ENERGY MANAGEMENT INITIATIVE FOR COMMUNITY IN HANG TUAH JAYA (ROOFTOP SOLAR PANEL PROJECT)



HANG TUAH JAYA MUNICIPAL COUNCIL

Connective Cities Dialogue Event "Towards Green Urban Infrastructure" ; 19-21 November 2019 ; Bandung Institute of Technology

CITY BACKGROUND

1. STARTING POINT

MAIN CHALLENGE, ISSUE & PROBLEM

 Based on Hang Tuah Jaya Greenhouse Gas (GHG) Inventory Report (2018), the highest emitters was the electricity consumption (more than 60%)

 Full coverage electricity within the city area. 100% coverage

 City council committed to fulfill the carbon reduction target: 45% intensity carbon by 2030

Need to promote SDG 7: Affordable and clean energy and also SDG 11: Sustainable City and Community



Newly develop area and establish on 2010 as Melaka State Administrative. Become a pioneer project for development of green city (low carbon city) through the implementation of federal government initiative called Low Carbon Cities Framework (LCCF) since 2012.

GROUP THAT MAINLY AFFECTED BY THE CHALLENGE, ISSUE, PROBLEM AND WILL BE ADDRESSED BY THE PRACTICE

- Community (Household), Industry,
 Owner Building within city area
- Energy Power Company, City Council

2. INSTITUTIONAL SETTING

POLICY, LEGAL REGULATION, INSTRUMENT

- Green Technology Master Plan
- (GTMP) National Level
- Melaka Smart City Policy State
 Level
- GHG Inventory & Climate Action
 Plan City Level

CITY COMMITMENT "As City Manager, we committed to support national vision to reduce carbon emission intensity by 45% per GDP per capita by year 2030 " 🕇 Mohd Rafee Ibrahim Mayor. Hang Tuah Jaya Municipal Council GREE HANG TUAH JAY TECHNOLOGY MASTER

3. APPROACH

METHODS, TOOLS OR INSTRUMENTS

Program Name: Net-Energy Metering (NEM)

New incentive / program was introduce effective 1st January 2019 to encourage the installation of rooftop solar panel to community. City council take this initiative as driver for clean energy, lowering carbon footprint & wealth benefit to community.





Awareness Program

Green Branding for your business

4. OUTPUT



Traditionally:

Consumer pay for M1

With Solar:

Consumer pay for M1 + M2, but with lower proportion from M1 since electricity is now self generated.

This reduce dependency on M1.

Result:

With increase tariff M1 over the years, consumer will save on the bill since M2 is fixed independent of the tariff hike

Customer can also sell back excess solar energy to TNB via NEM

IMPACT (COMMUNITY / CITY COUNCIL / POWER COMPANY)

ENVIRONMENT

Clean Energy, Lowering Carbon Footprint, Reduce Dependency

ECONOMY

More saving to community, lowering the demand (cost) of generation / supply, green business

SOCIAL

Low Carbon Society, Resilient community, Educational improvement, Public participation

MAIN LESSONS LEARNT

 Talk about the economy aspect (saving of money) was more attractive rather than talk about environmental aspect (lowering carbon footprint, etc). Need the strategies to tackle this point of view

Need to strength part of awareness and community understanding in term of energy management

 Hard to change for the existing ones. Can be done at early stage (new development / construction)

Zero Capex vs Purchase Option. Which one better?

"Malaysia has huge potential in harnessing solar power via rooftop PV systems. There are 3.2 million landed properties, 450,000 shophouses, *90,000 terrace factories, 21,000* stand-alone factories and 1,000 shopping complexes in Malaysia," -Minister of Energy, Science, Technology, Environment, and Climate Change (MESTECC)

PRECONDITION TO TRANSFER

- Develop relevant policy
- The fundamental concept of energy management, clean energy and low carbon initiatives
- Political readiness & willingness
- Supporting infrastructure
- Community readiness

