How JCM and its MRV can be designed for realization of Technology Transfer

—Personal view for a mechanism
to achieve the real objective of the project—

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Major Issues regarding CDM

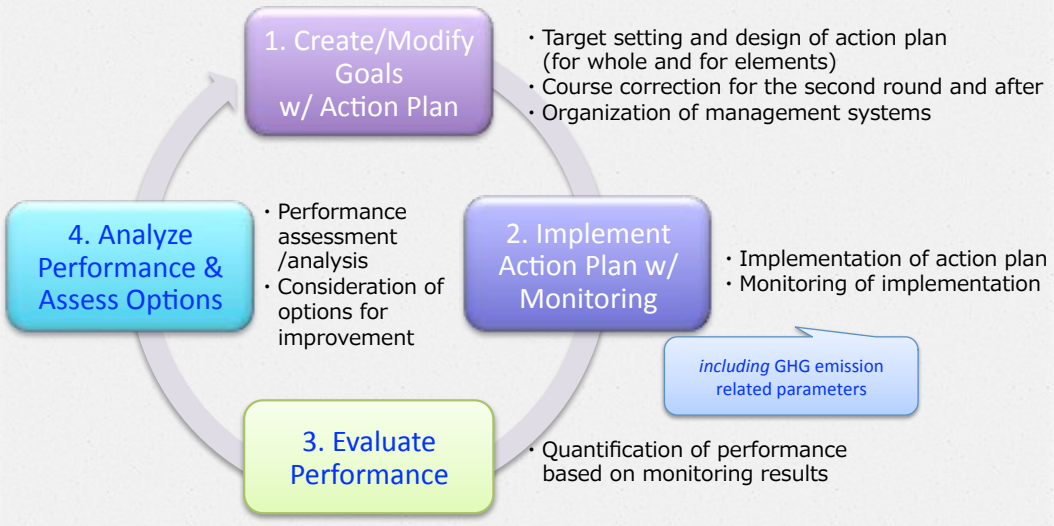
- No schematic means for project implementation in a proper fashion
  - Emphasis on 'accountability', 'reliability' and 'conservativeness'
    - Rather, it makes the project more difficult to be implemented
    - No concept for balancing the reliability and opportunity loss
    - Requirement for unrealistic demonstration (e.g., additionality)
  - CDM is a market mechanism for 'emission reductions' only
    - Few cases for transfer of best technologies, investment by Annex I (usually only a buyer), and filling needs of host government, reflection of SD-components
    - Few cases for projects in LDCs and rural areas
    - Very low CER price → CDM is almost dead
- How new JCM/BOCM can challenge to overcome these issues in scheme design?
- What is its attractive philosophy?

JCM-Specific Concepts (hopefully)

- Utilization of Japanese technologies
  - What is the *role of Japan* to mitigate 'global' warming issue?
    - Penetration of Japanese technologies throughout the world
    - Innovation/demonstration of best technologies (tested in Japan)
  - Japanese techs: Better/best but more expensive (in short term)
    - What instruments are effective to promote them?
      - JCM (w/ Governmental support) intends to be a promising channel
    - Provide the integrated solution *market mechanism?*
- Raising performance of the project
  - Importance is implementation the project itself, NOT credits
  - PDCA cycle (Kaizen); Follow-up by Japanese partners
- MRV is for what?
  - For proper operation of the project and Kaizen the performance
  - (& reliable accounting of GHG emission reductions)

KAIZEN: PDCA-Cycle for Performance Improvement

- Established processes for continuous improvement of performance



What should be Monitored?

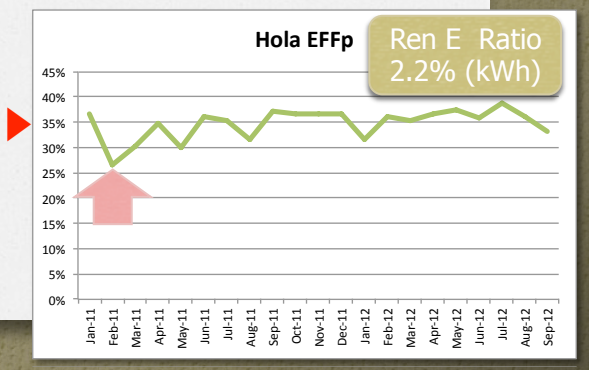
- Q: Simpler (by using default values) is better?
- Example: Diesel-based Mini-Grid + PV/Wind
- (Diesel Fuel Saved [kL])
  = (Generation by Ren.E [kWh]) × (Conversion from kWh to kL)
  / (Diesel Power Efficiency [%])

Monitored

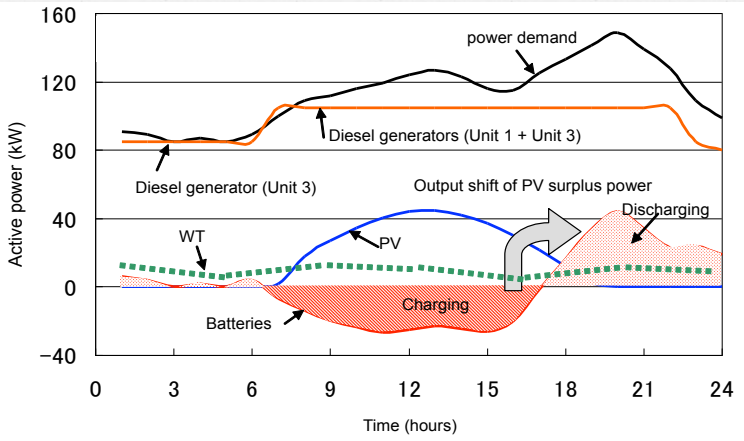
Key parameters used for PDCA cycle should be monitored!

Calculated as
(Diesel Power Generated [kWh])
/ (Diesel Fuel Consumption [kWh])

Key parameter to judge whether diesel generator is efficiently operated



Key Elements of Mini-Grid Operation



- Optimal capacity
- Stable operation
- High operation rate
- Proper maintenance

1. Surplus power, generated during the day time is stored into batteries.
2. In the night time, demand will be high-risen. (Peak time)
3. Unleash stored power into the grid to compensate the peak demand.
4. Diesel generators can run at the efficient fuel consumption rpm.
→Reduction of fuel cost

Source: Fuji Electric

This factor should be monitored (calculated) for proper operation !
(Inappropriate to use default)
→ Feedback thru PDCA

Gen. Efficiency of Diesel Gen.
× CO_2 emission factor of diesel oil

(CO_2 emission reductions) = (kWh by renewables) × (CO_2 emission factor of diesel power)