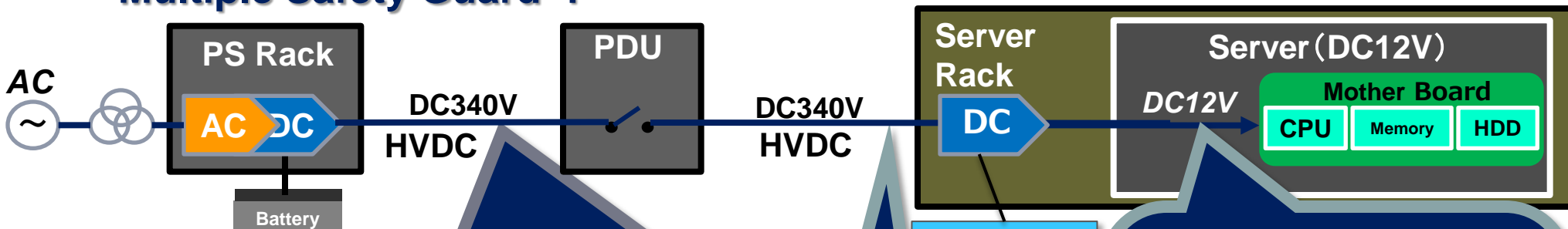
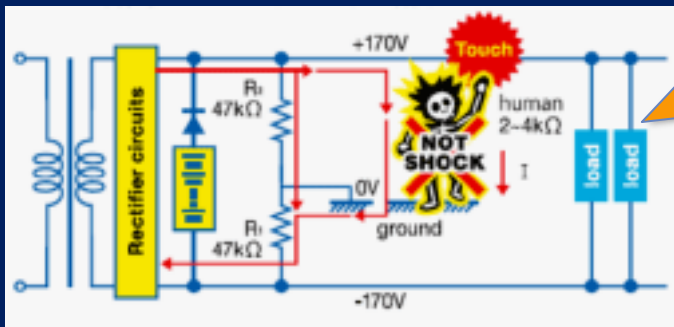


Multiple Safety Guard !



Key Technology : Middle Point Ground

The current is limited within safety current for human through high resistors of 47KΩ.



Dangerousness by the high voltage had been pointed out. But ,,,

Resolved the arc discharge issue at the time of switch-on/off and disconnection.

Central Redundant Power Supply

Key Technology : Bus Bar



Key Technology : Arc Suppression Circuit



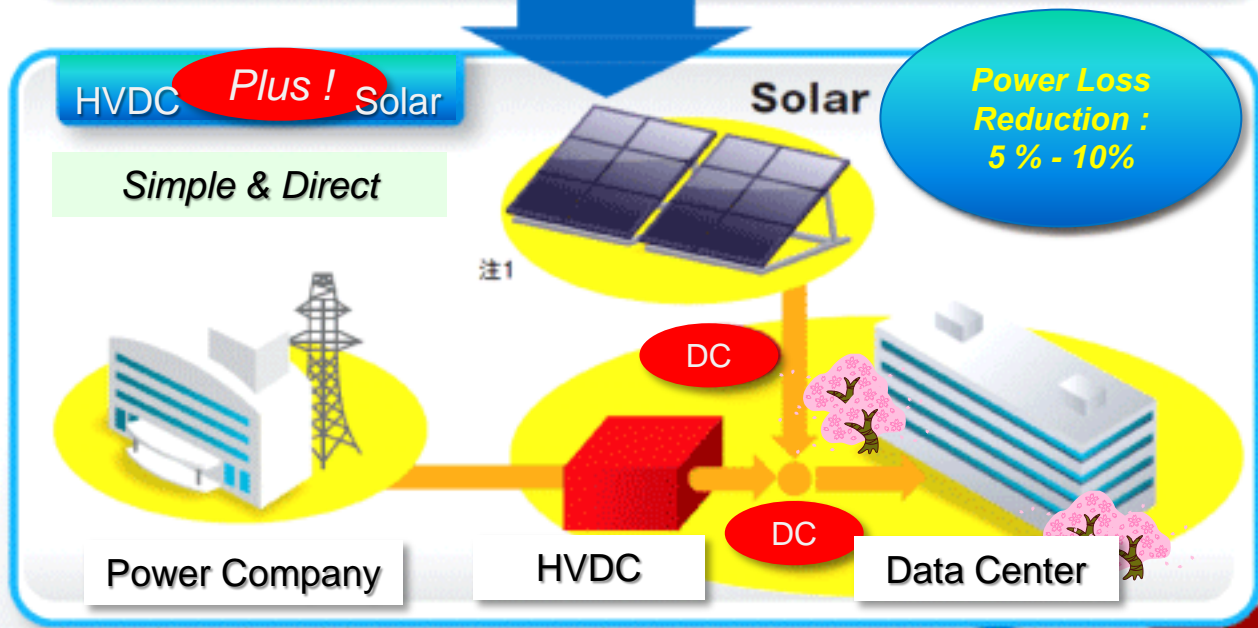
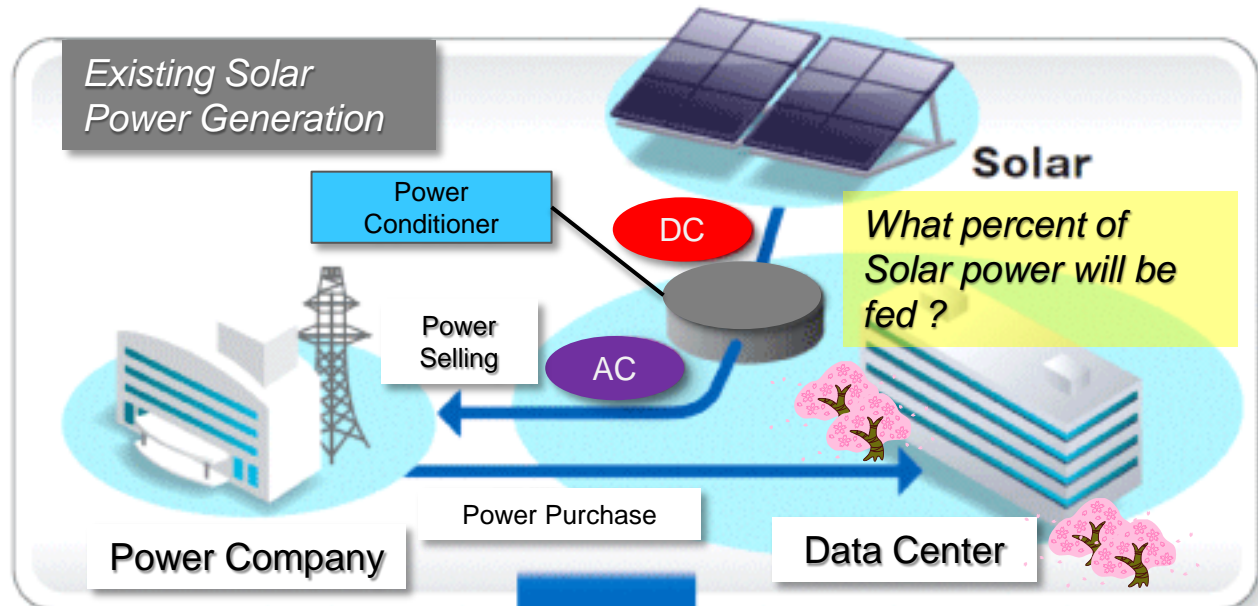
11. Solar Power + HVDC

Drive The Future Communication with Sunlight !

Solar battery generates DC that's the same as HVDC !

- Doesn't need Power Conditioner
- Local Generation for Local Consumption
- Reasonable Investment

...Say goodbye to Power Conditioners.



Beyond The Legacy

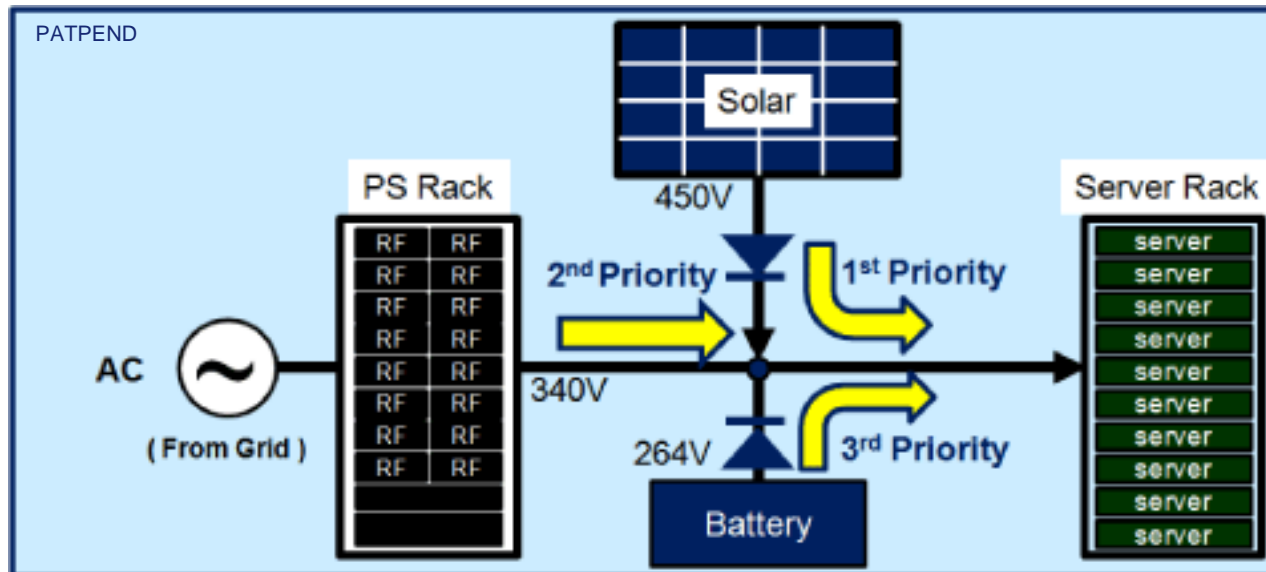
To do effective power generation, the solar battery needs the power conditioner that is controlling operating point so called " **MPPT** ".

It's true.

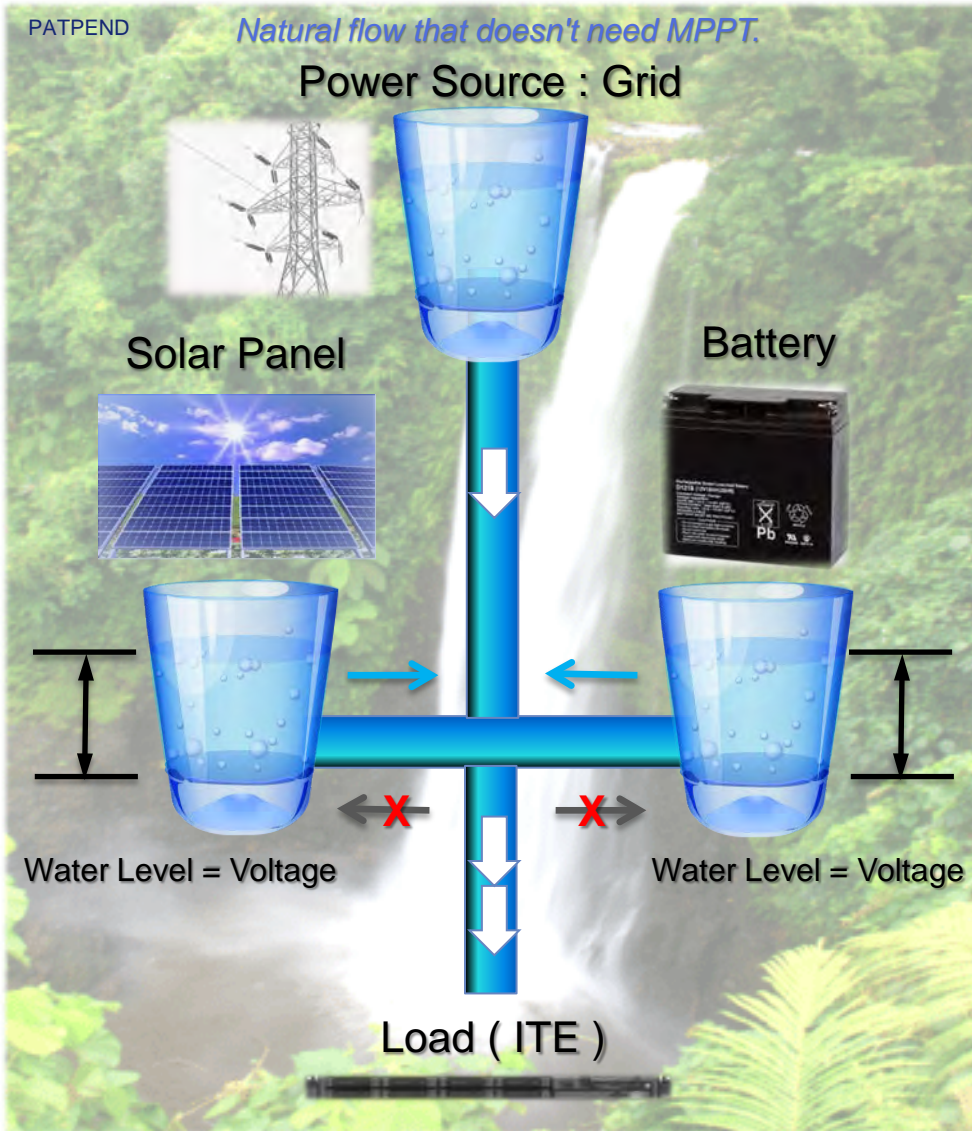
However, this theory will become legend .

NTT DATA INTELLILINK had developed simple and outstanding idea to break legacy.

In the following illustration, battery and solar panels are prioritized by their voltage. DC allows this simple architecture applying diodes which prevent reverse current.



Harmonic Balance



1st Priority

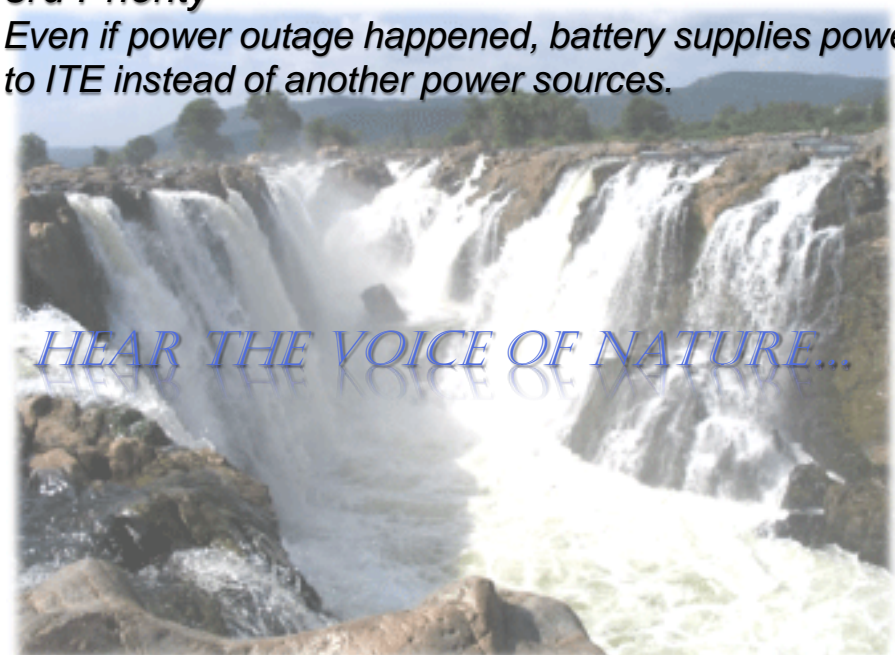
When solar panels are generating electricity, it'll be the first priority.

2nd Priority

If there is not enough sunlight to generate electric power operating ITE, grid supplies electric power seamlessly.

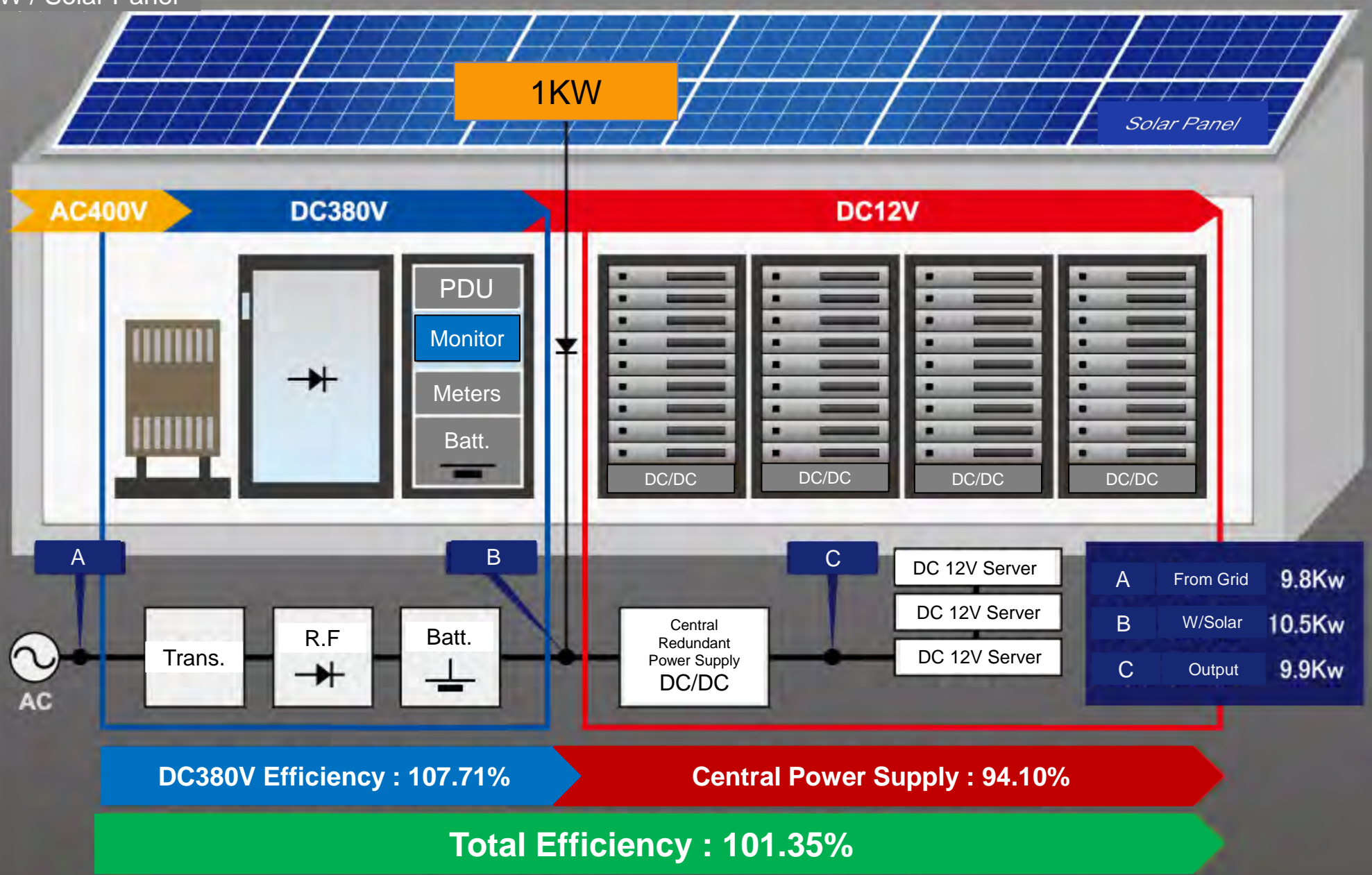
3rd Priority

Even if power outage happened, battery supplies power to ITE instead of another power sources.



11. Solar Power + HVDC

W / Solar Panel





Specialized for The Cloud Computing

Ishikari Data Center



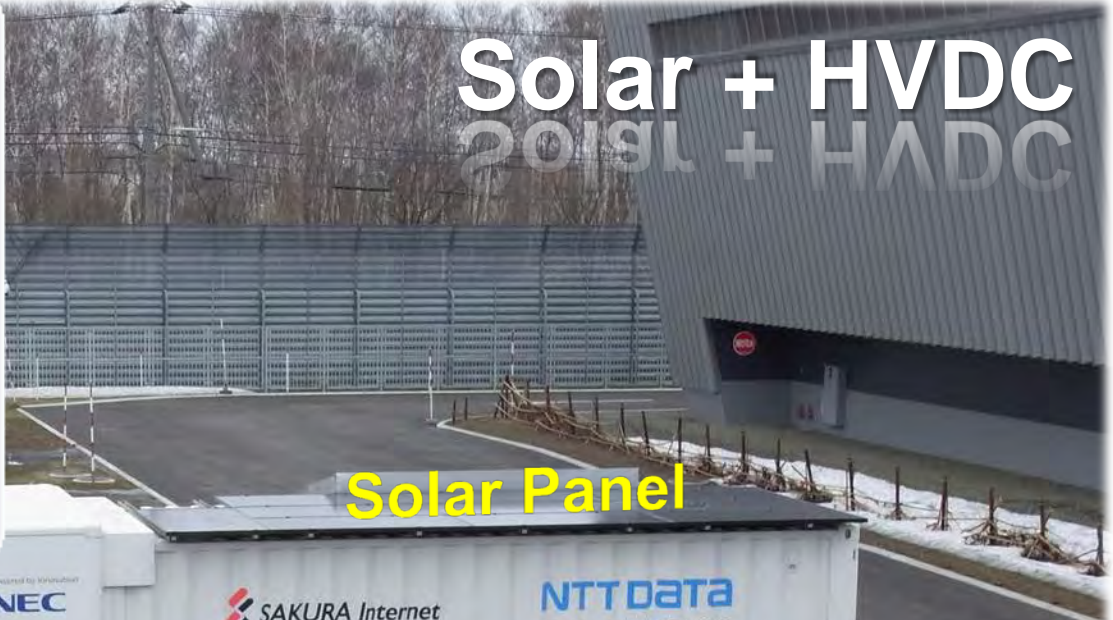
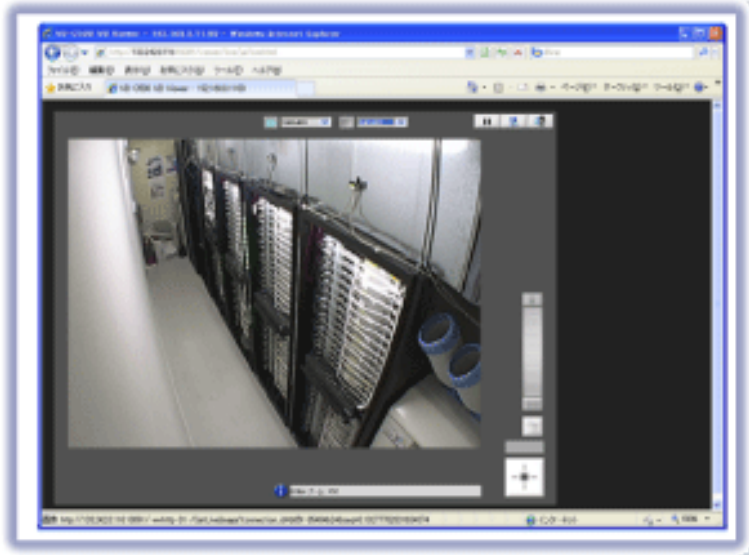
Nov. 15, 2011 Opened



12. Case study

Test-Bed / Sakura Internet

NTT DATA



Solar + HVDC

Solar Panel

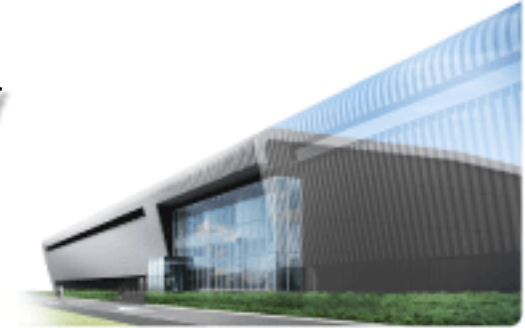


LED Direct Connection

It uses Solar Panels with HVDC, previously designed for containerized data center models.

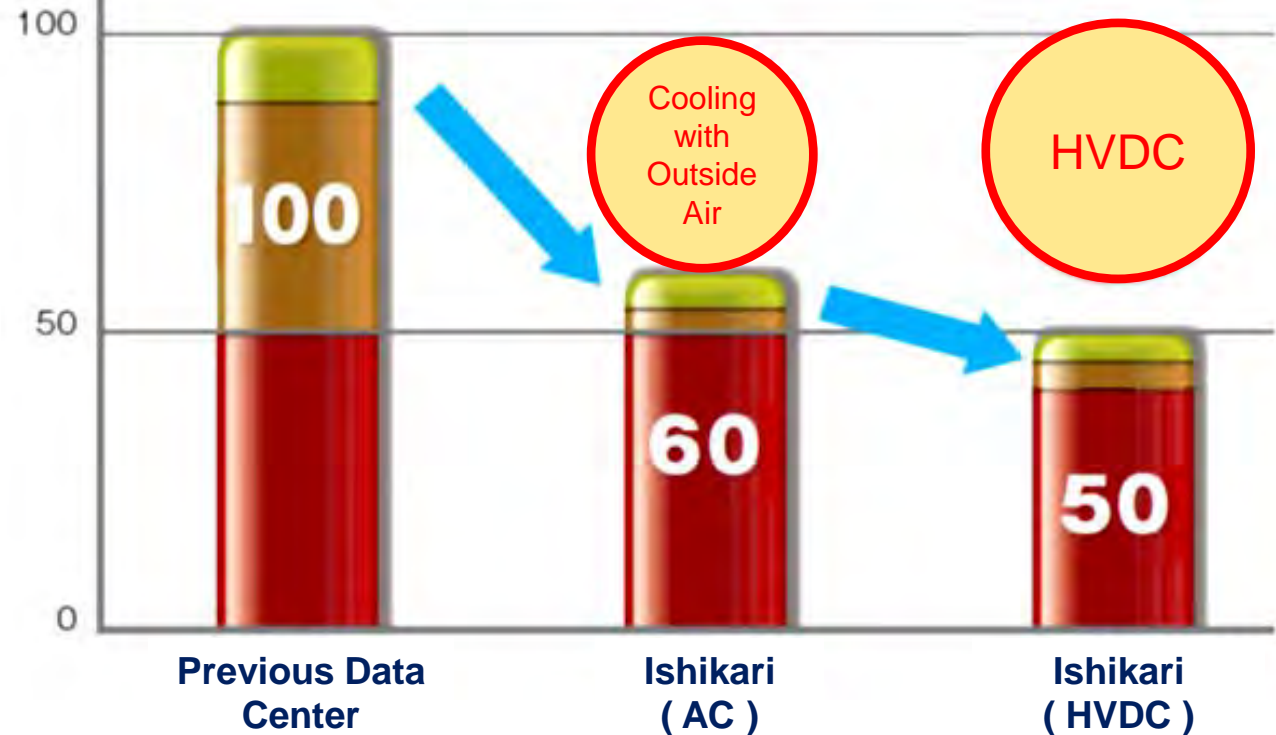
Sakura Internet had applied the outside air cooling system that reduces power consumption of 40% compared to previous data center.

The test-bed technologies have already demonstrated energy savings of more than 10%.



Power Consumption

Reduction Rate



- Others
- Air Conditioning System
- ITE



From Sakura Internet Evaluation Reports