Feasibility Studies with the Aim of Developing a Bilateral Offset Credit Mechanism FY2011

Studies for Project Exploration and Planning

Feasibility Study on Programmatic CO2 Emission Reduction Projects installing Energy Efficiency Servers, Air Conditioner, and Energy Management Software to many Data Centers in India.

New Energy and Industrial Technology Development Organization (NEDO) Kanematsu Corporation, Climate Experts, Kanematsu Electronics
F/S for Bilateral Crediting Mechanism


Country: India

Project Example

300 legacy servers ⇒ 16 new servers reduces elec. power 1,240MWh/year, equivalent to 1,200 t-CO2e.

For data center, this saves elec. cost about 9 million yen. Investment recovery period is about 6.5 years, and in case the CO2 credit can be sold, the recovery period becomes shorter by 0.5 years.

Concept

300 legacy servers
16 high efficient servers
With monitoring

Best Practices

We will introduce this project as “Good practices of energy efficiency in Data Center” both to governmental bodies and many data centers.

Cost Reduction for Data Centers

It is Good practice for DC Business.
Programmatic Concept

1) Server system integration and replacement
2) Optimize the cooling system for server room
3) Improve its energy efficient operations
4) Practical MRV discussed with experts in India
5) Good Practice reducing both Cost and CO2

F/S Proponents and Partners

Kanematsu Corp. (Organizer)
Climate Experts Ltd. (MRV)
Kanematsu Electronics Ltd. (Technical)

Partners

Baharti Airtel, India (Counterpart)
Hitachi, Ltd. (DC Total Solution)
KDDI India Private Ltd. (Monitoring)

MRV with Experts

We prepare a new methodology measure the energy consumptions for two parts of data centers;
(i) IT Part composed of IT equipment
(ii) Facility Part composed of building or facility
We investigate the appropriate reference scenario and benchmark marks to be evaluated by IT and energy experts in India.
Our viewpoint is “How the framework should be designed to overcome difficulties concerning CDM.
We propose a bottom-up scheme where local situations were reflected by incorporating “judgment by third-party specialist”.

F/S Reduction Assumption

Assumed Emission Reduction:
Market scale of data center equipment is 200 billion yen.
If the project share reaches 3%, 100 projects will reduce 1.2 million t-CO2e/year.