

**Forecast Life-Cycle Cost of
solar PV Electricity (LCOE) (RM/
KWhr) VS Future Cost of
Electricity from Fossil Fuel (RM/
KWhr)**

PV Scenarios for Residential (5% Nominal Discount Rate)								
Year	Total Capital Cost (RM/ kWp)	LCOE Gen (US\$/MWh)	LCOE Gen (sen/ kWh)	Single Buyer Tariff (sen/ kWh)	Transmission Tariff (sen/ kWh)	System Operation Tariff (sen/ kWh)	Distribution/ Customer Services Tariff (sen/ kWh)	Total Electricity Cost (sen/ kWh)
2016	6500.00	139.19	48.72	NA	NA	NA	NA	48.72
2017	6000.00	128.48	44.97	NA	NA	NA	NA	44.97
2018	5500.00	117.78	41.22	NA	NA	NA	NA	41.22
2019	5200.00	111.35	38.97	NA	NA	NA	NA	38.97
2020	5000.00	107.07	37.47	NA	NA	NA	NA	37.47

Data Prepared by Might - PV National Road Map Working Group

NA= Not applicable

Assumptions:

- 25 years duration,
- Average installed capacity for residential system (12 KWp)
- Average annual yield:1350 KWhr/KWp/yr
- Capacity factor 15.4%

Forecast Residential PV Generation Cost (2016-2020)

PV Scenarios for Commercial & Industrial (5% Nominal Discount Rate)								
Year	Total Capital Cost (RM)	LCOE Gen (US\$/MWh)	LCOE Gen (sen/kWh)	Single Buyer Tariff (sen/kWh)	Transmission Tariff (sen/kWh)	System Operation Tariff (sen/kWh)	Distribution/ Customer Services Tariff (sen/kWh)	Total Electricity Cost (sen/kWh)
2016	6000.00	121.82	42.64	NA	NA	NA	NA	42.64
2017	5500.00	111.67	39.08	NA	NA	NA	NA	39.08
2018	5000.00	101.52	35.53	NA	NA	NA	NA	35.53
2019	4800.00	97.46	34.11	NA	NA	NA	NA	34.11
2020	4500.00	91.36	31.98	NA	NA	NA	NA	31.98

NA= Not applicable

Data Prepared by Might - PV National Road Map Working Group

Assumptions:

- 25 years duration,
- Average installed capacity for residential system (1000 KWp)
- Average annual yield: 1,350 KWhr/KWp/yr
- Capacity factor 15.4%

Forecast Commercial & Industrial Solar PV Generation Cost (2016-2020)

PV Scenarios for Utility Scale (5% Nominal Discount Rate)

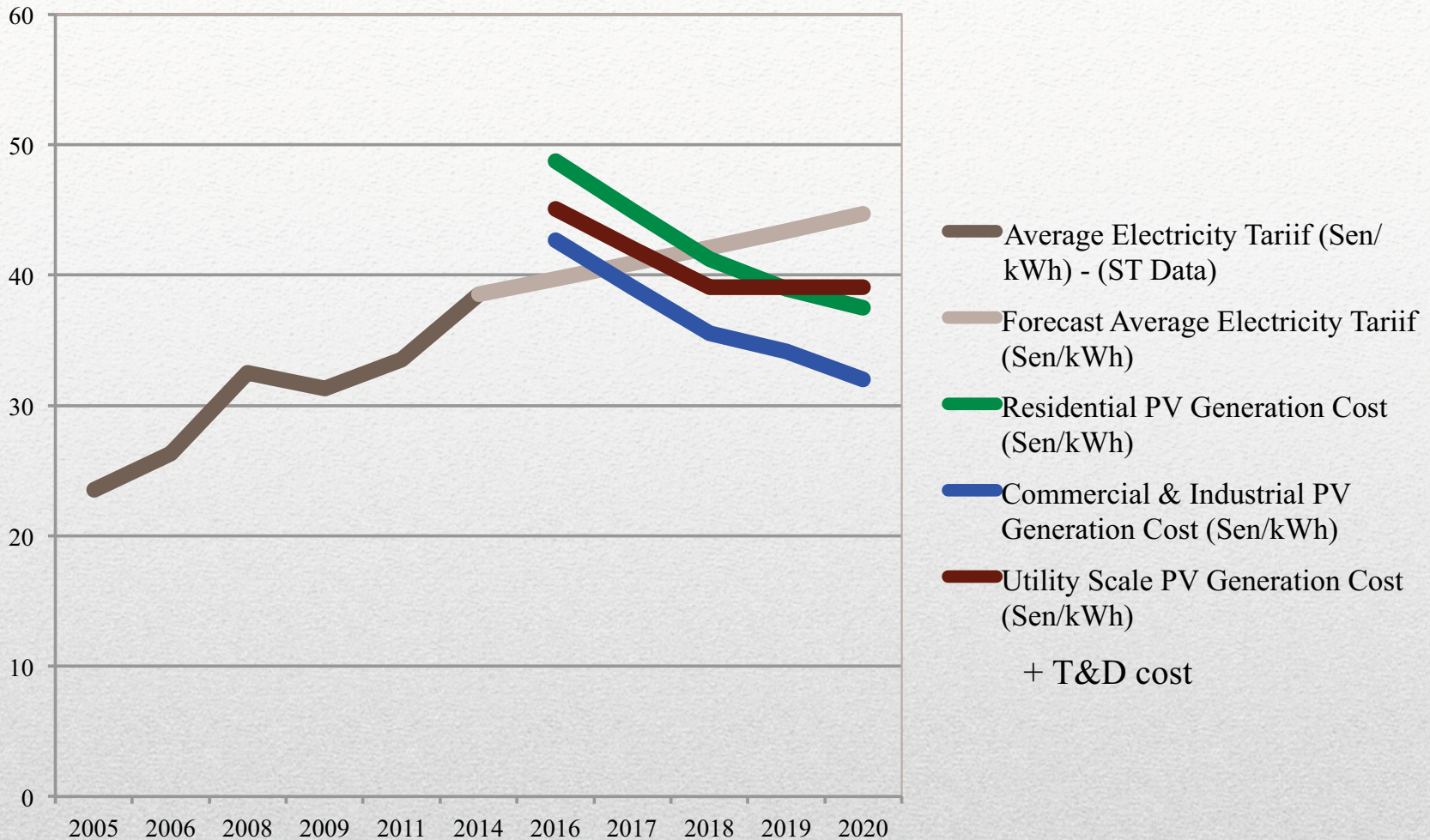
Year	Total Capital Cost (RM/ kWp)	LCOE Gen (US\$/MWh)	LCOE Gen (sen/ kWh)	Single Buyer Tariff (sen/ kWh)	Transmission Tariff (sen/ kWh)	System Operation Tariff (sen/ kWh)	Distribution/ Customer Services Tariff (sen/ kWh)	Total Electricity Cost (sen/ kWh)
2016	5500.00	93.98	32.89	0.19	3.66	0.05	8.25	45.04
2017	5000.00	85.44	29.90	0.19	3.66	0.05	8.25	42.05
2018	4500.00	76.89	26.91	0.19	3.66	0.05	8.25	39.06
2019	4500.00	76.89	26.91	0.19	3.66	0.05	8.25	39.06
2020	4500.00	76.89	26.91	0.19	3.66	0.05	8.25	39.06

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Assumptions:

- 25 years duration,
- Average installed capacity for residential system (between 50 MWp)
- Average annual yield: 1,550 KWhr/KWp
- capacity factor : 17.7%
- Land cost < RM 3 to 4 /sq ft. (lease or purchase) x 87,120 sq ft x 50 (1 acre ~43,560 sq ft, 2 acre/ MWp)

Forecast Utility Scale Solar PV Generation Cost (2016-2020)

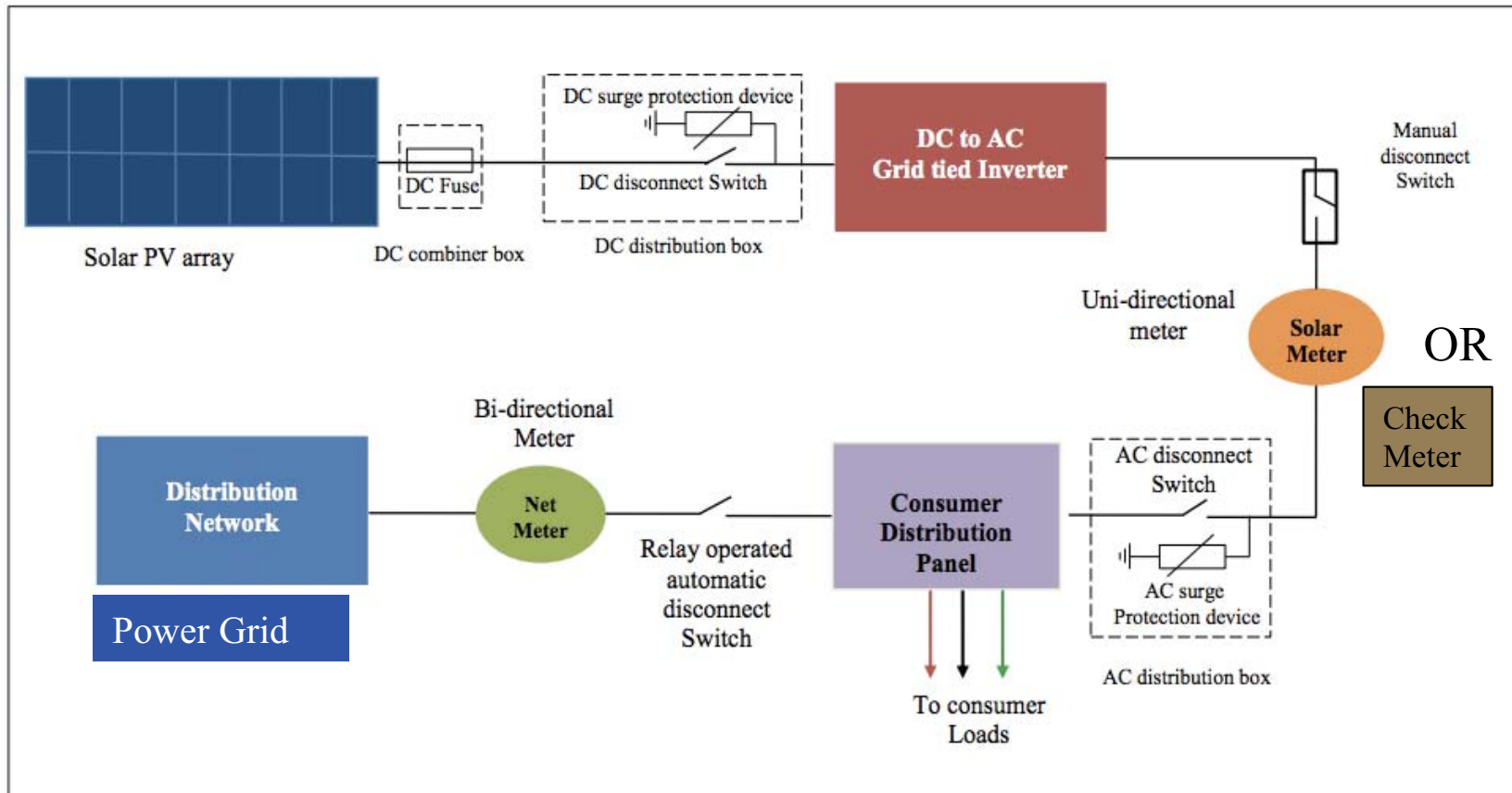


Past Trend and Forecast Average Electricity Tariff vs Solar PV Electricity Generation Cost (2016-2020)



PROPOSED MECHANISMS FOR NET ENERGY METERING (NEM)

Single Line Diagram of Rooftop Facility for Net Metering Interconnection



Proposed Net Energy Metering Interconnection Diagram

- **PV Installation Capacity**

i) Residential: **Maximum 4kWp for Single phase Installation**

Maximum 12kWp for Three Phase Installation

ii) Commercial and Industrial : **Maximum 75% of declared Max. Demand load OR Maximum 60% of Incoming Fuse Rating. (Or which ever higher)**

- **Meters Arrangement (Two Meters)**

Net Meter to record/Read the unit of Import Electricity in **kWh** and Export electricity in **kWh**

And **Solar Meter/ Check Meter** to record the units of electricity generated by Solar PV system.

- **Roll Over Period**

12 months roll over period is to allow excess export credit to be utilized over period of 12month to off set the import electricity.

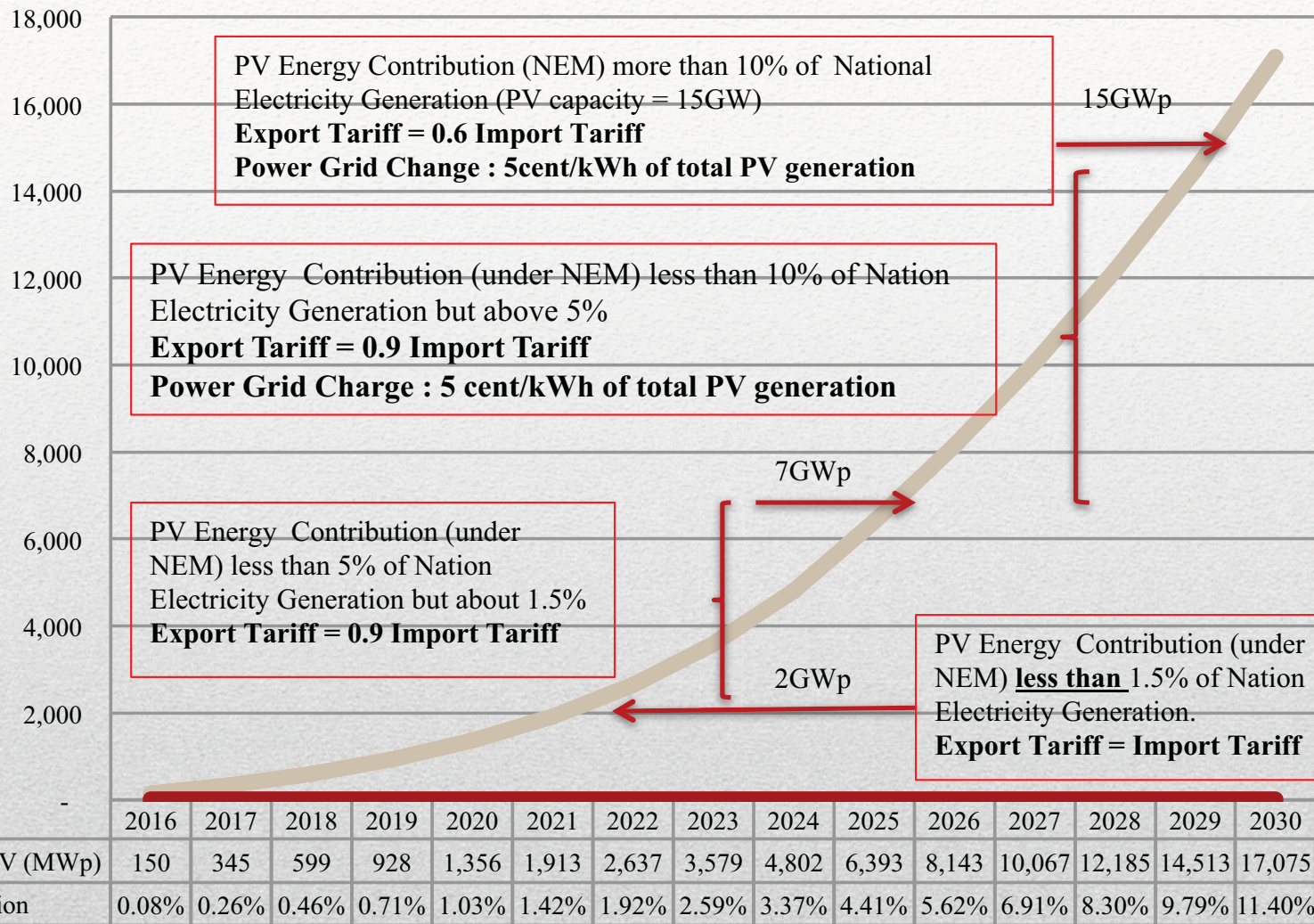
- **No Quota and No Cap System**

Any residential, commercial or Industrial electricity consumer are eligible to install Solar PV on their roof and require to follow the PV installation capacity requirement.

- **No Power System Study and Connection Confirmation Check**

- **ON – Line Application and Low Application Fee**

Proposed NEM Mechanisms.



Proposed Cumulative PV Capacity Targets, Export Tariffs and Power Grid Charges by Phases under NEM Programs