

Solar PV - Financial Folly OR Economically Essential

*ADB Headquarters, Manila, Philippines
15 June, 2015*



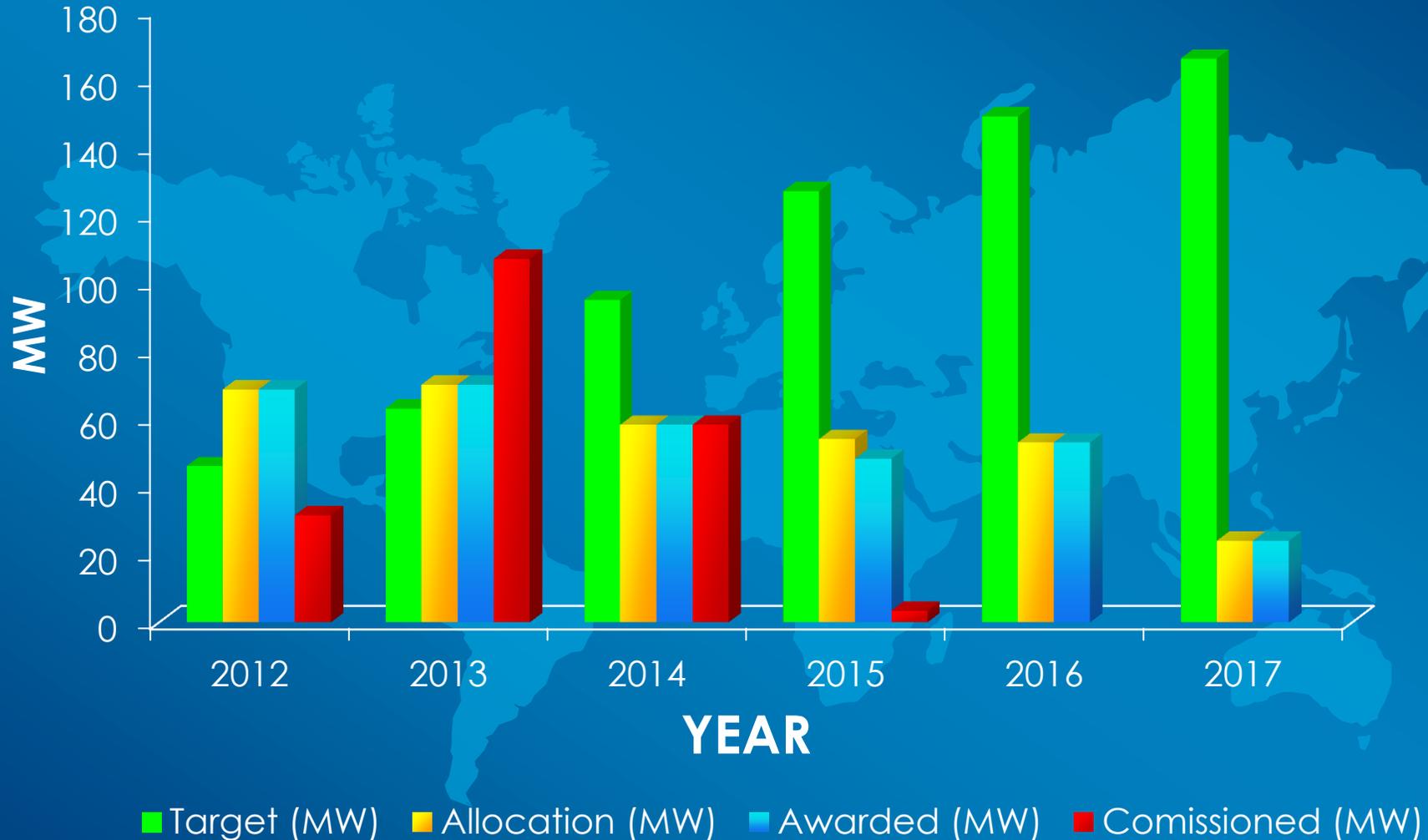
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Executive Director Minconsult Sdn. Bhd.



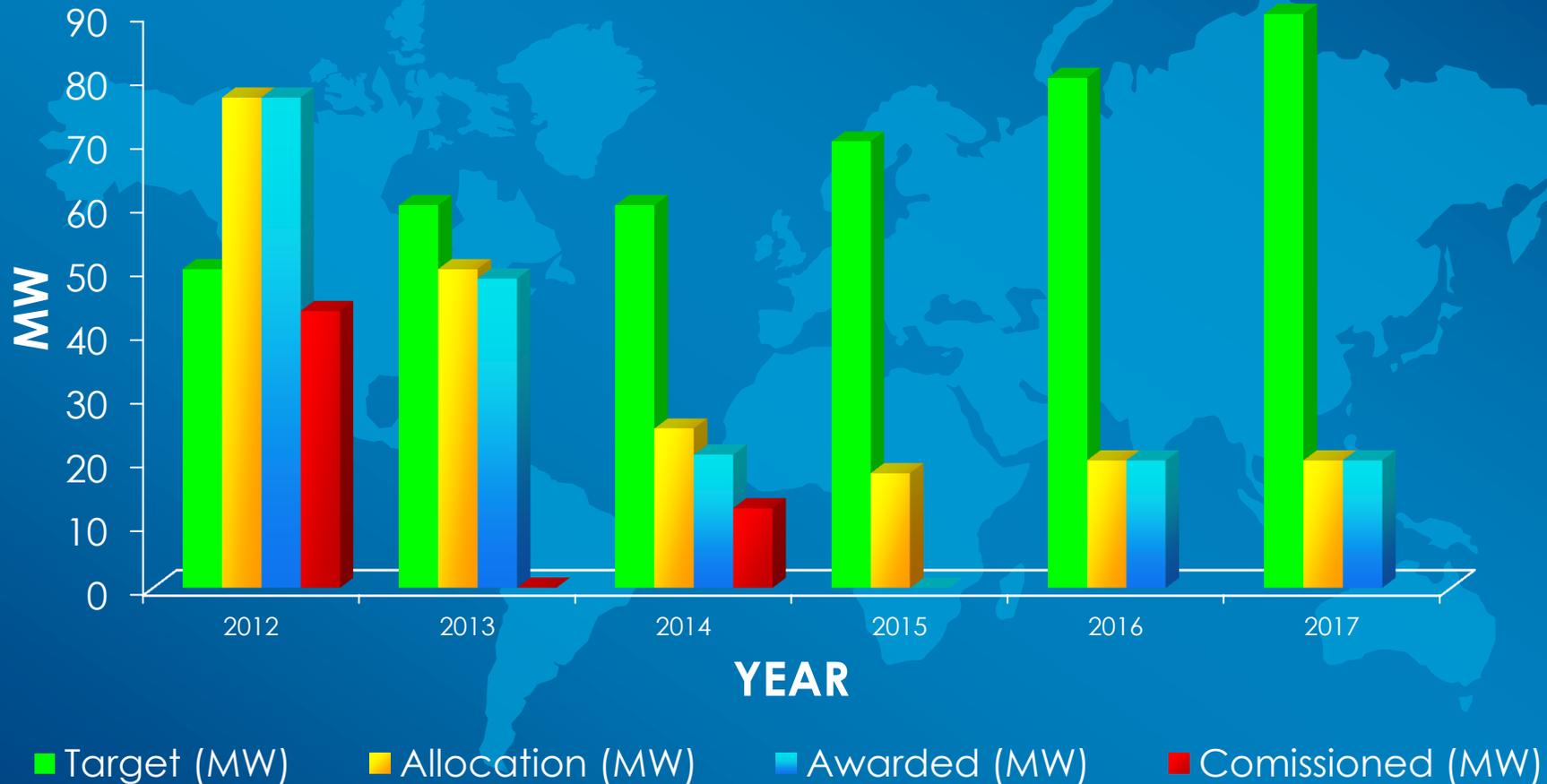
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SOLAR – MALAYSIA



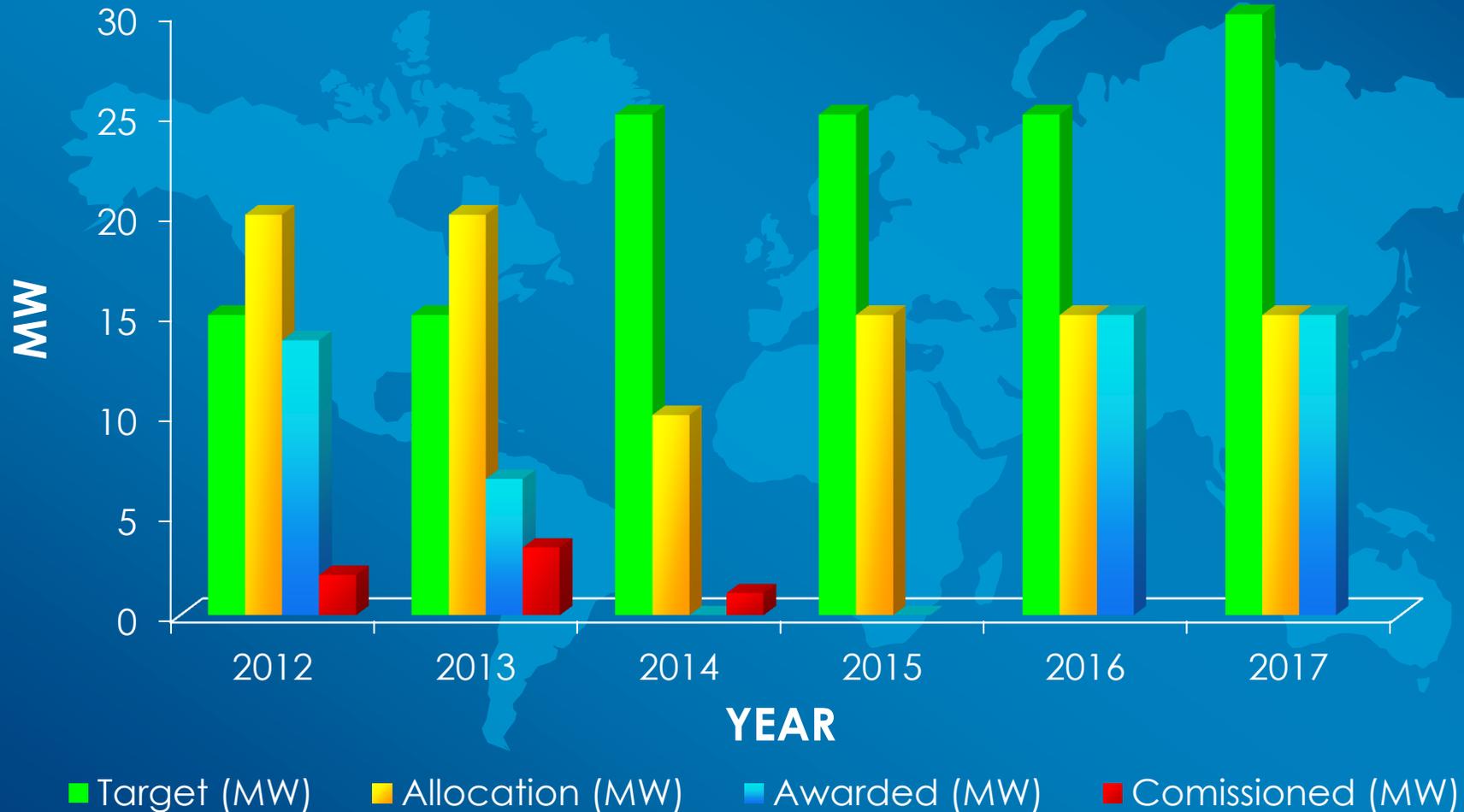
Source: SEDA, KETTHA

BIOMASS - MALAYSIA



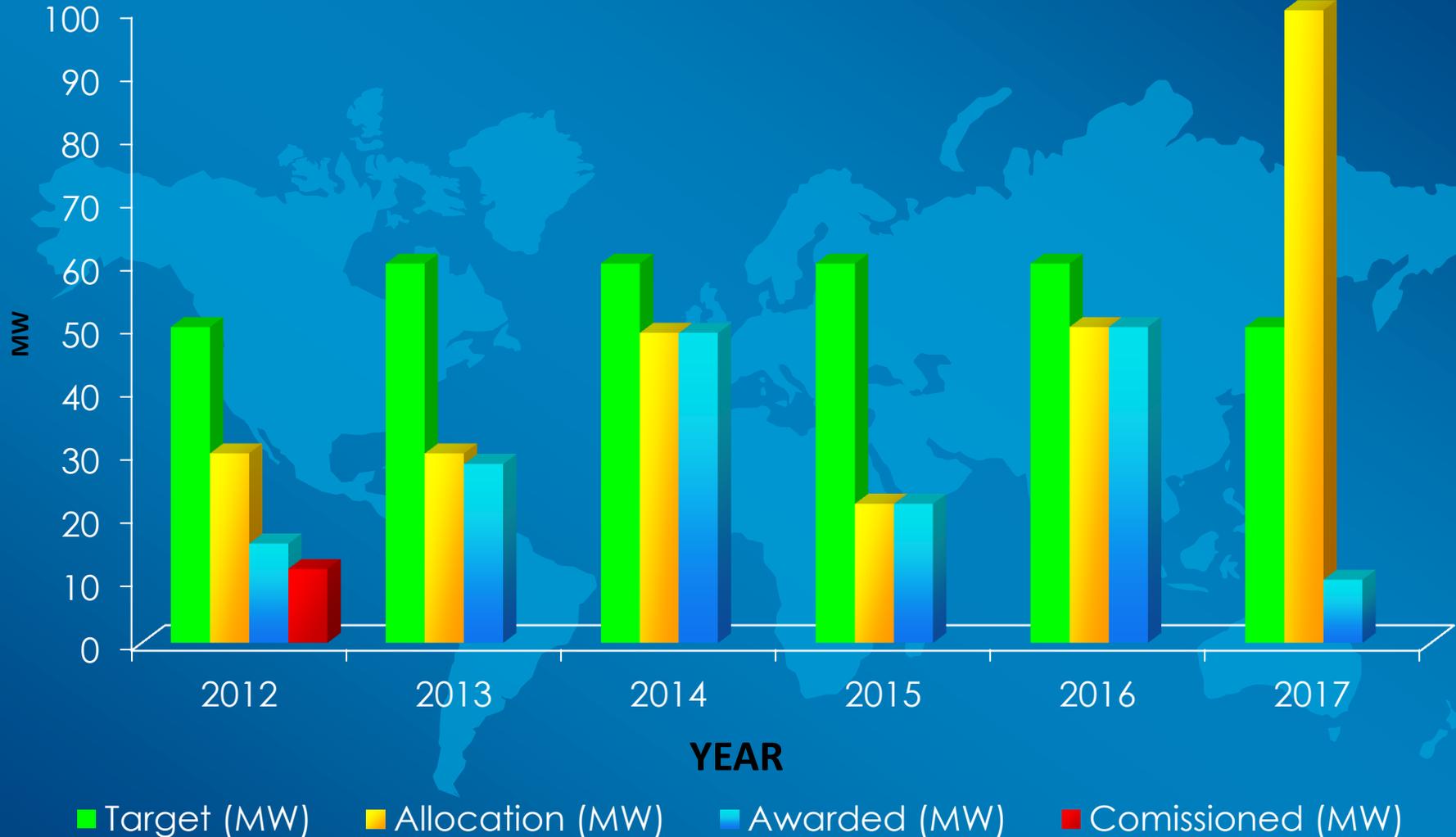
Source: SEDA, KETTHA

BIOGAS - MALAYSIA



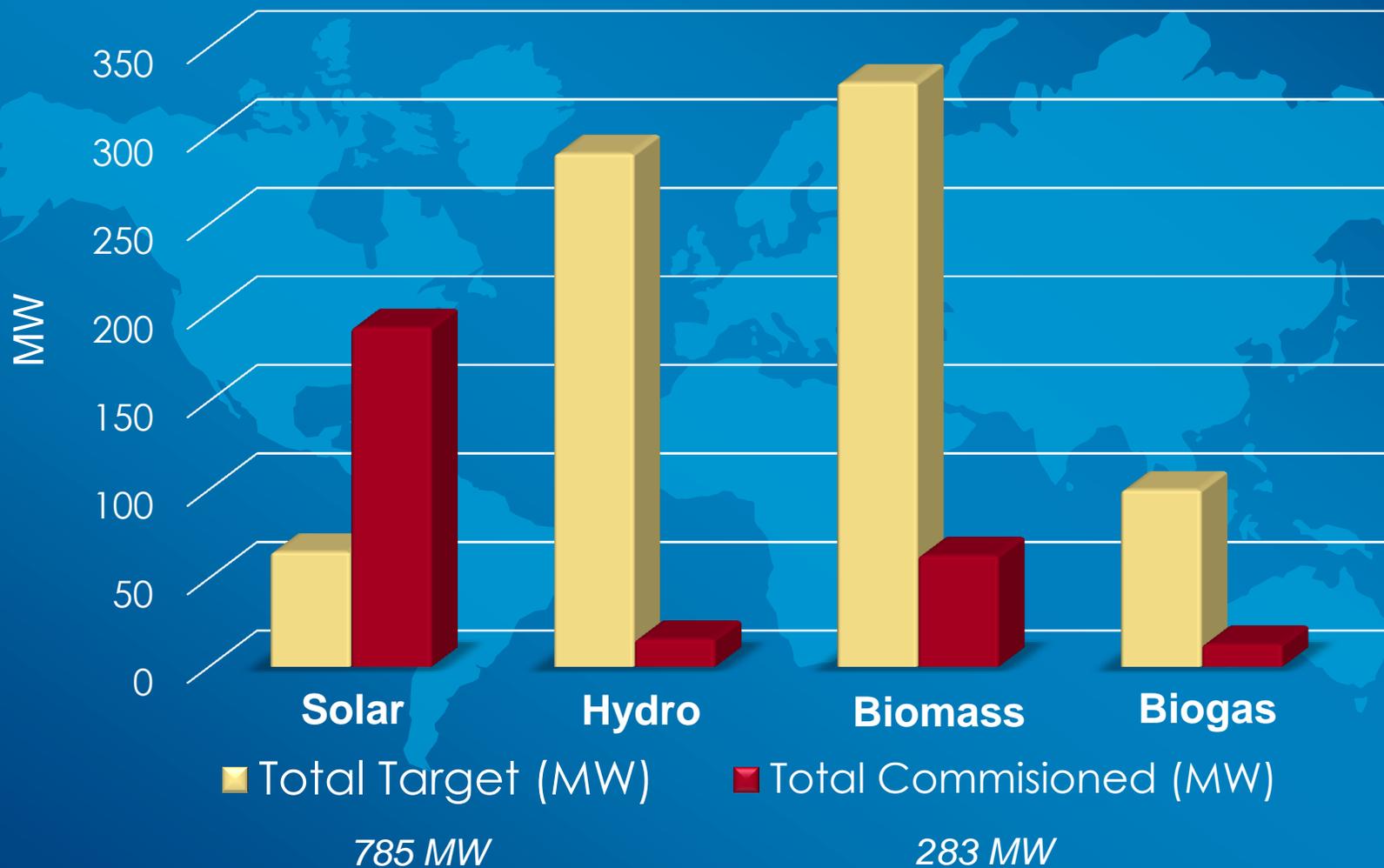
Source: SEDA, KETTHA

HYDRO - MALAYSIA

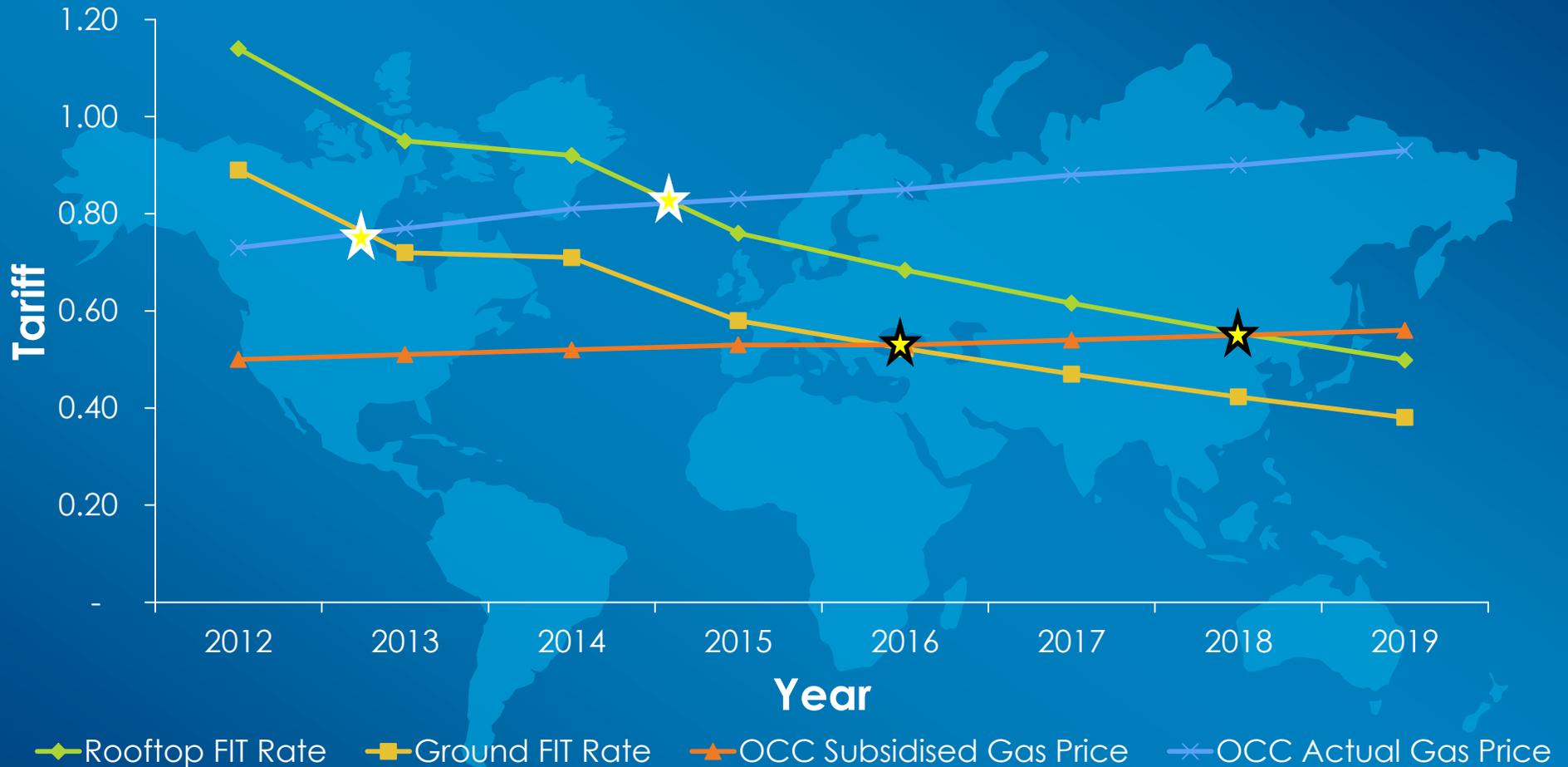


Source: SEDA, KETTHA

Target VS Commissioned 2012-2014



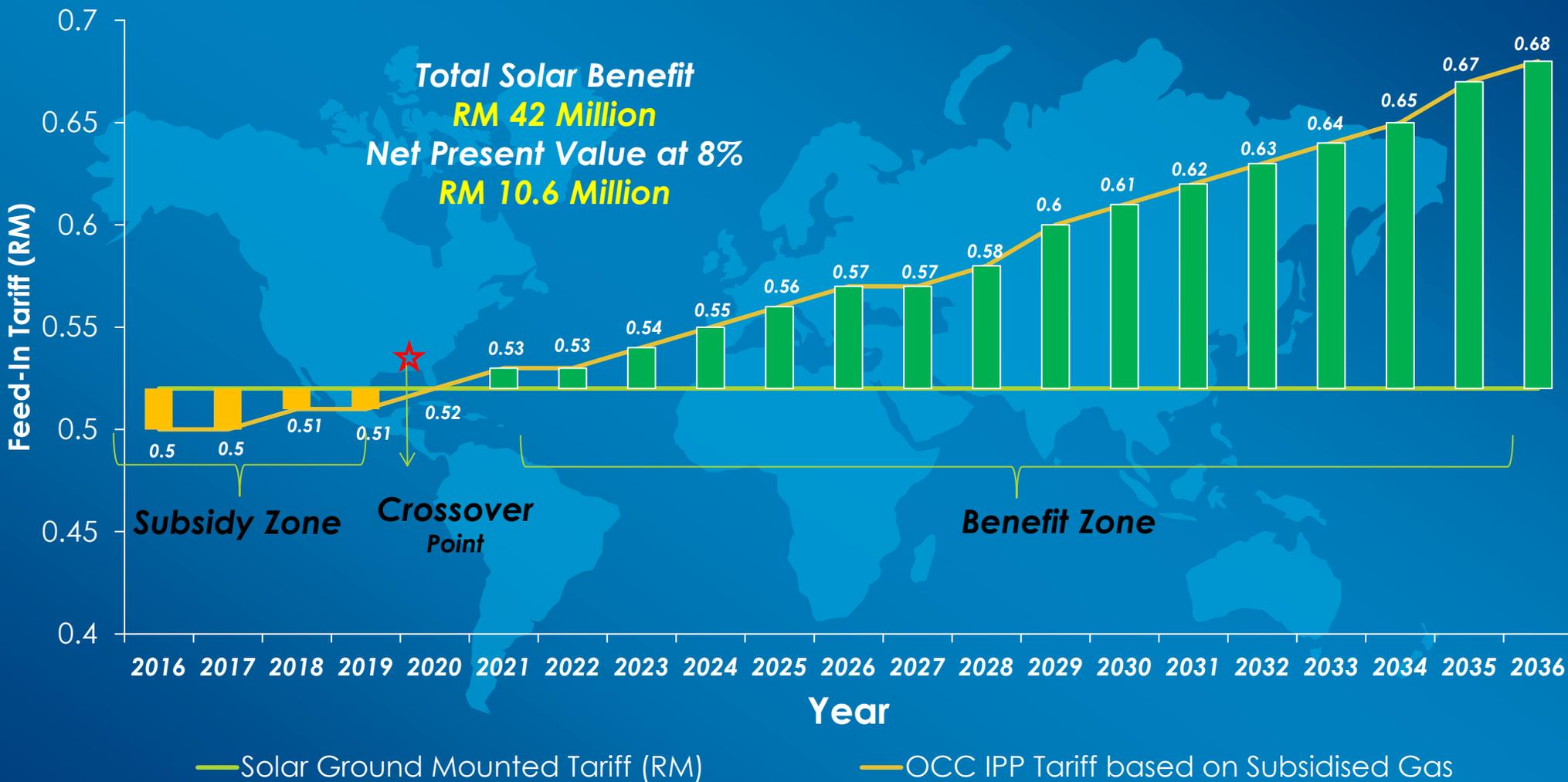
SOLAR FIT RATE VS OPEN CYCLE IPP RATE



1. Grid Parity with Subsidised gas price reach in 2016 (Ground) and 2018 (Rooftop)

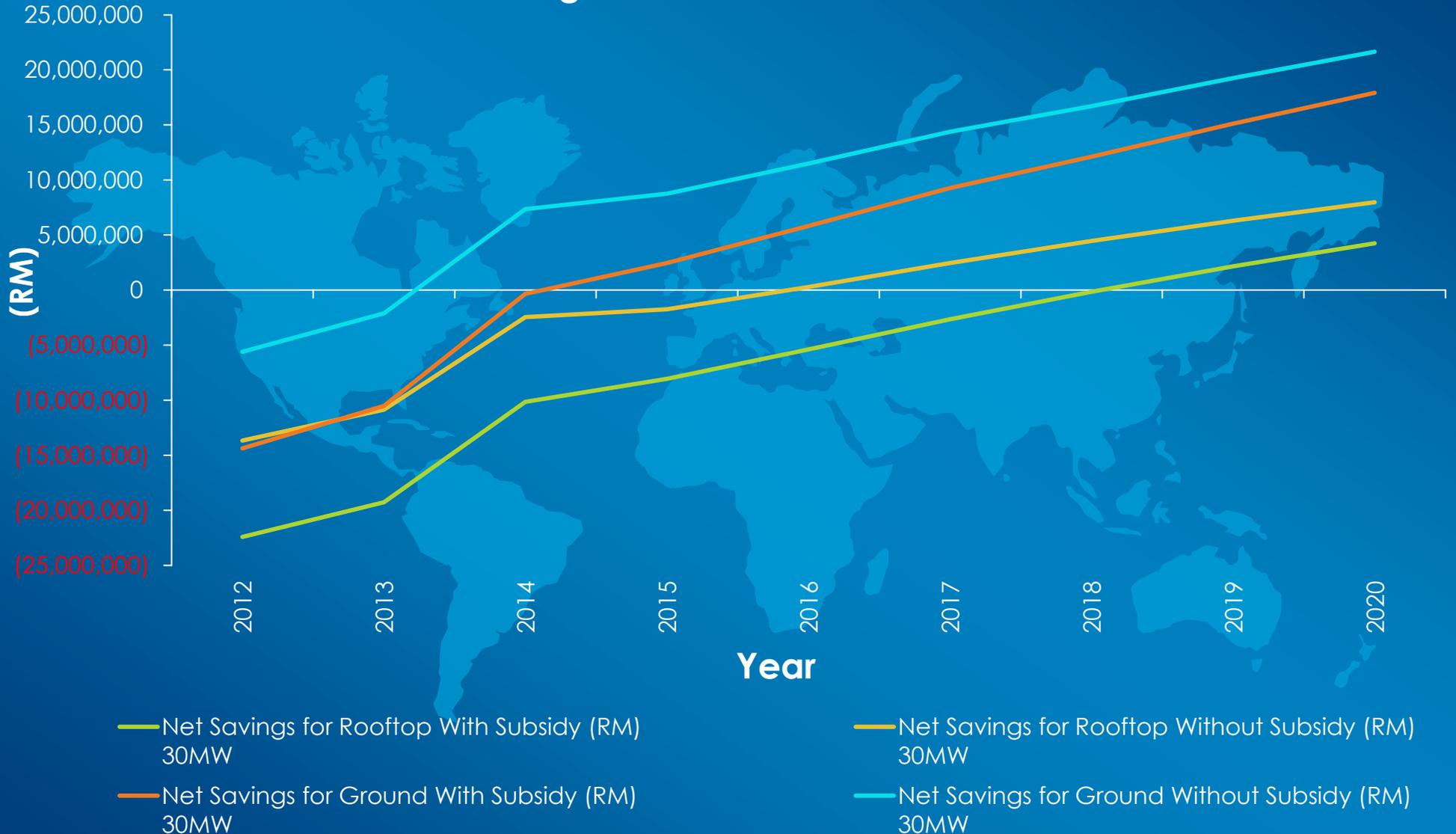
2. Grid Parity with actual gas price reach in 2013 (Ground) and 2014 (Rooftop)

FINANCIAL BENEFIT OF 30MW 2016 GROUND MOUNTED SOLAR PROJECT



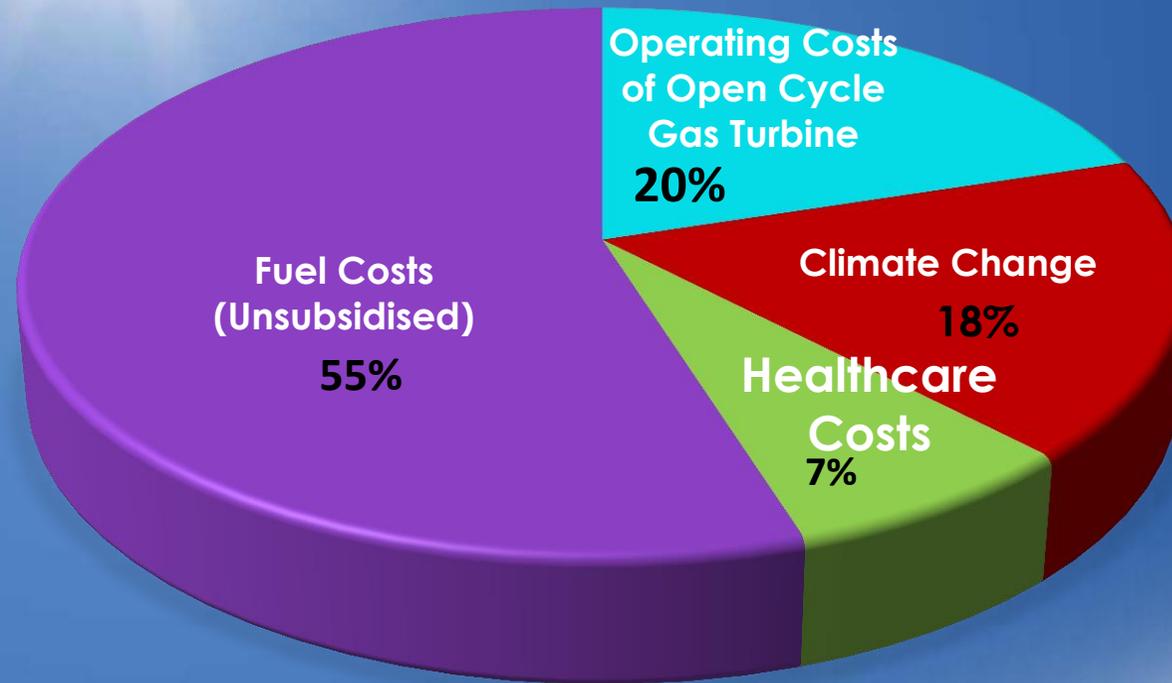
FINANCIAL IMPACT TO UTILITY

Net Savings of A 30 MW Solar Power Plant



ECONOMIC BENEFIT

ECONOMIC BENEFITS OF A 30MW POWER PLANT - YEAR 2012



- Financial Net Present Value to Utility with subsidised gas price is **(RM 10 Million)**
- Financial Net Present Value to Utility with Actual gas price is **RM 113 Million**
- Economic Internal Rate of Return (EIRR) of a solar power plant is **19%**
- Economic Net Present Value (ENPV) of a solar power plant is **RM 252 Million**

SMART MATRIX

	NO SMART	1/2 SMART	VERY SMART
Developers	<ul style="list-style-type: none"> • Can't do anything 	<ul style="list-style-type: none"> • Smart enough to get allocation • Not smart enough to deliver 	<ul style="list-style-type: none"> • Smart enough to get allocation • Smart enough to deliver
Bankers Financial	<ul style="list-style-type: none"> • No vision to support 	<ul style="list-style-type: none"> • Want to support • Issues LOIs but either does not finance or at unreasonable terms 	<ul style="list-style-type: none"> • Successfully finances projects <ul style="list-style-type: none"> - Contractor Financing - Pre / Post commissioning Project Financing - Refinancing eg : Yield Co
Policy Makers	<ul style="list-style-type: none"> • No vision • No framework 	<ul style="list-style-type: none"> • Have framework but <ul style="list-style-type: none"> - Not reflective of actual costs - Economic Benefits not realised - Not market driven 	<ul style="list-style-type: none"> • Long term framework with <ul style="list-style-type: none"> - True costs reflected - Economically sensitive - Sustainable Market approach - Subsidies for short term and impactful

 High Damage

 Moderate Impact

 High Benefit

MARKETING

CONSULTANCY

I want your money

**Good value for money
Good Service
Highly Professional and
on time**

**Lots of competitors
I AM BETTER**

R.E. DEVELOPER

I want your waste

**Pay you for Environmental
Service**

**Typically – First/Early
Developers**

CONCLUSION

Solar / R.E.

Definitely Economically Essential

Financially Viable when true Market Values Considered

Short Term Costs Outweighed by Long Term Benefits

Develop Policy Framework and leave to the market

THANK YOU

