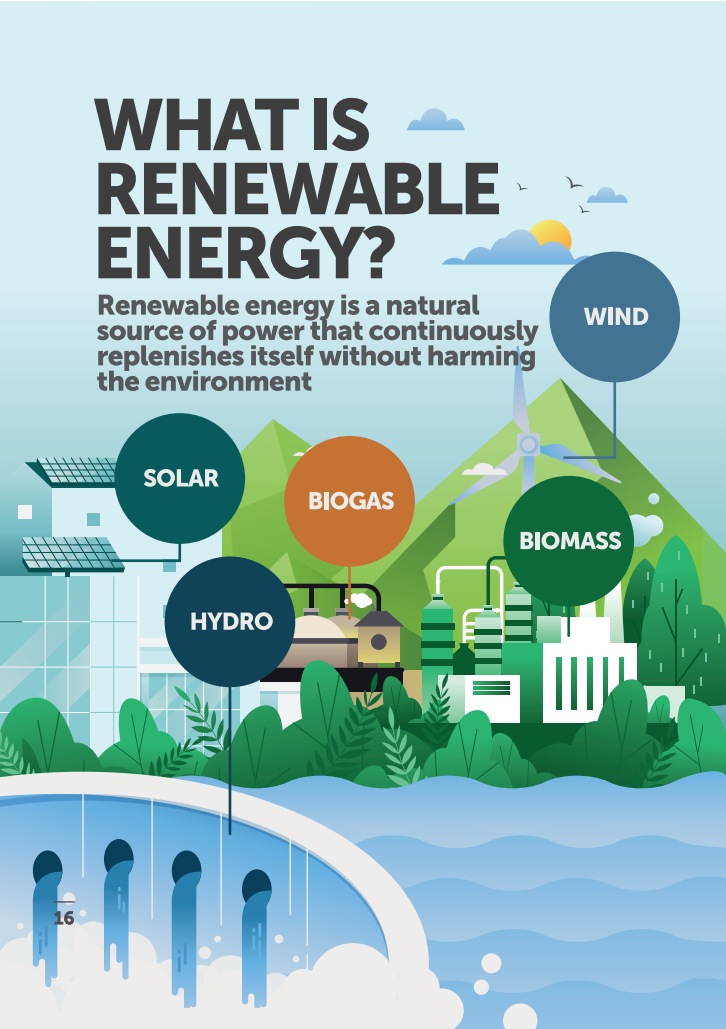


Renewable Energy is a natural resource that's unlimited and is constantly replenished.

Energy Management refers to the practice of conserving energy while using energy efficiently.

WHAT IS RENEWABLE ENERGY?

Renewable energy is a natural source of power that continuously replenishes itself without harming the environment



What is Energy Management?

Energy management refers to the practice of reducing energy consumption (energy conservation) whilst using energy efficiently (energy efficiency).

Examples of energy conservation

Switch off your electrical appliances when not in use

Minimise the use of air conditioners and optimise the use of ceiling fans

Iron multiple items of clothing at once

Example of energy efficiency

Use appliances with energy-efficient labels

Our Roles in Sustainable Energy

Promote and develop the sustainable energy industry in Malaysia

Advise and guide the Ministry on all matters related to sustainable energy

Implement the programmes on sustainable energy introduced by the Government

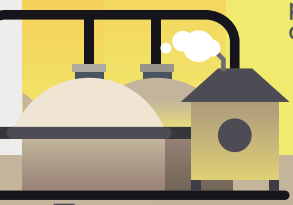
Our Initiatives and Programmes

- Feed-in-Tariff (FiT)
- International Sustainable Energy Summit (ISES)
- Solar Accelerated Transition Action Programme (Solar ATAP)
- Nikmat Untuk Rakyat (NUR@PETRA)
- Zero Energy Building (ZEB)
- Government Lead By Example (GLBE)
- Sustainable Energy Low Carbon Building Assessment GreenPASS
- Building Energy Data Online Monitoring System (BEDOS)
- National Energy Awards (NEA)
- Energy Audit Conditional Grant (EACG)
- Training Courses

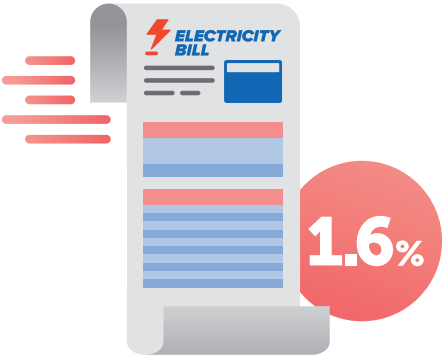
WHAT IS FEED-IN TARIFF (FiT)

The Feed-in Tariff is a mechanism established under the Renewable Energy Act 2011. It was introduced to boost the growth of renewable energy power generation.

The mechanism allows electricity produced from indigenous renewable resources to be sold to distribution licensees at a fixed premium rate for a specific duration.



How FiT is Funded?



The FiT in Malaysia is financed by electricity consumers who contribute 1.6% of their total electricity bill towards a Renewable Energy (RE) Fund. However, domestic users who consume 300 kWh of electricity or less each month will be exempted from contributing to the RE Fund.

WHAT IS ISES?

International Sustainable Energy Summit

ISES

The International Sustainable Energy Summit (ISES) is our hallmark communication platform. It is held once in every two years.

In the global platform, ISES acts as a platform for thought leaders in both the public and private sector to collaborate on critical issues and facilitate the widespread deployment of sustainable energy.

The inaugural ISES was held in 2012.

WHAT IS SOLAR ATAP?

The Solar Accelerated Transition Action Programme (Solar ATAP) is a government initiative allowing consumers to generate solar energy from rooftop spaces and export excess power back to the grid for bill offsets.

A continuation of the Net Energy Metering (NEM) programme, it optimizes solar adoption across Malaysia.

Its core principles are:

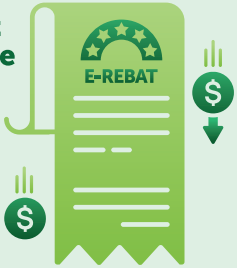
- Export excess solar energy to the grid as an energy offset.
- Maximize system installations up to 100% maximum demand (or 1MW).

This initiative is executed by The Ministry of Energy Transition and Water Transformation (PETRA), regulated by the Energy Commission (EC), and implemented by SEDA Malaysia.

Nikmat Untuk Rakyat

THE NUR@PETRA PROGRAMME

The Nikmat Untuk Rakyat (NUR@PETRA) programme is a continuation of the Sustainability Achieved via Energy Efficiency (SAVE) initiative, introduced to enhance energy efficiency across the country.



Through this programme, domestic households receive an RM200 e-Rebate when purchasing selected electrical appliances that carry a 4-star or 5-star energy efficiency label certified by the Energy Commission (EC) or the Energy Commission of Sabah (ECoS).

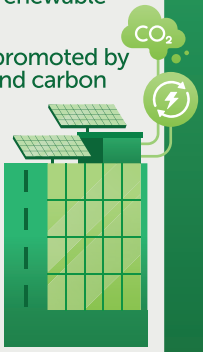
The Ministry of Energy Transition and Water Transformation (PETRA) oversees the implementation of NUR@PETRA, with SEDA Malaysia appointed as the Implementing Agency, supported by the Energy Commission (EC).

THE ZEB PROGRAMME

The Zero Energy Building (ZEB) is a global programme.

It involves the high performance efficient building that are integrated with renewable energy applications.

This programme is now actively promoted by countries committed to energy and carbon reduction such as European Union (EU) countries, and Japan.



In Malaysia, the programme is the result from MoU agreement between SEDA Malaysia and JASE-W in October 2018.

The objectives of the MoU are to disseminate and promote the ZEB and ZEB Series Concept.

The ZEB Series Concept includes:

- Support for development of standard methodology for ZEB in Malaysia
- Promote and create awareness on ZEB concept
- Capacity building through trainings

THE GREENPASS PROGRAMME

GreenPASS is a voluntary certification by SEDA Malaysia that evaluates and recognizes sustainable energy practices and carbon reduction in buildings.

Its key objectives are:

- Drive low-carbon city development
- Offer systematic building energy assessments
- Provide an alternative path to green building ratings (e.g., MyCREST, GBI), and support national carbon reduction goals

GreenPASS is beneficial for building owners, property developers, local authorities, and both public and private organizations seeking to certify and showcase their energy-efficient building projects.

WHAT IS BEDOS?

The Building Energy Data Online Monitoring System (BEDOS) is a digital platform designed to track, analyze, and report building energy consumption.

BEDOS allows building owners to establish energy baselines, monitor savings, export detailed carbon and electricity reports, and easily migrate energy data.

Additionally, it serves as the official portal to apply for GreenPASS certification to recognize low-carbon building achievements.

THE EACG PROGRAMME

The Energy Audit Conditional Grant (EACG) supports the implementation of comprehensive energy audits for commercial buildings and industrial installations.

Its primary objective is to identify practical and financially viable Energy Saving Measures (ESMs), which will subsequently reduce energy consumption, operational costs, and carbon emissions.

Eligible applicants with a monthly electricity consumption of 100,000 kWh and above are required to appoint a registered Energy Service Company (ESCO) to conduct the audit.

Its key objectives are:

- Target Sectors: Commercial buildings and industrial installations
- Eligibility: Electricity consumption ≥ 100,000 kWh/month
- Audit Implementation: Conducted by a registered ESCO
- Grant Amount: Up to RM100,000 (Industrial Installations) and RM60,000 (Commercial Buildings)

Energy Audit → **Identify ESMs** → **Implement ESM** → **Energy & Cost Savings**

WHAT IS NEA?

The National Energy Awards (NEA) is an initiative by the Ministry of Energy Transition and Water Transformation (PETRA) that recognizes local organizations across all sectors for adopting sustainable energy practices.

Launched in 2018, NEA identifies Malaysia's top-performing organizations to represent the nation at the ASEAN Energy Awards (AEA) while driving industries toward Malaysia's net-zero greenhouse gas emissions goal by 2050.

TRAINING COURSES

One of our core functions is to provide trainings and capacity building programmes related to the sustainable energy sector (Section 15(i) SEDA Act 2011).

Renewable Energy (RE)

Trainings available to certify as Qualified Person (QP)

- Grid-Connected Photovoltaic (GCPV) Systems Design
- Grid-Connected Photovoltaic (GCPV) for Wireman & Chargeman
- Grid-Connected Photovoltaic (GCPV) Systems Installation & Maintenance
- Off-Grid Photovoltaic (OGPV) Systems Design
- Operation & Maintenance of Biogas Power Plant

Energy Efficiency (EE)

Awareness and technical trainings available

1. Energy Management in Building
2. Energy Audit in Building
3. Energy Efficient Management in Air-Conditioning & Mechanical Ventilation System (ACMV)
4. Principle & Application in Compliance to Malaysian Standard (MS1525: Code of Practice on Energy Efficiency and Use of Renewable Energy for Non-Residential Buildings)

5. **Registered Energy Manager (REM)**
6. **Measurement & Verification (M&V)**
7. **Thermal Energy System Advance**

Other Trainings

- Sustainable Low Carbon Building
- Zero Energy Building (ZEB)
- Building Energy & Performance Simulation (BEPS)
- Solar Thermal & Thermal Energy Efficiency Training
- Environmental, Social & Governance (ESG)

Training customisation for any of the combination above is available.

Get more info on our trainings at

www.seda.gov.my/trainings

“A transition to clean energy is about making an investment in our future.”
—
Gloria Reuben

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