

## **China-ASEAN Forum on Social Development and Poverty Reduction 2017**

# **Renewable Energy and Sustainable Social Development**

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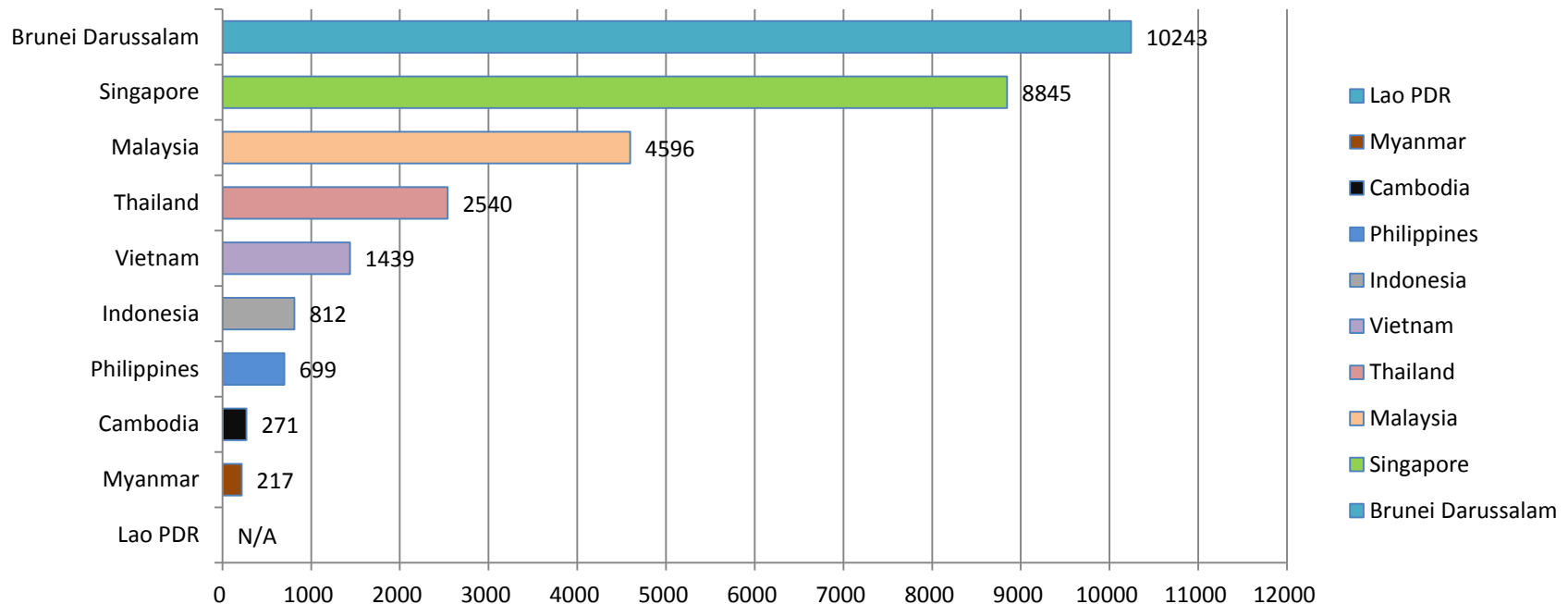
**Li Fengling**

**July 2017**

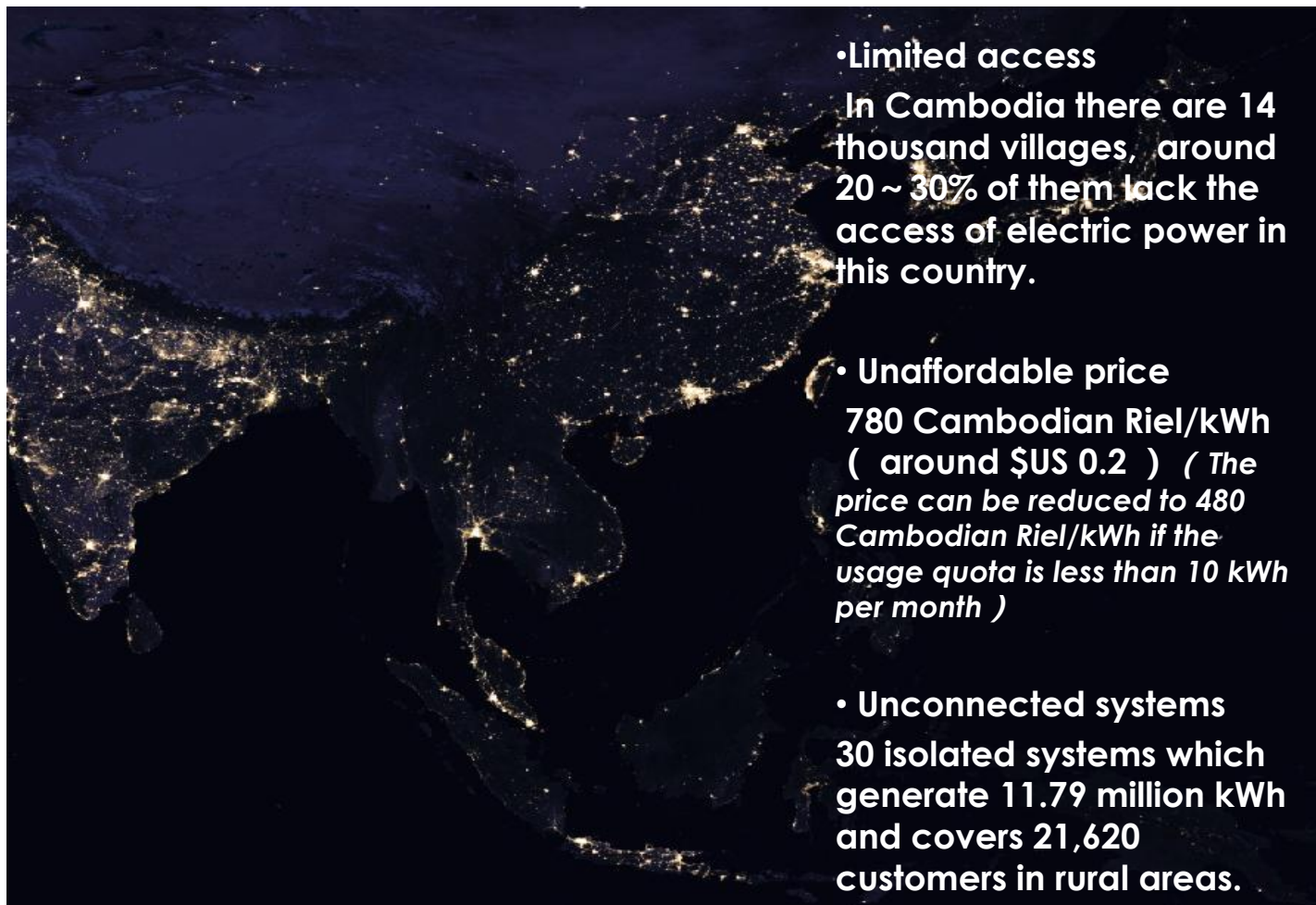
# Power Consumption vs. Social Development

One of important indexes related to Social Development and Poverty Reduction is electric power consumption (per capita).

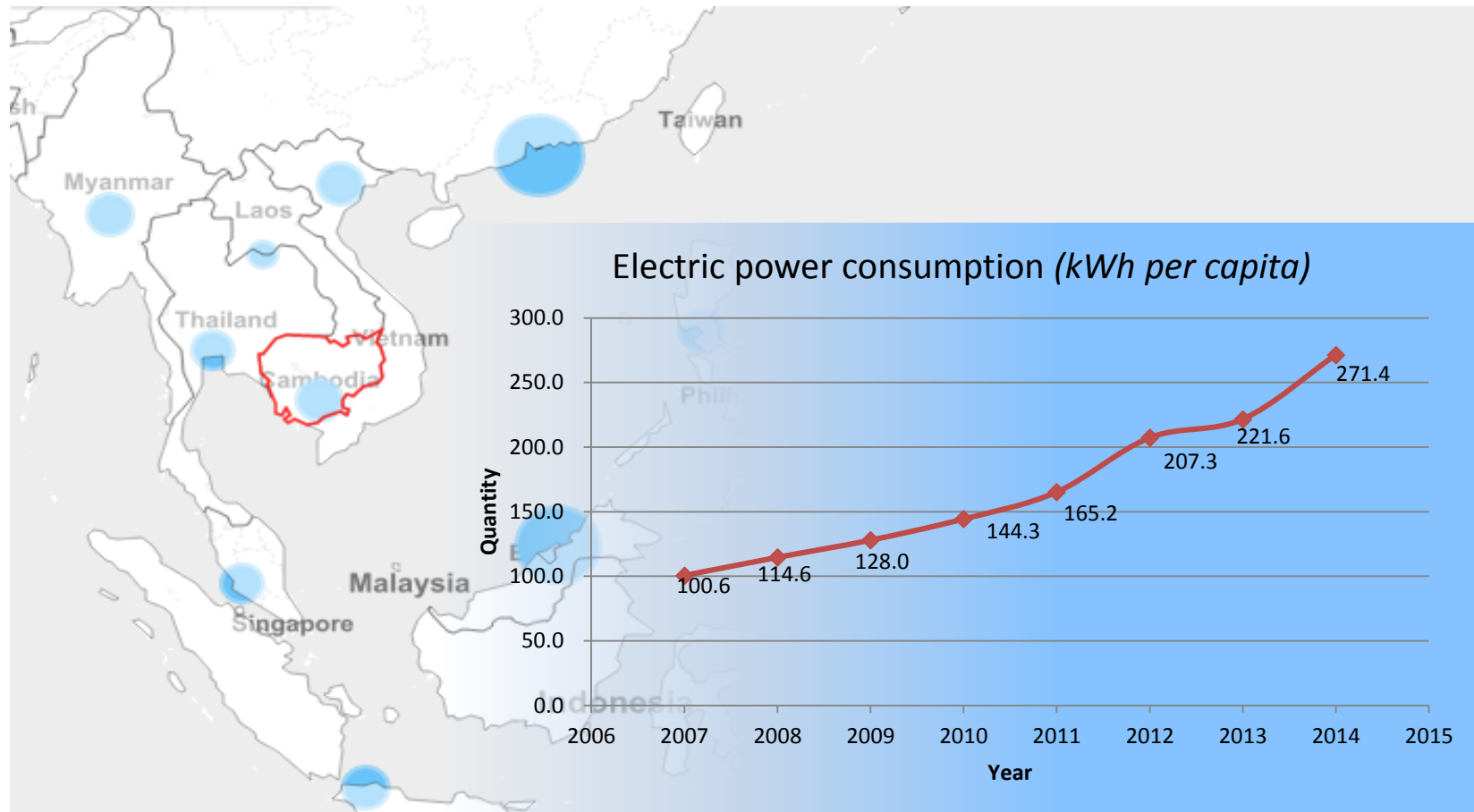
**Electric power consumption in ASEAN countries (kWh per capita)**



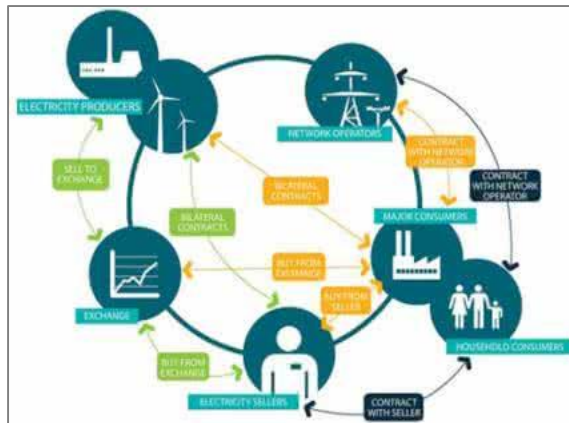
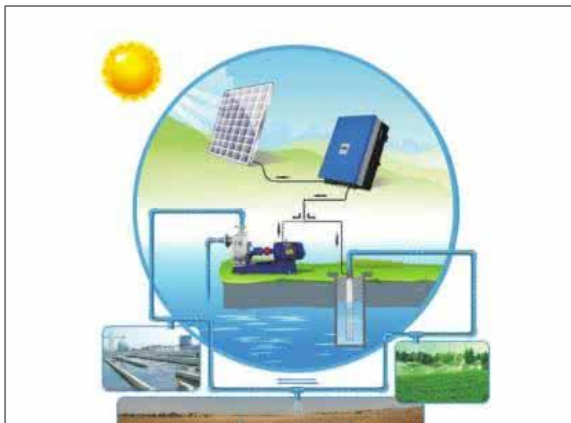
Though we have seen significant improvement for the past decades in power supply, one fact that we cannot ignore is the situation of big shortage of electric power in some areas of ASEAN.



Severe situation happens in rural areas. It is gratifying that energy bring modernization and industrialization to big cities, such as those shining spots above. While rural areas in ASEAN as well as China still suffer limited access and unaffordable electric power.



From around 100 kWh to 271 kWh (per capita) was a great leap in the past decade for Cambodia. However **271 kWh** per capita, which means less than **1** kWh each day, shows us there is still lots of job we can work together to change the situation, and especially in rural areas.



01

Home renewable energy system

02

Building - integrated PV (BIPV) system

03

“PV+” systems

04

Renewable energy micro grids

## A For private use

Independent power pack (including small power plant and storage), suitable for single houses in remote area.

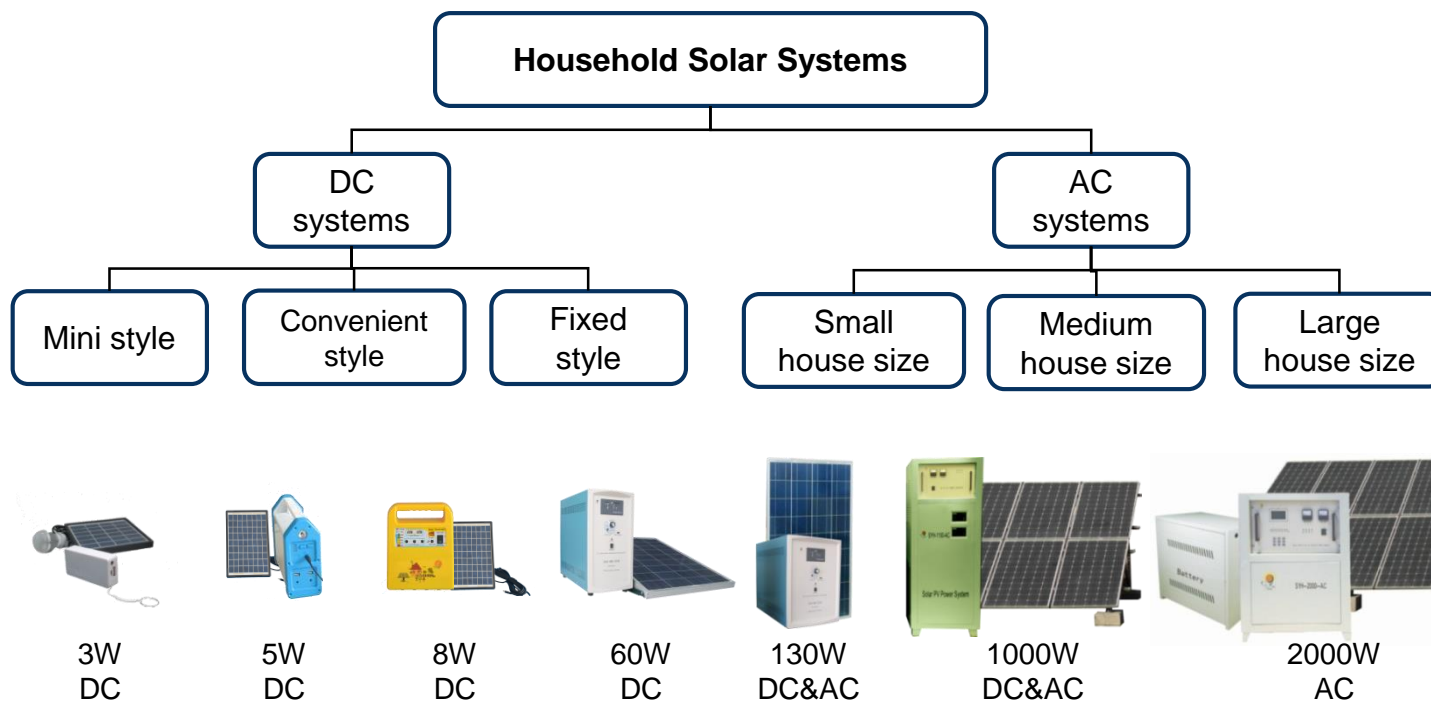
## B For power sharing

Micro power grid. Power storage is generally required, suitable for power sharing between houses and villages nearby.

## C For power trade

Connected to the bulk power system. Apart from self use, excessive power can be traded via public power system. Power storage is not necessary.

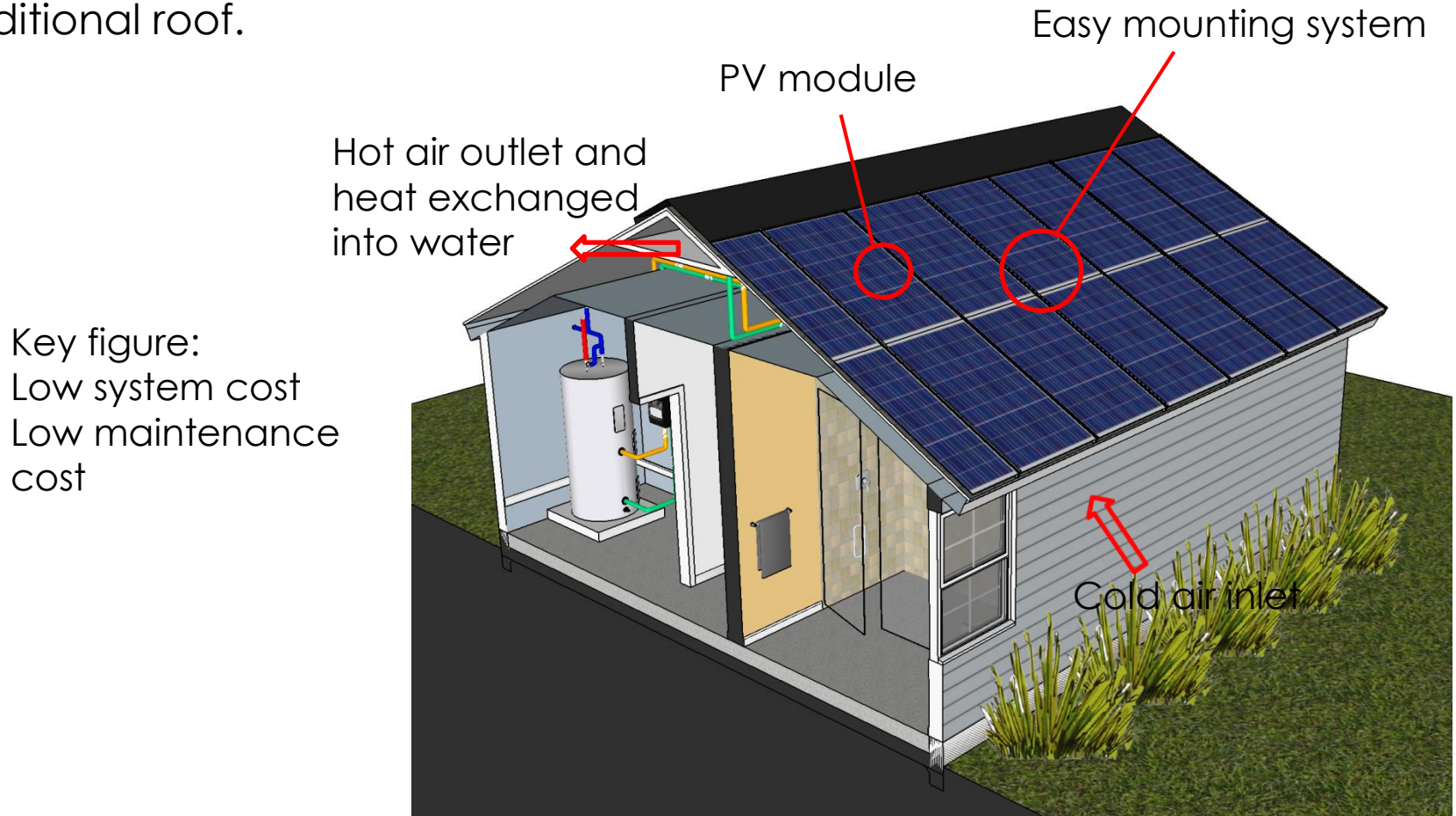




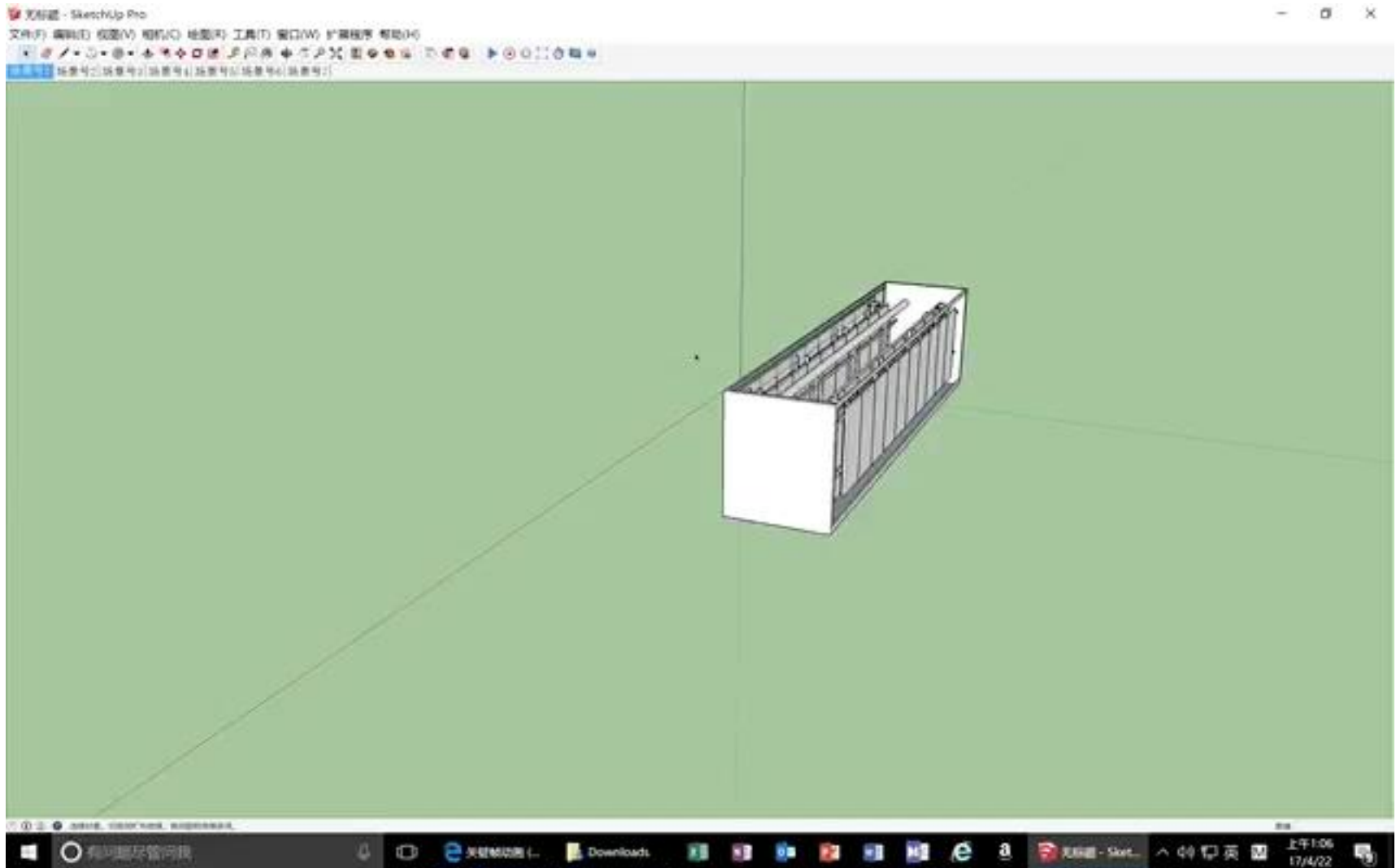
We provides a whole series of solar systems for local families, from 5W to 2000W, which can be easily installed.

# Solar Roof

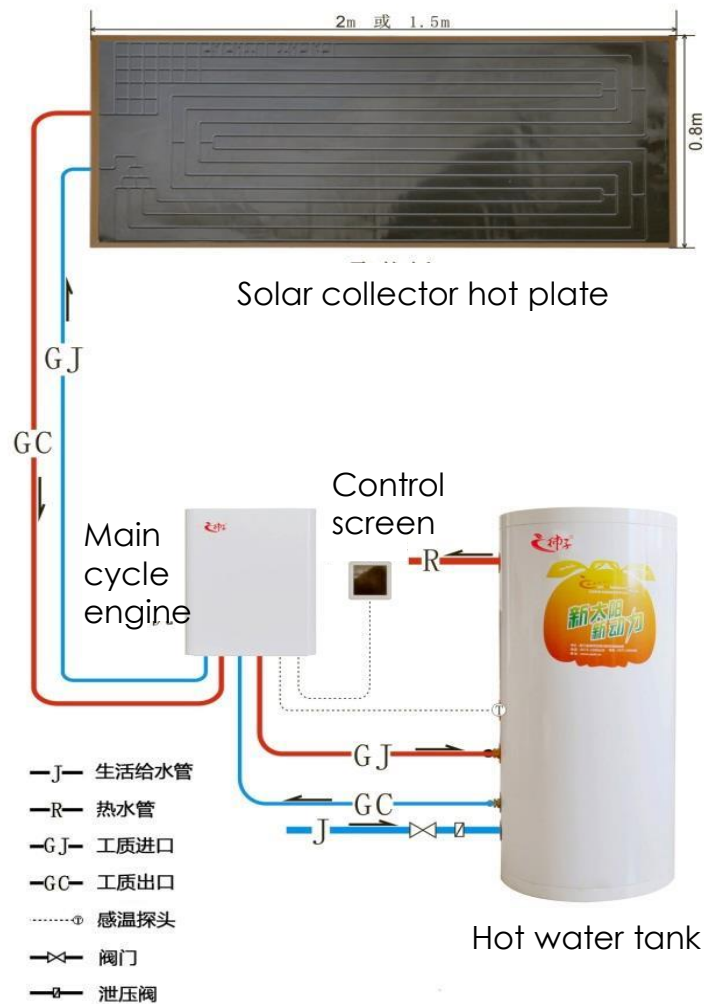
Our Solar roof provides both electricity and hot water for domestic uses, and also improves the water proof performance compared to the traditional roof.







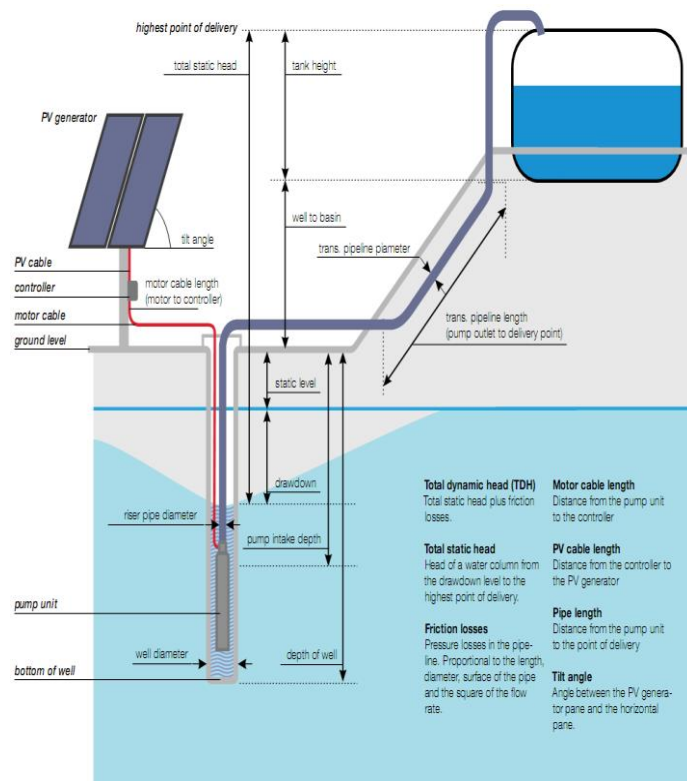
# Heat Trap Solar Hybrid Hot Water System



High efficiency , lightweight, easy installation, energy-saving , all-weather.

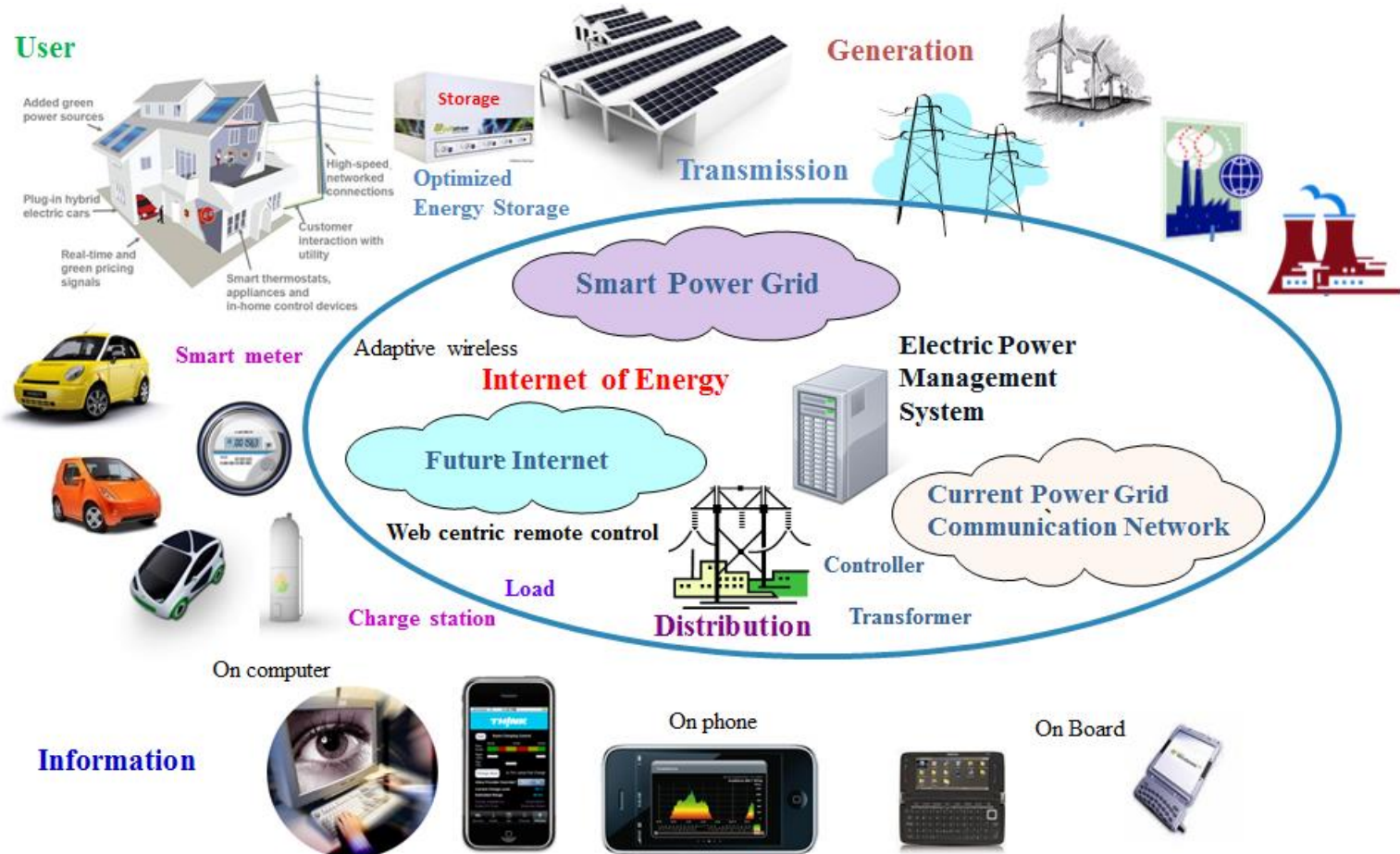
# Water pump and solar-wind hybrid systems

The solar water pump normally built with 3.5kW solar system ( pump head is 60m , pump capacity is 40 m<sup>3</sup> ) , which can effectively solve routine water usage problem in villages. Wind turbine can be also included to take good advantage of wind source in some villages.





# Micro Grid / Energy Internet



**Beijing Smart China Energy Internet Research Institute Co. Ltd. (SCER)** was founded by the professional teams from Tsinghua University in early 2015 in Beijing, P.R.China. SCER is a leading research company focusing on the Energy Internet, involving renewable energy, electrical automation, transmission & distribution system, power system management, micro grids, energy storage, power electronics etc. The business includes leading technology R&D, industrial incubation, pilot demonstration, engineering & investment, financial services etc.

## Professional teams

10 Professors from  
Tsinghua University

## Leading Research

10 research clusters for  
10 specialized energy fields

## Shareholders

Tsinghua Holdings Co. Ltd  
Sequoia Capital  
Trina Solar

## Expert Committee

9 National/ Oversea  
Academician

## Industrial Alliance

Over 60 corporate members in  
energy sector joined

## Pilot Demonstration

8 National demonstration  
Engineering projects



Lighting up the future.



## Technical service

- Energy System planning & design
- Technical counseling
- Power data analysis
- Professional training
- Energy-saving service



## Products

- Renewable energy devices
- Power management system
- Electronic devices (FACTS & VSC)
- Storage and control systems
- Power system simulation software
- Energy router



## Engineering

- EPC
- Renewable power plants installation
- Energy system operation
- Maintenance



## Financial service

- Investment
- Industrial fund
- Fund management

# THANKS

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