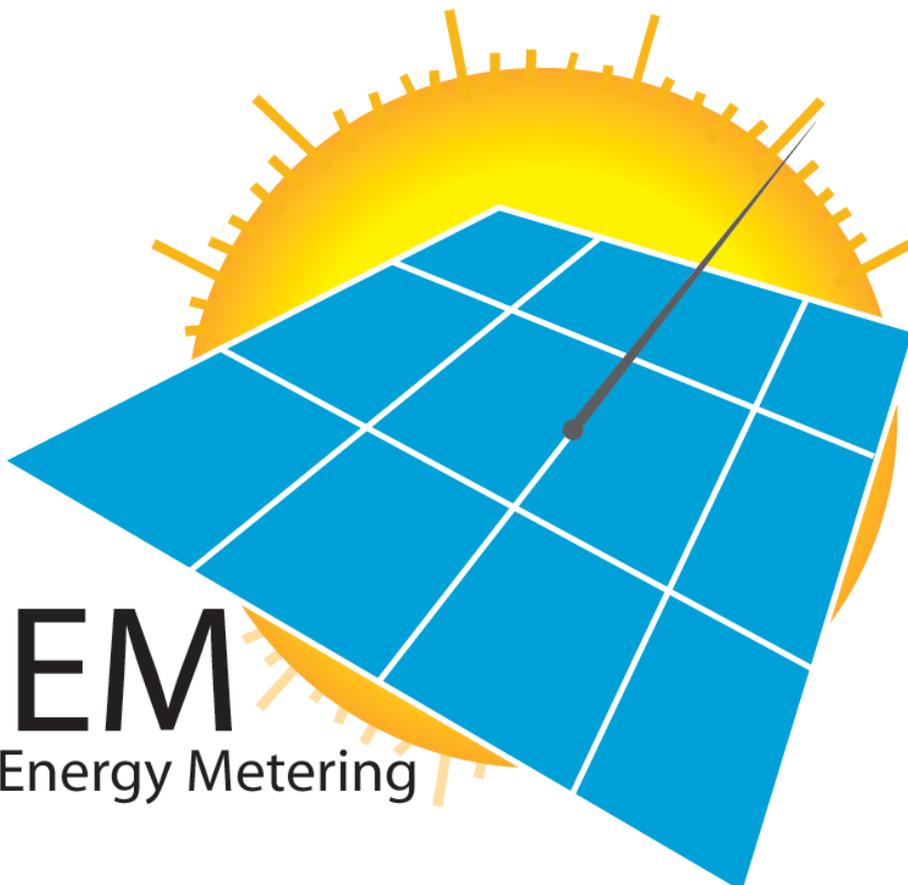


NET ENERGY METERING 2019

22 NOVEMBER 2018



NEM
Net Energy Metering

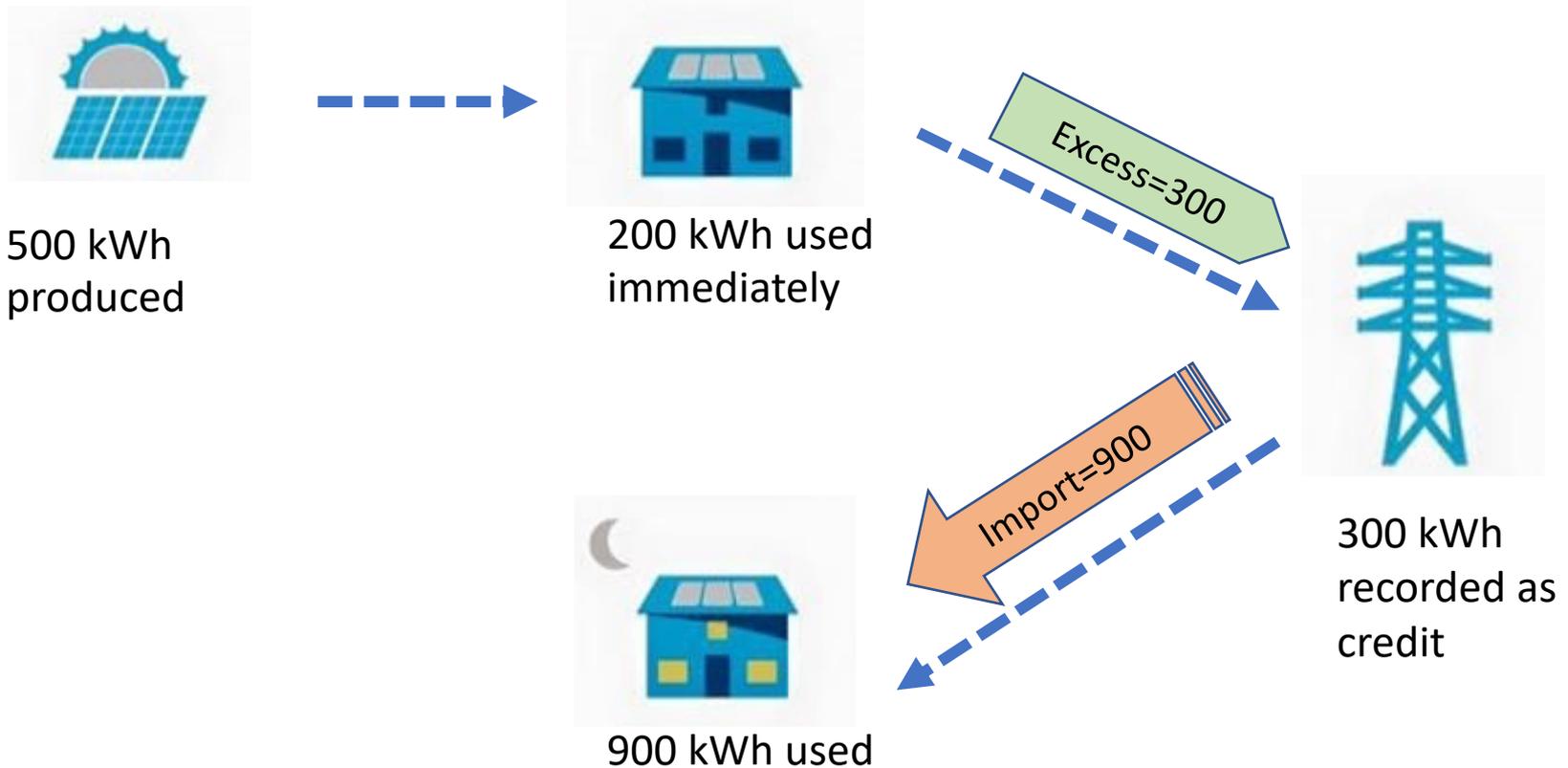
“Solar PV is on track to be the cheapest source of new electricity in many countries.”

*Dr. Fatih Birol, Executive Director, IEA
Oct 2018 ASEAN Ministers of Energy Meeting*

ENHANCEMENT TO THE EXISTING NEM

Issues	Solutions
High cost of outright purchase	More affordable - Solar leasing, Solar PPA
Long payback period	1-to-1 NEM calculation -Excess energy exported to grid at retail tariff
Operations and Maintenance	Solar leasing. Peace of mind.
Risk of default repayment	SARE
Is now the right time to put solar on your rooftop?	YES! The fall of global PV module prices & inverter

1-to-1 NEM (Case for Domestic Consumer)



1100 kWh total used (solar + grid)

Customer only charged for **600**kWh (i.e. 900 import -300 excess)

Formula of Total Used, $A = B + C - D$

1100



Total amount of
electricity
consumes from
solar + grid



500



Total amount of
solar produces

Monthly Read Obtained
from Solar Meter



900



Import from the
grid

Monthly Read Provided
by Utility



300



Exported excess
solar generation
to the grid
Monthly Read Provided
by Utility

B



500 kWh
produced



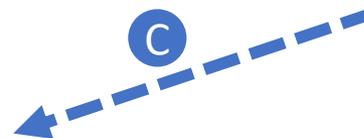
200 kWh used
immediately

D



300 kWh
recorded as
credit

C



900 kWh used

A

1100 kWh total used (solar + grid)

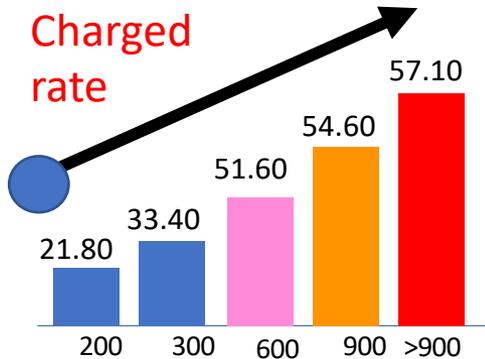
1-to-1 NEM



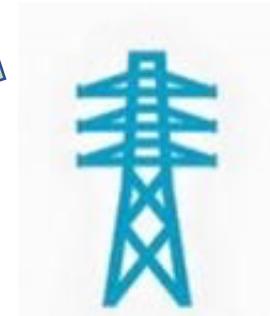
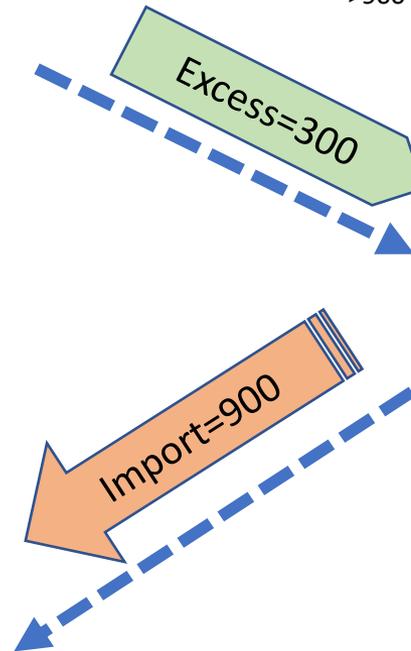
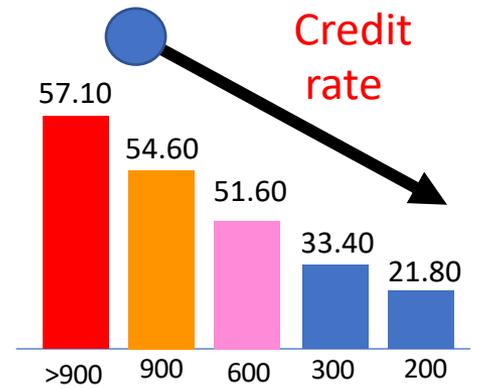
500 kWh produced



200 kWh used immediately (day light)



900 kWh used (at night)



300 kWh recorded as credit

Customer only charged for 600kWh

Benefits of NEM

1. Import less energy from the grid
2. Save on your electricity bills
3. Export excess energy back to the grid for credit to reduce electricity bills even further
4. Hedge against any possibility of future electricity tariff increases – lock the price
5. Contribute to the reduction of CO2 emission
 - Reduce your carbon foot print
6. Mitigate climate change
7. Contribute towards national energy security

TECHNICAL & SAFETY REQUIREMENT

- Application of smart inverter to avoid technical violation toward neighbouring consumers.
- Smart inverter provides protection and voltage support for effective and safe integration into the system.
- To be made compulsory in new NEM

REGULATIONS OF NEM

- Guideline on Solar Photovoltaic Installation on Net Energy Metering Scheme
- Licensing requirement:
 - Installation above 72kW for three phase system and above 24kW for single phase system, the NEM consumer shall apply for license from the Energy Commission under Section 9 of the ESA 1990.
- NEM Assessment Study (NEMAS) for installation above 72kW.
- Power System Study (PSS) for installation above 1MW.

