

# FORECASTING THE ENERGY INDUSTRY

**T**he profession of economist is commonly heard of. But what about energy economist? One may ask what are energy economists and what do they do? In this section, **Energy Malaysia** takes a closer look at the roles and functions of an energy economist, the unsung hero of the energy industry. Wan Zaini Zakaria, Universiti Tenaga Nasional's (UNITEN) own energy economist gives insights on what it takes to be one.

Energy economist falls under the broader career category of economists. An energy economist's job scope includes conducting economic analysis related to energy demand and supply, energy market analysis, energy price and energy policy analysis. He or she also

carries out analysis on environmental protection and use of the natural environment such as water, air, land and renewable energy resources.

To be an energy economist, one must possess a Bachelor's Degree of Economics (Energy) (Hons). An

interested candidate can pursue their degree from a Foundation level in the Arts or Science stream or even a Diploma level in either Business Studies or Engineering. He or she must be equipped with critical thinking, good analytical skills and an understanding of the energy markets.

## Role and Function

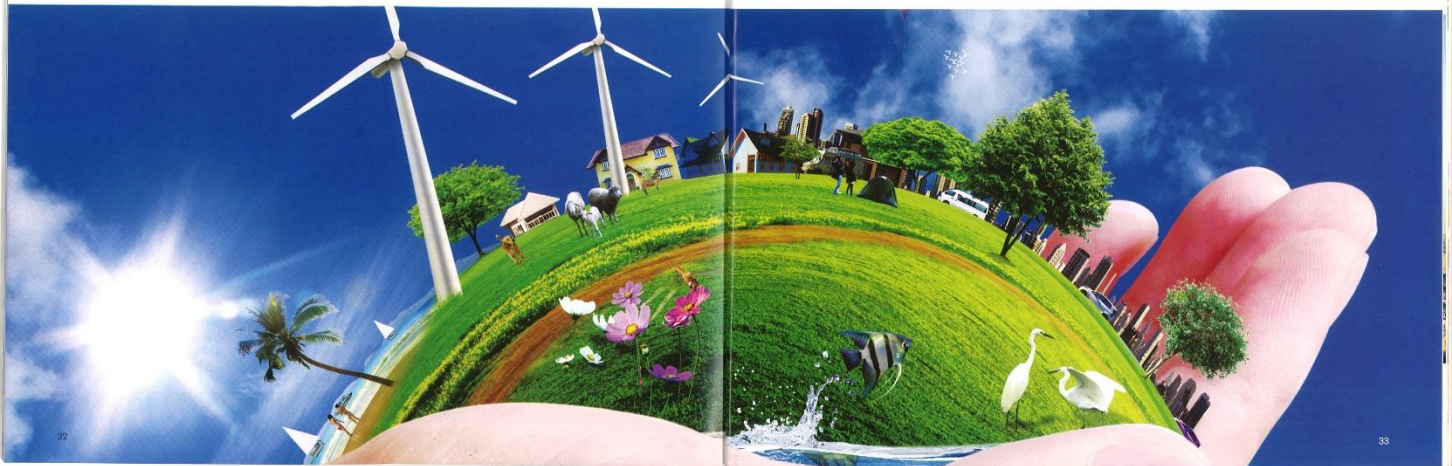
According to Wan Zaini, there are three principle roles of an energy economist. First, energy economist acts as an analyst in the area of energy-economy-environment (3E) studies. The person examines on topical issues in the area of sustainable energy development, climate change and nuclear power. Not only that, an energy economist also acts as a team member by working side by side on studies and analyses projects like energy reports.

As an example, energy economists at the Institute of Energy Policy & Research (IEPR), UNITEN in collaboration with several local and international energy agencies have conducted studies on Energy Efficiency Implementation in Malaysia: Impacts of 2013 MEPS Appliances Regulation and Establishment of Standard Operating Procedures (SOP) for Energy Data Collection and Dissemination.

Additionally, an energy economist functions as an advisor by providing

information to energy agencies whilst also working together with various energy agencies like Tenaga Nasional Berhad (TNB), Energy Commission and Ministry of Energy, Green Technology and Water (KeTTHA). He or she advises these agencies to ensure that they can work effectively towards meeting their national energy development goals and objectives.

Local energy economists work closely with TNB, the Energy Commission and



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Power Path



*"Should energy sources become completely renewable, as with solar, wind or geothermal power, energy economists may no longer be needed or may move into another type of role."*

**- Wan Zaini Zakaria,**  
Energy Economist, Universiti Tenaga Nasional's (UNITEN)

KaTTHA on capacity building efforts in energy-economy modelling and techno-economic assessments. The staff at College of Energy Business and Economics (CEE), UNITEN, works with counterparts from energy planning institutions involved in national energy and electricity planning studies such as studies of various energy report, wind energy report and world bank, just to name a few.

#### The Problem Solvers

However, this profession comes with its own set of challenges. As an energy economist, Wan Zaini stated that it always comes down to the supply and demand of energy pertaining to the risk of a given supply source and the security of the supply source. He or

she has to determine the availability of supply which is correlated to the nation's economic health. If supply gets harder to obtain, energy costs will go up. This in turn significantly impacts the economy with a ripple effect whereby every other segment of the economy is influenced negatively as well. The energy economist assists in studying these trends and foretells whether or not the trends will continue while also providing solutions.

As there is continuous transition within the energy industry, the need for renewable energy sources arises. Non-renewable energy sources then would become secondary *and* with this would alter the role of an energy economist. As such, the energy economist will help foretell the most efficient way of using a limited energy supply. In some cases, he or she will also control the way it's used so as to protect the environment as much as possible.

Nonetheless, energy economists today have a very important job to do economically, politically, socially and environmentally. They have the responsibility to forecast, study, analyse and provide viable solutions for an energy problem. It is a need that no doubt will not go away for at least the foreseeable future. **END**

Power Practice

## The Bachelor of Economics (Energy) (Hons.)

### Paving the Future of Energy Industry

**A**s energy resources fluctuate unpredictably in the industry, it is absolutely vital to have energy economists to analyse, foretell and solve problems within the energy industry. **Energy Malaysia** delves into the makings of an energy economist with insights from Dr. Nora Yusma Mohamed Yusoff, Head of Department and Senior Lecturer at Universiti Tenaga Nasional (UNITEN).



Recently introduced at UNITEN, the Bachelor of Economics (Energy) (Hons.) is a pioneering tertiary programme that has garnered the attention from students all over the nation and even on an international scale. It is the first university in Malaysia to offer this Bachelor' course to cater to the demanding growth of energy economists in Malaysia.

**Dr. Nora Yusma Mohamed Yusoff,** Head of Department and Senior Lecturer at UNITEN explains requirements for potential students and the career prospects for students involved in this degree programme.

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### Programme Structure

#### PROGRAMME DURATION

- 3 years (9 semesters)



#### AMONG THE COURSES INCLUDED IN THE PROGRAMME ARE:

- Energy Economics
- Energy Management
- Energy Security
- Renewable Energy and Sustainability
- Energy Regulations and Policies
- Energy and Society
- Economics of International Oil & Gas
- Energy Audit & Reporting
- Green Energy and Environmental
- Low Carbon Economics
- International Energy Trade and Market
- Managerial Economics

#### JOB PROSPECTS

- Energy Economist
- Energy Auditor
- Environmental Consultant
- Environmental Auditor
- Green Industry Auditor
- Economic Specialist Officer
- Economic Researcher and Consultant
- Business Analyst
- Corporate Executive
- Lecturer

Source: UNITEN

The launch of this tertiary programme is in line with UNITEN's vision and mission which is to achieve its status as an energy university. This 3-year Bachelor's degree programme is designed to expose students to the specific aspects in economics discipline and energy sector. In doing so, it offers specialisation courses including energy economics, energy security, energy regulations and policies and renewable energy and sustainability, just to name a few.

According to Dr. Nora, prior to the establishment of this programme, UNITEN conducted various studies by referencing other countries to establish a benchmark for it. Further, Professor Ken Koyama, the Chair in Energy Economics of Energy Commission at UNITEN is the

member of the consultative council of the curriculum development.

This Bachelor of Economics (Energy) (Hons.) course is specifically structured to equip students with a strong theoretical and practical knowledge in economics and energy. These qualities are prerequisites to students before they can embark on the real world of energy service sectors. Additionally, students can also continue to pursue their studies to obtain the Master's Degree in Energy Management or in other Master's Degree in Business Administration (MBA) programmes.

A graduate of this programme can start their career as an energy economist, economic researcher and consultant or even a lecturer if they wish to dabble in the academia field. For those who

wish to focus on the enforcement aspect, they can pursue taking special training courses to hold positions as an energy manager, energy auditor or environmental auditor.

With this newly offered course, it promises top notch graduates specialised in energy economics with a wide array of job prospects awaiting them. These specialised graduates would be a valuable asset in the industry by greatly enhancing the industry knowledge and know-how. **EM**

