

Financing clean energy projects in Malaysia

马来西亚清洁能源项目融资

Market signals, opportunities and
challenges

市场信号、机遇与挑战

Ernest Navaratnam, CEO of Cenergi SEA

马来西亚Cenergi 公司首席执行官

October 2018

2018年10月

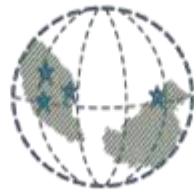


About Cenergi SEA

Cenergi公司简介



Focus on biogas and energy efficiency in Southeast Asia
致力于东南亚的沼气和能源效率



Largest grid-connected POME-biogas developer in Malaysia, 5.5 MW
马来西亚最大的并网棕榈油废液 (POME) -沼气开发商, 5.5兆瓦



5.5 MW
More than RM 50mil deployed for Energy Efficiency
投入超过5000万令吉用于提高能源效率



The Renewable Energy Market

可再生能源市场



Renewables are the fastest-growing energy source in the world today; prospected to provide at least

14% of the global energy mix

**可再生能源是当今世界增长最快的能源；
预计将至少**

占全球能源结构的14%

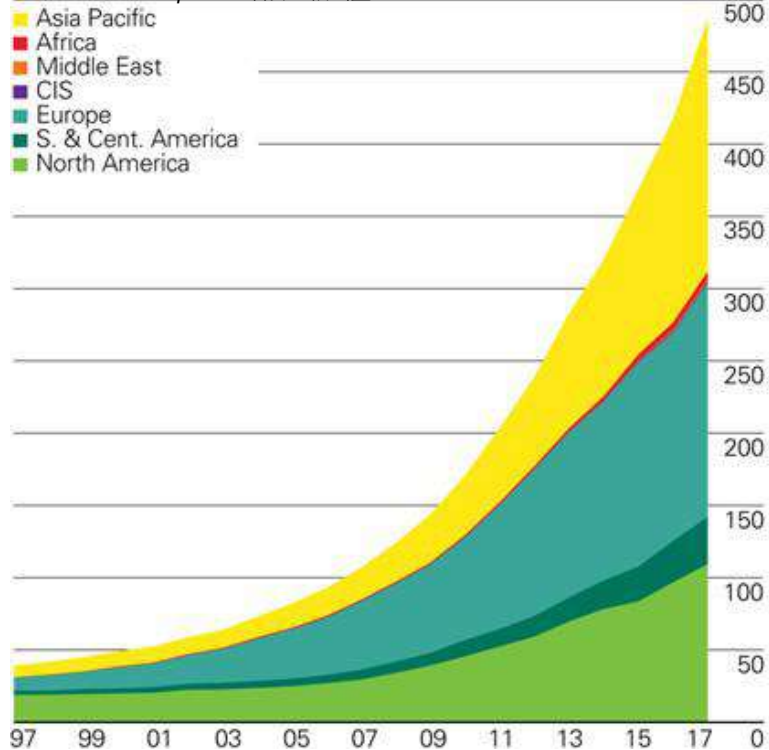
RE Consumption and Share of Power by Region

各地区可再生能源消费和可再生能源发电量占比

Renewables consumption by region

各地区可再生能源消费

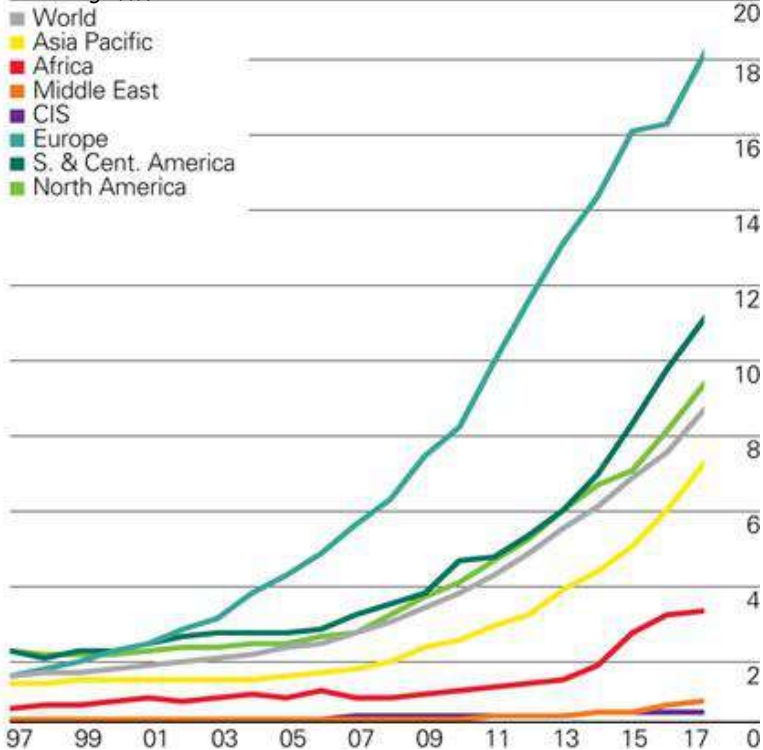
Million tonnes oil equivalent 百万吨油当量



Renewables share of power generation by region

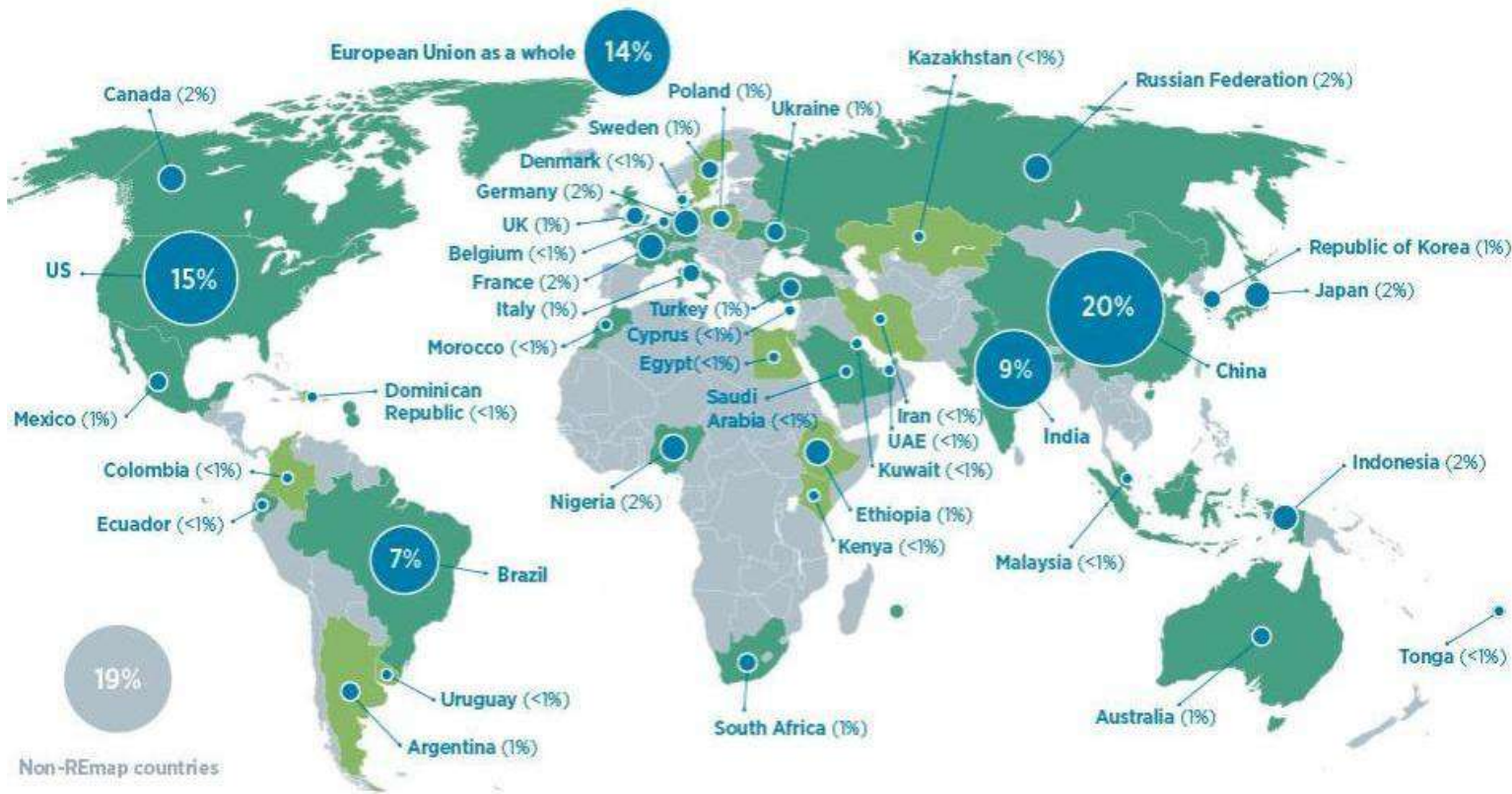
各地区可再生能源发电量占比

Percentage 百分比



Percentage of RE each country will consume by 2030

2030年各国可再生能源占比



Source: International Renewable Energy Agency (IRENA)
来源：国际可再生能源机构（IRENA）



Clean Energy is key in Southeast Asia to spur economic growth: 清洁能源在刺激东南亚经济增长中发挥关键作用:

1. ASEAN is an emerging economy in the world, home to around 634 million
东盟是一个新兴经济体，人口达6.34亿。
2. Indonesia, Malaysia, Philippines, Thailand and Vietnam are experiencing significant growth of RE in the region
清洁能源在印度尼西亚、马来西亚、菲律宾、泰国和越南发展迅速。
2. ASEAN is committed to reach **23% of renewable energy (RE)** in the primary energy mix by 2025
东盟承诺，到2025年，可再生能源在一次能源结构中的比重将达到23%。

Renewable Energy Opportunities in Malaysia

马来西亚可再生能源的机遇



Perspectives from Project Developers

项目开发商的视角

- Does the RE sector have the business models and practices that investors seek?
可再生能源领域是否存在投资者寻求的商业模式和实践？
- Where are the opportunities for project developers?
项目开发商的机会在哪里？
- What are the barriers and how can they be overcome?
有哪些阻碍？应当如何解决？



Malaysia's Great Potential for RE Growth

马来西亚可再生能源增长潜力巨大



Palm Oil Industry 棕榈油产业

We have 450 working palm oil mills with waste to recover opportunities to produce electricity and biogas
我们有450家运营中的棕榈油厂，废液可以发电和制造沼气



Abundant Resources 资源丰富

Abundant biomass and biogas potential, good sun irradiation, abundance opportunities for mini-Hydro

丰富的生物质和沼气；
日照充足；
小水电领域机会众多



Green Islamic Bonds 绿色伊斯兰债券

Malaysia is a hub for Green Sukuk (Islamic Bonds) that provide lower rates of interest for sustainable projects

马来西亚是绿色伊斯兰债券的中心，为可持续项目给予较低的利率

Changes in Political Climate

政治气候的改变

1

“You don’t have to know *me*, you have to know *how*” - a new open, transparent and meritocratic attitude

“你不需要是我的熟人，但是你要会做事”——新型的、透明的、任人唯才的态度

2

Moving away from expensive nuclear to renewable energy options, using abundant local resources

利用当地丰富的资源，逐渐从昂贵的核能转向可再生能源

3

Growing the national renewable energy from **2% to 20% by 2030**
到2030年，国家可再生能源将从**2%增长到20%**

4

Energy efficiency recognised as the lowest hanging fruit in the clean energy transformation
能源效率被认为是清洁能源转型中最容易实现的目标

Green Sukuk Programme (GSP)

绿色伊斯兰债券

The GSP is an innovative and ethical financial structure that aims to **speed up the development** of smaller, high-quality Renewable Energy and Energy Efficiency projects in Malaysia, and eventually Southeast Asia.

绿色伊斯兰债券计划是一项创新的、道德的金融产品，旨在**助推**小规模、高质量的可再生能源以及能效项目在马来西亚，甚至整个东盟地区的发展。

1. | Develop, launch, and operate GSP
开发、发布以及运行绿色伊斯兰债券
2. | Scale up and diversify pipeline of small RE projects
扩大以及多元化小型可再生能源项目的渠道
3. | Invest in global standard energy efficiency projects
投资全球标准能效项目



Renewable Energy Challenges in Malaysia

马来西亚可再生能源的挑战





What policy and regulatory frameworks will encourage Malaysia's renewable energy transition to scale?

哪些政策和监管框架将帮助扩大马来西亚可再生能源转型规模？

RE Challenges and Potential Solutions

可再生能源的挑战以及可能的应对方案



Renewable energy is seen to be more costly than conventional energy generation

人们认为可再生能源比传统能源发电的成本更高



Difficulty connecting to and injecting into the national grid

难以并网



1) Educate on the affordability of RE and its underutilised feedstock

大力宣传：可再生能源的成本并没有普遍认为的高，且其原料未充分利用

2) Enforce a merit order dispatch

执行发电经济调度制度



1) Bring the grid to whomever needs it

将电网覆盖到所有人

2) Liberalise the market to encourage buying of “green energy”

放开市场，鼓励购买“绿色能源”

In Summary

总结

The clean energy industry in Malaysia is a nascent and untapped market with abundant resource. But financing its projects can be easier with the proposed:

马来西亚的清洁能源产业是一个新生的、未开发的市场，资源丰富。以下建议可以让其项目融资更加简单：

- 01 | Moderation of investment criteria from banks
根据银行的投资标准进行审核
- 02 | GSP and alternative methods of funding
采用绿色伊斯兰债券以及其他创新方式融资
- 03 | Raising awareness of cost-saving RE/EE projects
提高对可再生能源 / 能效项目成本节约方面的认识
- 04 | Greater regulation of the energy market: merit order
对能源市场加强监管：发电经济调度
- 05 | Simplifying access to the national grid
简化并网手续



**Thank you for
listening.**
谢谢

info@cenergi-sea.com

@cenergisea on FB | LI | TW

