

Jakabaring Green Sports City

**2MW Solar Plant In
Palembang, South Sumatra
Supported by Financing Programme for
JCM Model Projects**

Sharp Corporation

July 12th, 2017

Sharp in Indonesia – Local Production/Local Services

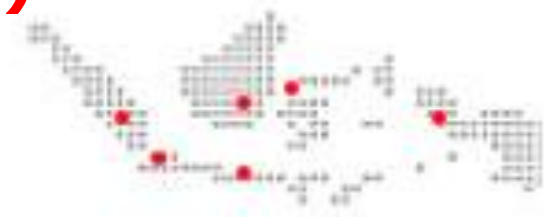
We developed our business in close with the market since 1970

SHARP.

Company name: **PT. Sharp Electronics Indonesia (SEID)**

Foundation and starting sales business in 1 April 2005

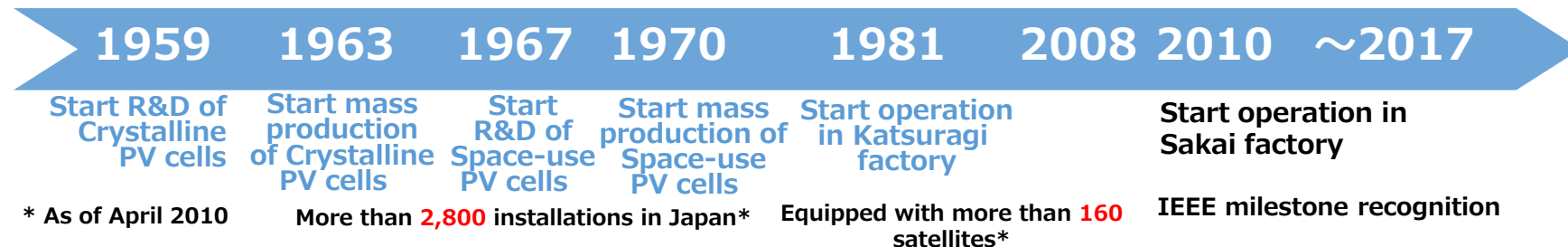
*Company name changed since 1 May 2015.



Sharp - Solar / Energy Management

PV Module Core Technology + Energy Management System

Crystalline Silicon Technology: 58 years of Experience



Background of the Project

**South Sumatra Government will host a part of Asian Games in 2018
at Jakabaring Sports City, Palembang**

- Initiation by South Sumatra Government Green Sports City
- PDPDE, selected by South Sumatra Government
- Sharp, Technology Provider
- Joint Development by PDPDE and Sharp
- JCM Subsidy for the Project
- PPA with PLN

Outline of 2MW Solar Plant

South Sumatra Government will host Asian Games in 2018 at Jakabaring Sports City

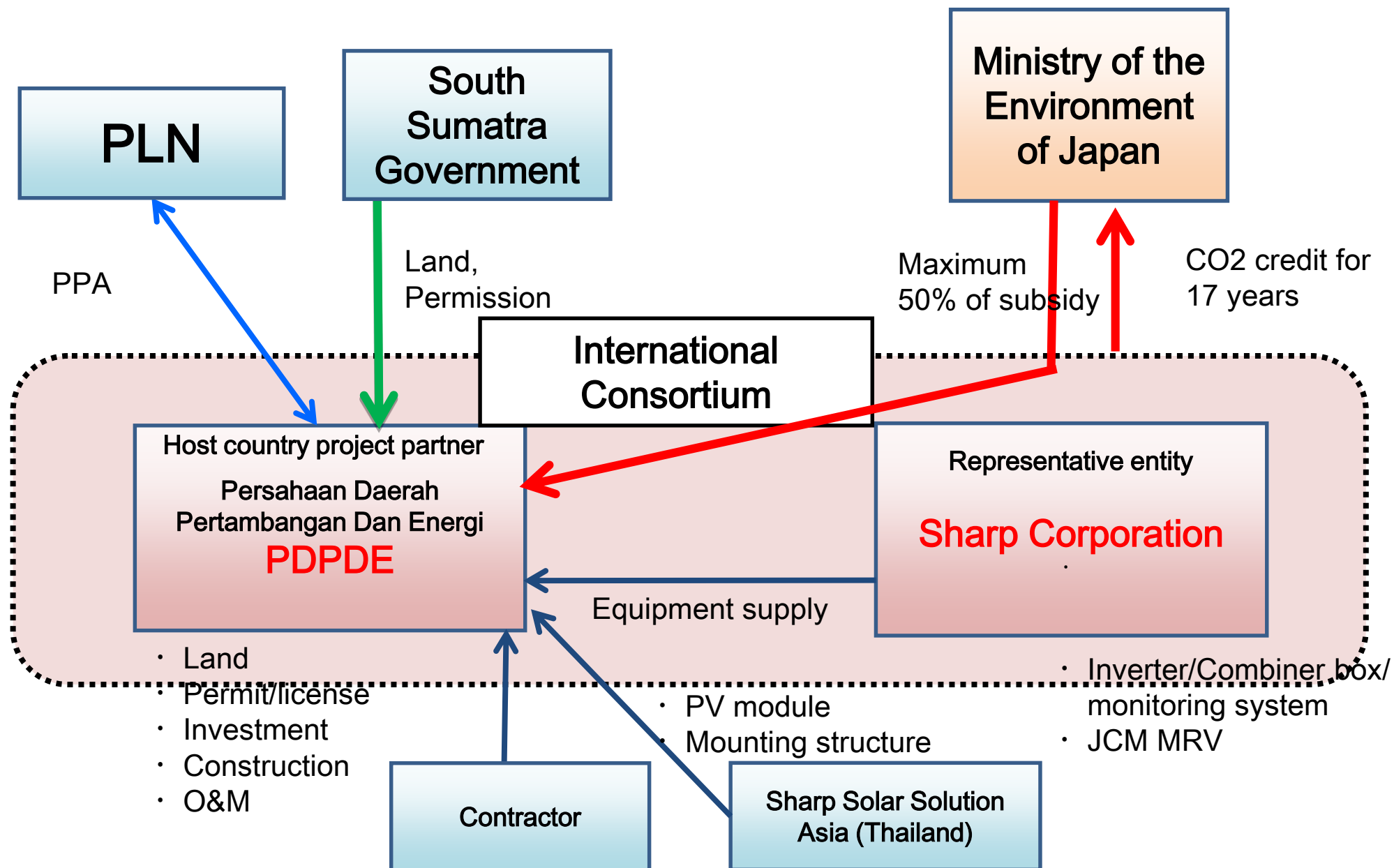
1. Plant Capacity : 2MWac

2. Expected Power Generation: 1,897MWh/year

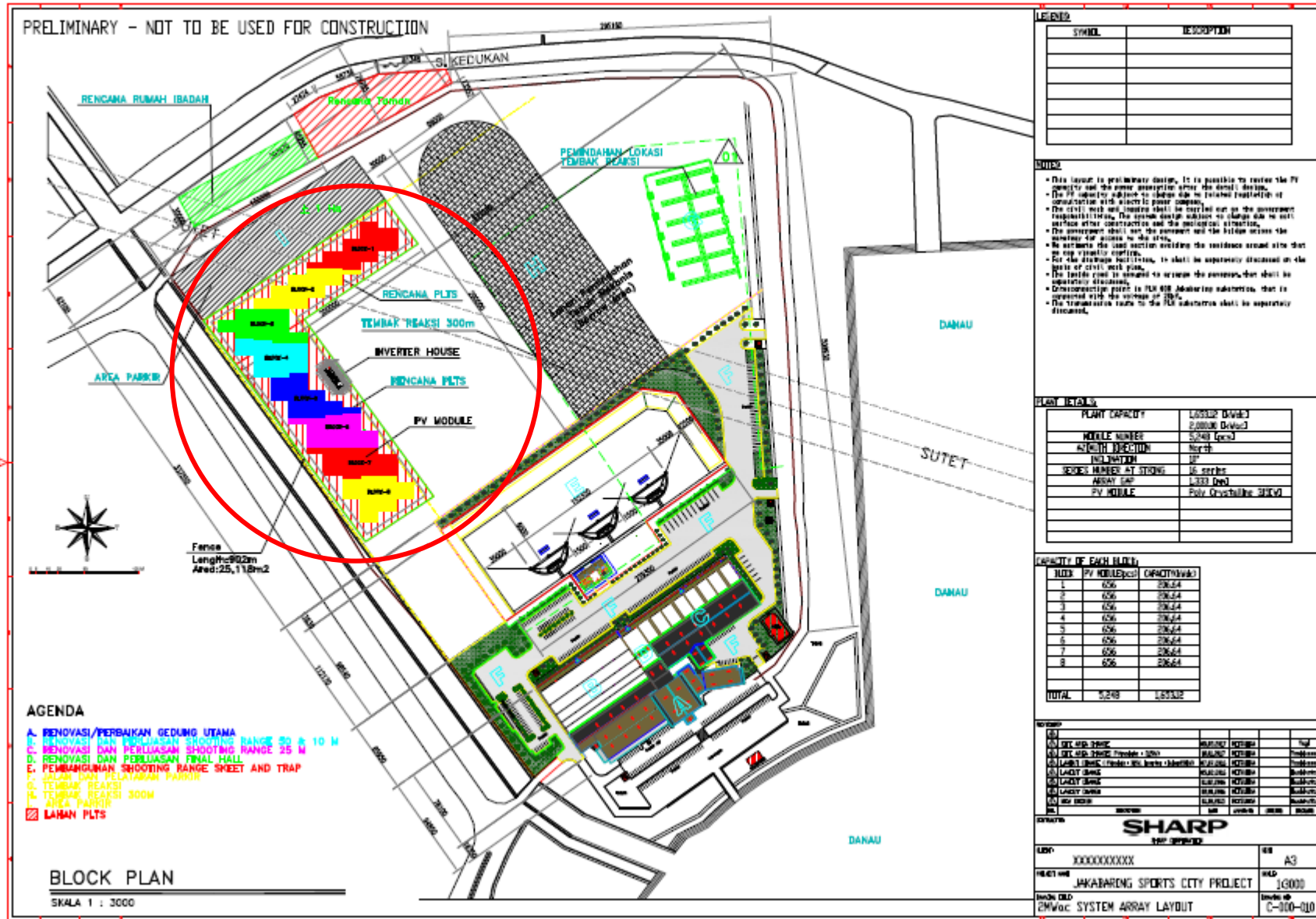
3. Expected CO2 Reduction: 1,303 ton (0.687 ton/MWh)



Structure of the Project



Layout of the Project

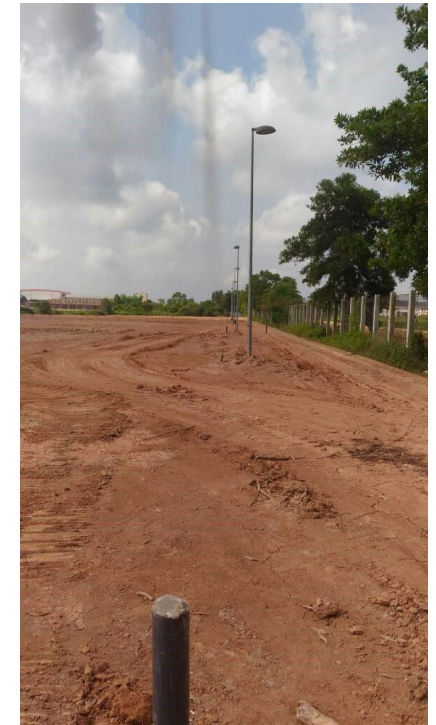
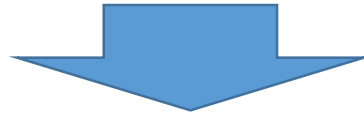


- System size:
1,653.12kWdc/2,000kWac
- Module type:
Poly-crystalline 315W
- Number of PV modules:
5,248 pcs
- Direction: North
- Inclination: 10 degree

Current progress, the challenges, and the contribution to sustainable development of the Project

- 1) GEC announced a selection of the project in 2016
- 2) PDPDE secured Power Purchase Agreement (PPA) in 2017
- 3) Land Preparation work started in last May
- 4) Start Installation in September
- 5) Commercial Operation in January, 2018

Becomes
Jakabaring Sports City
as
Green Sports City
which contribute to
CO2 emission reduction
for more than 17 years



Technologies

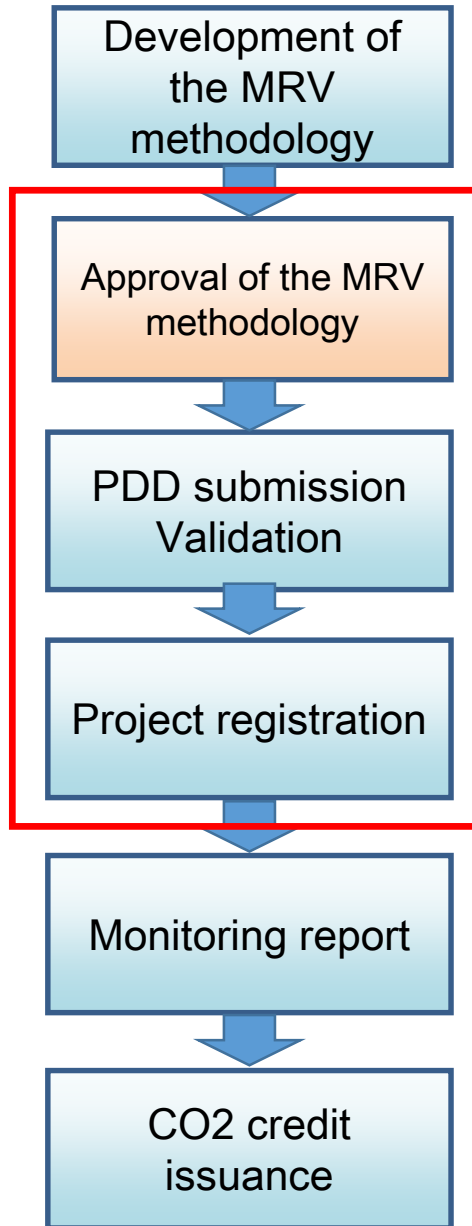
- 72 cells large PV module with proven technologies
- Large scale centralized inverter

together with

- Optimized local technologies,
like foundation of pile



MRV Progress of the JCM Project Cycle



For the FY 2017, we will process for the PDD documentation, Local Stakeholder Consultation, and project registration

- Making PDD
- Holding Local Stakeholder Consultation
- Signing to MoC
- Public comment, registration application
- Making SDIP

- Making monitoring report
- Making credit issuance application form
- Making SDIP
- Application to CO2 credit issuance
- Administration to open JCM credit account

MRV Calculation of emission reduction

No.	Eligible criteria for the project
Criterion 1	The project newly installs solar PV system(s)
Criterion 2	The PV modules are certified for design qualifications (IEC 61215, IEC 61646 or IEC 62108) and safety qualification (IEC 61730-1 and IEC 61730-2).
Criterion 3	The equipment to monitor output power of the solar PV system(s) and irradiance is installed at the project site.

Calculation of emission reduction

$$RE_p = \sum_i (EG_{i,p} \times EF_{RE,i}) = \text{Power generation amount} \times \text{grid emission factor}$$

$$ER_p = RE_p - PE_p = RE_p$$

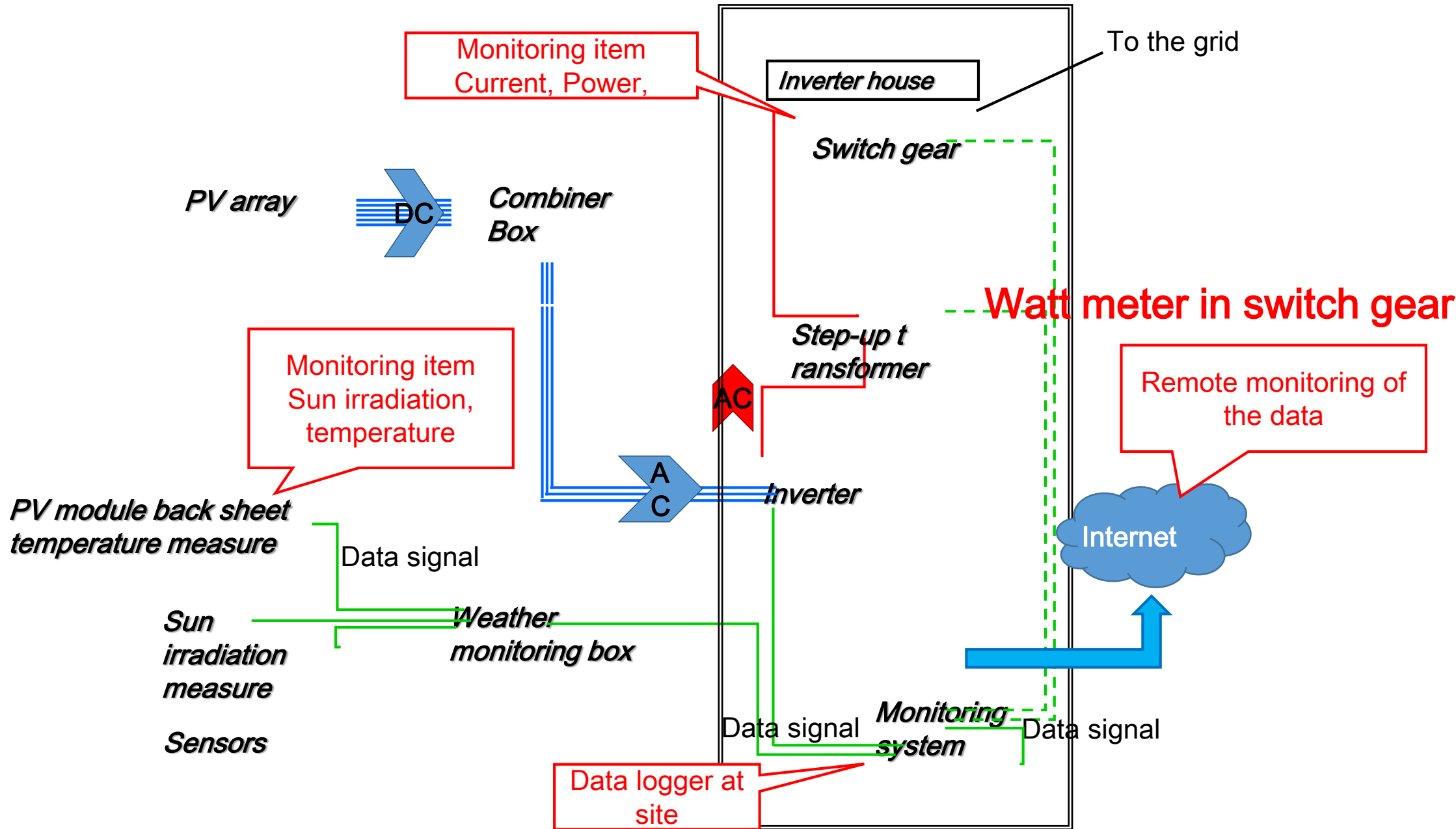
ER_p : Emission reductions during the period p [tCO₂/p]

RE_p : Reference emissions during the period p [tCO₂/p]

PE_p : Project emissions during the period p [tCO₂/p]

Applied grid emission factor : 0.483 t CO₂/MWh (Sumatra grid)

MRV Monitoring point



Thank you
SHARP