

Clean Energy Market Intelligence & Project Access

Country Report Update

Malaysia 2012 Update







Sustainable Energy Association of Singapore (SEAS)

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ACRONYMS & ABBREVIATIONS

ADB	Asian Development Bank	
В	billion	
BAKOREN	National Energy Coordinating Board	
BAPPENAS	National Development Planning Agency	
BAU	Business as Usual	
BEE	Bureau of Energy Efficiency	
BPPT	Agency for Assessment and Application of Technology	
CDM	Clean Development Mechanism	
CECEP	China Energy	
CECIC	China Energy Conservation Investment Corporation	
CER	Certified Emission Reduction	
CFL	Compact Fluorescent Lamps	
CFO	Carbon Finance Operation	
CSP	Concentrated Solar Power	
CTF	Clean Technology Fund	
DAE	Department of Atomic Energy	
DBP	Development Bank of the Philippines	
DENR	Department of Environment and Natural Resources	
DNA	Designated National Authority for CDM	
DOE	Department of Energy	
DOST	Department of Science, Technology and Environment	
DPL	Development Policy Loan	
EE	Energy Efficiency	
EE&C	Energy Efficiency and Conservation	
ERAV	Electricity Regulatory Authority of Vietnam	
ESCO	Energy Service Company	
EVN	Vietnam Electricity	
FI	Financial Institution	
GCM	Generation Competitive Market	
GHG	Green House Gas	
GOI	Government of Indonesia	
Gol	Government of India	
GOP	Government of the Philippines	
GW	Gigawatt	
IFO	International Funding Organization	
IGCC	Integrated Gasification Combined Cycle	
IIFCL	India Infrastructure Finance Company Limited	

100		
IPP	Independent Power Producers	
IREDA	Indian Renewable Energy Development Agency	
IRES	Indonesian Renewable Energy Society	
IT Laarb	Information Technology	
kWh	Kilowatt Hours	
LBP	Land Bank of the Philippines	
LFG	Landfill Gas	
M	million	
MARD	Ministry of Agriculture and Rural Development	
MDB	Multilateral Development Banks	
MEMR	Ministry of Energy and Mineral Resources	
MHA	Ministry of Home Affairs	
MNRE	Ministry of New and Renewable Energy	
MOE	Ministry of Environment	
MOF	Ministry of Finance	
MOIT	Ministry of Industry and Trade	
MONRE	Ministry of Natural Resources and Environment	
MoP	Ministry of Power	
MPI MW	Ministry of Planning and Investment	
	Megawatt	
NAPCC	National Action Plan on Climate Change	
NAPOCOR	National Power Corporation	
NDRC	National Development and Reform Commission	
NEA	National Energy Administration	
NEC	National Energy Commission	
NEECP	National Energy Efficiency and Conservation Program	
NEP	National Electrification Policy	
NHPC	National Hydroelectric Power Corporation	
NPCI	Nuclear Power Corporation of India	
NTPC	National Thermal Power Corporation	
ODA	Official Development Assistance	
PD	Presidential Decree	
PFC	Power Finance Corporation	
PIU	Project Implementation Unit	
PLN	Indonesian State Electricity Company	
PPA	Power Purchase Agreement	
PPC	Provincial Peoples Committees	
PPP	Public Private Partnership	
PRC	People's Republic of China	
PSU	Power Sector Undertaking	
PV	Photovoltaic	
RA	Republic Act	
RE	Renewable Energy	
REAP	Renewable Energy Association of the Philippines	
REMB	Renewable Energy Management Bureau	
RPO	Renewable Purchase Obligations	
RPS	Renewable Portfolio Standard	
SBV	State Bank of Vietnam	
SERC	State Energy Regulatory Commission	
SOE	State-Owned Enterprises	



SPV	Solar Photovoltaic
ТА	Technical Assistance
TCE	Ton Coal Equivalent
UNFCCC	United Nations Framework Convention on Climate
	Change
VAT	Value Added Tax
VIP	Vietnam, Indonesia, Philippines
VNEEP	Vietnam National Energy Efficiency Program
WB	World Bank
WBG	World Bank Group
WESM	Wholesale Electricity Spot Market

TABLE OF Contents

Acronyms and Abbreviations	
Table of Contents	
Regional Update: Malaysia	1
Renewable Energy & Energy Efficiency	2
Highlights	
Energy Sector Backgrounds	3
Energy Sector Highlights and	6
Challenges	
Renewable Energy and Energy	7
Efficiency	
Opportunities for Singapore firms in	11
Indonesia	
Fund Mapping	13
Project Matrices	14

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MALAYSIA

REGIONAL UPDATE

Renewable Energy & Energy Efficiency Highlights

- Vision 2020 is Malaysia's top program that seeks to make the country a high-income developed nation by 2020. It plans to invest around \$147 million in renewable energy and energy efficiency projects.
- The current renewable energy (RE) contribution to the total power generating capacity is less than 1%. Malaysia seeks to increase this percentage to 5.5% by 2015. However, over the last decade, Malaysia has strived towards the "5%" goal and has continuously failed to meet it. To date, it has only ever achieved less than 20% of its target rate.
- Malaysia introduced the Tenth Malaysia Plan 2011-2015, which established fund mechanisms, feed-in tariff and action plans in order to make RE a larger contributing sector. The plan also implements energy efficiency (EE) goals, such as removing subsidies on oil and gas.
- Although Malaysia does not have to follow the Kyoto Protocol, as it is still a developing nation, the government has pledged to reduce carbon intensity by 40% by 2020, from 2005.
- The hydropower and biomass industry are the two largest renewable energy contributors. They are both anticipated to grow, as palm oil is predicted to increase by 240% over the next decade and hydropower, especially mini-hydro, has large growth forecasts as well.

Energy Sector Background

The following report highlights the current stance and projected growth of Malaysia's energy industry, specifically focusing on renewable energy (RE) and energy efficiency (EE) developments.

Malaysia is one of the fastest developing countries in Southeast Asia, as its economy testifies to the nearing approach of Malaysia's Vision 2020: to achieve a high-income developed nation status. With an average GDP growth of 6.0% per annum, coupled with industrialization and fast urbanization, Malaysia is on a path to successful economic standing. However, Malaysia's growth is largely responsible for energy security challenges and environmental issues. If Malaysia wants to support its economic trajectory, it must first address these matters. Consequently, for the last few years and upcoming times, Malaysia has instituted measures in the RE sector and EE domain.

Total installed power generating capacity in Malaysia reached around 22,000 MW in 2011. Natural gas and oil, of which Malaysia is heavily dependent on, accounted for around 50% of total installed capacity, coal for 20.9% and hydropower for 7%. In 2009, non-hydro renewable energy capacity was less than 1%, with goals to expand the industry to 5.5% in 2015 and 11% in 2020. In 2011, the electric generation capacity was 2,17 1MW for hydropower and 40 MW for biomass—the two largest renewable energy contributors.

Presented below are the actual figures and 2015 targets for grid-connected power generation from renewable energy sources:

Source	2011 (Actual)	2015 (Target)
Solar PV	2.5MW	65MW
Biomass	40MW	330MW
Mini-hydro	12.5MW	290MW
Solid waste	5MW	200MW
Biogas	4.95MW	100MW

Source: seda.gov.my and idfr.gov.my

Current demand for electricity stands at about 61.1% from industry and services, 26.3% from manufacturing, 6.6% from agriculture and 2.9% from construction. The industrial sector is expected to grow by 7.2% annually for the next three years. The table illustrates the expected growth from specific demand sectors from 2011 to 2015 and their share of GDP in 2015:

Demand sector	Growth from 2011-2015 (Expected)	Share of GDP in 2015 (Expected)
GDP	6.0%	N/A
Services	7.2%	61.1%
Manufacturing	5.7%	26.3%
Construction	3.7%	2.9%
Agriculture	3.3%	6.6%
Mining	1.1%	5.9%

Table 4.2 Growth and share of GDP of current demand sector for electricity

Source: Tenth Malaysia Plan, epu.gov.my

Power Sector Structure and Regulation

The Malaysian government largely determines the power sector and energy framework. The electricity supply is of monopolistic nature, as all the generation, transmission and distribution of electricity in the region comes from three government-linked companies: Tenaga Nasional Berhad, Sarawak Electricity Supply Company and Sabah Electricity Limited.

Tenaga Nasional Berhad (TNB)

- Generation capacity of 11.2GW
- Biggest electric utility firm and biggest power company in Southeast Asia
- Owns the National Grid
- Generates 55% of Malaysia's power
- Power primarily from thermal and hydro

Sabah Electricity

- Generation of 785MW
- Only power utility firm in Sabah
- 80% owned subsidiary of TNB and 20% by the government of Sabah
- Consumption by sector:
 - Commercial: 39%
 - o Domestic: 31%
 - o Industrial: 29%
 - Public lighting: 1%

Syarikat SESCO Berhad

- Generation capacity of 938MW
- Generates 4.6% of power
- 51.6% owned by the Sarawak State Government and 45% by the Sarawak Enterprise Corporation Berhad
- Power primarily from oil, gas, coal and hydro

The forecasted growth of electricity demand is 3.7% this year, compared to 3.1% in 2011. For the period up until 2020, electricity demand is expected to continuously grow at about 3.5-6.4% per annum.

Below are the main government agencies relevant to the power sector.

Agency	Key Role relevant to Energy Sector	
Economic Planning Unit	Principal government agency that focuses on development planning and blueprinting the growth of Malaysia's energy policy	
Ministry of Energy, Green Technology and Water	Facilitator of growth and regulator for the energy, green technology and water sector	
Pusat Tenaga Malaysia (MalaysiaNational energy research center for energy planning and research efficiency and technological research and development		
The Energy Commission	Handles all the regulatory functions of the Ministry of Energy; regulates the energy supply activities and enforces energy supply laws	
National Green Technology Council	Green TechnologyStrengthens the institutional framework and accelerates the development of green technology	
Malaysia Electricity Supply Industry Trust Account	Provides financial assistance for rural electrification, energy efficiency and RE projects	
Energy Efficiency and Conservation Agency MalaysiaFocuses its efforts on the implementation of energy efficiency pro-		
Environmental Research and Management Association of Malaysia	Provides training in a variety of environmental areas	
Business Council for Sustainable Development in MalaysiaFosters the active participation of the business and industrial com in caring for the environment		
Malaysian International Chamber of Commerce and Industry	Encourages their members to include environment consideration in corporate operations	
Sustainable Energy Development Authority	Administers and manages the implementation of the feed-in tariff system	

Energy Sector Highlights and Challenges

- Oil and natural gas remains the significant contributors to economic growth as PETRONAS, wholly owned by Malaysia, accounts for almost 50% of Malaysia's revenues. However, national oil will be depleted in 16 years at current rates and the natural gas reserve is predicted to be exhausted in 70 years. Malaysia is expected to revert to being a net oil importer by 2015.
- Palm oil and related products account for about 3.3% of GDP and the palm oil production is expected to increase by 240% in the next 10 years.
- In 2015, electrification in Peninsular Malaysia is expected to reach almost 100% and 99% in Sabah and Sarawak. Electricity supply will be extended through the grid with alternative systems such as mini-hydro. Malaysia is expected to invest about RM4.9 billion (US\$ 1.55 billion) for this initiative.
- In order to increase power generation capacity, Malaysia has also enacted specific initiatives such as:
 - In Peninsular Malaysia: two hydroelectric plants will be commissioned with a combined capacity of 622MW.
 - In Sabah: three new power plants (two gas-based and one coal-based using clean technology) will be commissioned with a combined capacity of 700MW.
 - In Sarawak: a 2,400MW Bakun Hydroelectric project will be commissioned in stages.
- Malaysia implements new plans every five years. 2011 saw the enactment of the 10th Plan for Malaysia, which introduced new action plans that would lead the country closer to Vision 2020. Some of Malaysia's plans are enumerated below:
 - o Introducing feed-in-tariff to help finance renewable energy investments.
 - Introduction of a FiT of 1% that will be incorporated into the electricity tariffs and then into the Renewable Energy Fund.
 - Providing fiscal incentives and funding for green technology investments.
 - Promoting projects eligible for carbon credits.
 - Promoting foreign and private investment.
 - Foreign investment committee guidelines were removed.
 - Emphasizing energy security and economic efficiency as well as environmental and social considerations.
 - Initiatives to secure and manage reliable energy supply.
 - Measures to encourage EE.
 - Adoption of market-based energy pricing.
 - Malaysia is supporting the private sector more and more, as it aims to modernize business regulation and foster competitiveness in the energy industry. As it aims to be in the top ten nations for ease of doing business, an estimated value of RM12 billion (US\$ 3.8 billion) was undertaken via privatization at the end of 2010.
 - Challenges to RE & EE sector:

- Financial barriers
 - RE is not commercially feasible, as the current business environment in Malaysia does not support the adoption of RE technology.

- Lack of experience of RE among financial institutions and investors leading to low participation and increased risk and cost of capital.
- $\circ \quad \text{Administrative and political barriers}$
 - Lack of attention given to the maintenance factor by the government.
 - Insufficient cooperation among organizations involved in implementing renewable energy policy.
 - Long delays and absence of standardized access conditions.
- Socio-cultural barriers
 - Limited public awareness of renewable energy technologies.
 - Accessing low cost energy.

Renewable Energy and Energy Efficiency

Renewable Energy

Although Malaysia is keen on creating a strong RE sector, it has failed to provide results in the past. Some of the barriers that have been present in the past are the lack of overall national plan, the absence of a regulatory framework, low energy prices and insufficient funding. For example, in 2001, under the Fifth Fuel Policy, RE was targeted to be a significant contributor to the country's national grid with a generation mix of 5%. When this was unsuccessful at the end of December 2005, Malaysia reaffirmed their 5% target in their Ninth Plan, only to miss the target, again. The renewable target set out since a decade ago has not been achieved and currently, less than 1% of renewable energy accounts for the total power generating capacity of the country.

Nonetheless, the Malaysian government has reiterated its support of renewable energy. Under the Tenth Plan, the National Renewable Energy Policy and Action Plan was implemented, with several new initiatives secured for completion in 2015:

- Renewable energy target of 985MW
- or 5.5% of RE contribution to total electricity generation by the following sub-plans:
- Introduction of a Feed-in Tariff of 1% incorporated into the electricity tariffs of consumers to support the development of renewable energy.
- Establishment of the Renewable Energy Fund to finance the expansion.
- Establishment of Sustainable Energy Development Authority of Malaysia to facilitate development of the renewable energy industry.
- Introduction of AFFIRM, which incentivizes businesses to adopt green technology by implementing tax incentives and soft loan schemes.

By 2030, Malaysia aims to develop around 4,000 MW of renewable energy, with 60% of the total RE mix coming from solar energy, followed by 20% from biomass.

From 2011 to 2015, in Malaysia's New Energy Policy, the government emphasizes energy security and the development of renewable resources. For example, in the transport sector, there will be a mandatory mandate to ensure blending of bio-fuel.

Below are the future targets set for renewable energy and their overall contribution to the total power contribution in the next 40 years:

Year	Cumulative RE capacity (MW)	Renewable contribution
2010	73	0.5%
2015	985	5.5%
2020	2,080	11%
2030	4,000	17%
2050	21,400	73%

Table 4.4: New renewable energy capacity targets to be achieved

Source: APEC Expert Group on New & Renewable Energy Technologies

Specific Renewable Energies

<u>Biomass</u>

Gaining attraction, but at a steady rate.

Home to renewable organic matters including timber waste, oil palm waste, rice husk, coconut trunk fibers and municipal waste.

Palm oil industry the most popular form of biomass.

Over the past 4 decades, the palm oil industry has grown tremendously.

Currently, 4.85million hectares of land that is planted with oil palm trees and it contributes to 37.3% of the world's total palm oil production.

In 2010, Malaysia produced 16.99 million tons of oil per day.

Efforts have been made to increase the palm oil industry's contribution to gross national income by 240% from 2010-2020.

Problems: conversion of forestland threatens to create CO2 emissions.

Hydropower

Only RE technology that is presently commercially viable on a large scale.

Expected to play a prominent role in generation mix.

Peninsular has limited options but will see an increase from 5% in 2008 to 35% in 2030 in Peninsular Malaysia.

Currently operates three hydroelectric schemes.

Sarawak has vast potentials of hydropower with the potential to generate 28,000 MW of electricity.

Focus is on small hydropower projects (mini-hydro power).

<u>Solar PV</u>

Most of the solar PV used in Malaysia is at the domestic level and large-scale commercial use is not significant yet.

Solar PV contributes to national energy mix by 0.013%, but is expected to rise to 1.5% in 2015.

Under the new plan, there are subsidy schemes and tax exemptions for solar PV.

Wind power

Not suitable to generate electricity commercially.

Availability of wind varies with location, but is generally very low.

Below are the main companies in Malaysia that manufacture, export, import, design, sale and supply Malaysia's renewable energy:

Power	Main Companies
Biomass	Custom Energy, Ecobax Trade, Eternal Power Holding Pte Ltd, Hexgen Energy Corpn Sdn Berhad, Membranes Systems Sdn Bhd, Renewables Plus Limited
Hydro	Able Energy Sdn Bhd, Chenango Technologies Sdn Bhd, Pharo Engineering Sdn Bhd
Solar PV	Ebbydem, Green Solar Energy Sdn Bhd, Advanced Solar Voltaic Sdn Bhd, SOL – Lite (Malaysia) Sdn Bhd, Enerleds Solutions Sdn Bhd, Helios Aethon Solar Ltd, Jenson Signage, Muhibah Konsortium Holdings
Wind	Amalinsya Sdn Bhd, Green Constitutes Sdn Bhd, OIOS Sdn Bhd, Sonnenbaum Sdn Bhd

Table 4.5 Main companies in Malaysia for specific renewable energies

Energy Efficiency

The Malaysian government faces growing issues such as the security of energy supply and the depletion of national energy resources. The government highlights energy efficiency as an important aspect in its pursuit of a sustainable, and successful, economy. Malaysia sees EE as a means to

potentially alleviate the mounting energy demand and ensure the continuous supply of fuel at an affordable price.

Before the enactment of an EE law, Malaysia produced limited success in improving energy efficiency. There was no national legislature on the matter, and most of the efforts were voluntary. However, Malaysia is beginning to develop agencies, policies and action plans to promote EE. In this respect, the National Energy Efficiency Master Plan has been the cornerstone for EE development.

The 2010 National Energy Efficiency Master Plan is a holistic implementation framework that drives efficiency measures across all sectors in order to achieve a cumulative target of energy savings by 2015 and 2021. This is Malaysia's largest measure to harness energy savings and reduce Malaysia's carbon emissions and dependency on fossil fuels. Some of the sectors that will see EE initiatives are listed below:

Residential: phasing out of incandescent light bulbs by 2014; strengthening efforts to deliver environmentally sustainable housing through the introduction of green guidelines and a green rating system –those who pass will be met with tax incentives.

Township: introduction of guidelines for green townships and rating scales based on carbon footprint baseline.

Industrial: increasing the use of energy efficient machineries and equipment such as high efficiency motors, pumps and variable speed drive controls; new emission standards for specific industries.

Building: revision of the building laws to incorporate the Malaysian standard code of practice on EE and RE for non-residential buildings; wider adoption of the Green Building Index to benchmark energy consumption in buildings.

Since Malaysia is still a developing country, the Kyoto Protocol does not legally bind it; however, the Prime Minister has committed to a 40% reduction in carbon intensity by 2020, compared to 2005, under the Low Carbon Cities Framework and Assessment System. In order to achieve this goal, Malaysia wants to introduce efficient coal technology and gradually remove energy subsidies on oil and gas in order to achieve market prices.

Relationships with Funds and Investors:

Private foreign investments

There is a strong global investment community in the Malaysian clean tech sector due to the government's emphasis and desire for foreign and private investment. Under the 10th Malaysian Plan, the government supports foreign investment. Solar PV and biomass are especially attractive to global investors. Malaysia has already attracted five foreign direct investments to set up solar PV manufacturing facilities, amounting to about RM13.8 billion (US\$4.36 billion) worth of venture. Companies such as Japan Carbon and Sarawak Corridor of RE are investing up to US\$ 103.6 billion dollars in jatropha oil and palm-based biodiesel.

Clean Development Mechanism (CDM)

The 8th most registered CDM projects is Malaysia. Most of the recorded and upcoming projects are related to palm oil and landfill gas capture. Around 32 CDM projects with an annual reduction of 2.56 million tons of CO2 are already underway, with an additional 90 projects under evaluation.

11

Asian Development Bank and World Bank

As Malaysia is edging closer to becoming a developed nation, the government or the private sector including international players funds many projects. Malaysia has chosen not to borrow from the World Bank and for the last 15 years, the nation has not engaged with the Asian Development Bank for funding. However, they recently rekindled their relationship, and the ADB has already made 11 loans for energy projects in 2012.

Opportunities for Singaporean firms in Malaysia

Malaysia offers strong opportunities to Singaporean firms in the RE sectors following their ambitious targets for a green economy. With their primary goal of becoming a developed country by 2020, Malaysia knows it cannot overlook the importance of the RE and EE sector. Despite the limited success of their past action plans, Malaysia has reaffirmed their desire to grow the RE and EE sector. The 10th Malaysian Plan introduces vigorous goals such as achieving 5.5% RE out of the total power generation capacity. Under this plan, Malaysia has also emphasized the desire to include foreign companies and investment in the energy sector.

Due to the proximity, both in foreign relations and geography, Malaysia is a strategic country to do business with. The Singaporean government continues to strengthen its ties with its neighbors, as we can see with the recent drafted plan for the potential of sharing electricity with Malaysia.

Energy Efficiency Target of 40% reduction of CO2 by 2020 National Energy Efficiency Master Plan Cumulative savings for 2015 and 2021 Tax incentives, rating scales, emission standards and other financial enticements

Biomass

Palm oil is a huge industry in Malaysia

Expected to increase by 240% in the next decade

Large on-going projects to build more palm oil industries and technologies to turn palm oil into fuel

<u>Hydropower</u>

Commercially viable on a large scale On-going projects to build more hydropower plants

<u>CDM</u>

8th most registered CDM projects 32 CDM projects with 90 under evaluation Focused on palm oil and landfill gas capture

Overall there are many opportunities for Singaporean firms in the biomass and hydropower sectors in Malaysia. The large projects and significant funding being committed to RE and EE are testimony to the available opportunities for Singaporean firms. The favorable regulations and encouragement to the private sector demonstrates Malaysia's ambitious target to include foreign power and investment.

FUND MAPPING

Partnerships and Funds for Renewable Energy and Energy Efficiency Development

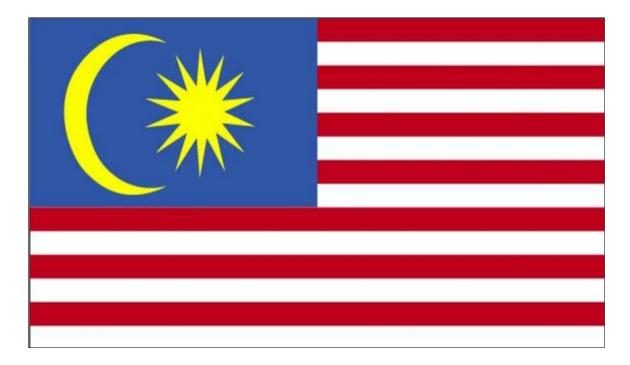
GLOBAL

- World Bank
- International Finance Corporation
- Asian Development Bank
- Climate Technology Initiative
- Global Environment Facility
- Seed Capital Assistance Facility
- Global Energy Efficiency and Renewable Energy Fund
- Renewable Energy and Energy Efficiency Partnership
- Global Climate Partnership Fund
- Sustainable Energy Market Development Program
- Asia Sustainability and Alternative Energy Program
- Global Energy Program
- Clinton Climate Initiative
- Clean Development Mechanism
- Clean Investment Funds
- Armstrong Asset Management (ASEACE)
- Deutsche Investitions (DEG)
- Norwegian Investment Fund for Developing Countries (Norfund)
- *No longer*: Asia-Pacific Partnership on Clean Development and Climate (APP)

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Malaysia

Description of Matrices:

Update of active projects from August 2010 in Malaysia region (projects still active are marked with **)

Addition of new active projects since August 2010 in Malaysia region. Only CDM.

CDM projects from Aug '10 onwards			
Number	Registered	Title	Annex I Parties
1	21 Dec 09	AMA08-W-10, Methane Recovery in Wastewater Treatment, Kedah, Malaysia	Switzerland, Netherlands
2	02 Feb 10	Inno-Kwants Mewah-Palm Oil Mill Waste Recycle Scheme, Malaysia	UK and Northern Ireland
3	17 Mar 10	Kunak Bio Energy Project	UK and Northern Ireland
4	15 Jun 10	Filmax Biomass Thermal Energy Project	UK and Northern Ireland
5	21 Jun 10	Sunquest Biomass Renewable Energy Project	UK and Northern Ireland
6	08 Oct 10	Sungei Kahang POME Biogas Recovery for Energy Project in Johor	Japan
7	29 Dec 11	KDC MILL 1 AND MILL 2 BIOGAS PROJECT	UK and Northern Ireland
8	25 Jan 11	Biogas Recovery at Ulu Kanchong Palm Oil Mill	UK and Northern Ireland
9	26 Jan 11	Biogas Plant at United Plantations Berhad, UIE Palm Oil Mill	Denmark
10	26 Jan 11	Sungai Kerling Hydropower Plant	Sweden
11	26 Feb 11	Homet Raya Sibu Biomass Cogeneration Power Plant Project	UK and Northern Ireland

12	05 Mar 11	MY08-WWP-30, Methane Recovery in Wastewater Treatment, Pahang, Malaysia	Netherlands
13	14 Apr 11	G.B. Industries Biomass Fuel Switch Project	UK and Northern Ireland
14	26 Apr 11	Tabes Sdn Bhd Sibu Biomass Cogeneration Project	UK and Northern Ireland
15	31 Aug 11	Biogas Project at Prolific Yield Palm Oil Mill	Denmark
16	01 Jun 11	Tekmedic Biomass Fuel Switch Project	UK and Northern Ireland
17	20 Jun 11	BIOENERGY PLANT – SAWIT KINABALU	Denmark
18	23 Jun 11	Abedon Enviro Bio-Waste Composting Project, Malaysia	Japan
19	15 Jul 11	Residual Organic Waste to Steam & Electricity Project in Nilai, Malaysia	UK and Northern Ireland
20	31 Aug 11	Biogas Project at Prolific Yield Palm Oil Mill	Denmark
21	14 Sep 11	Biogas Plant at United Plantations Berhad, ULU BASIR Palm Oil Mill	Denmark
22	22 Sep 11	MNI Renewable Energy Plant	Denmark
23	03 Apr 12	Rubberflex Biogas Plant, Pahang	Switzerland
24	17 Apr 12	Leluasa Biomass Steam Plant in Lahad Datu, Sabah, Malaysia	Canada