

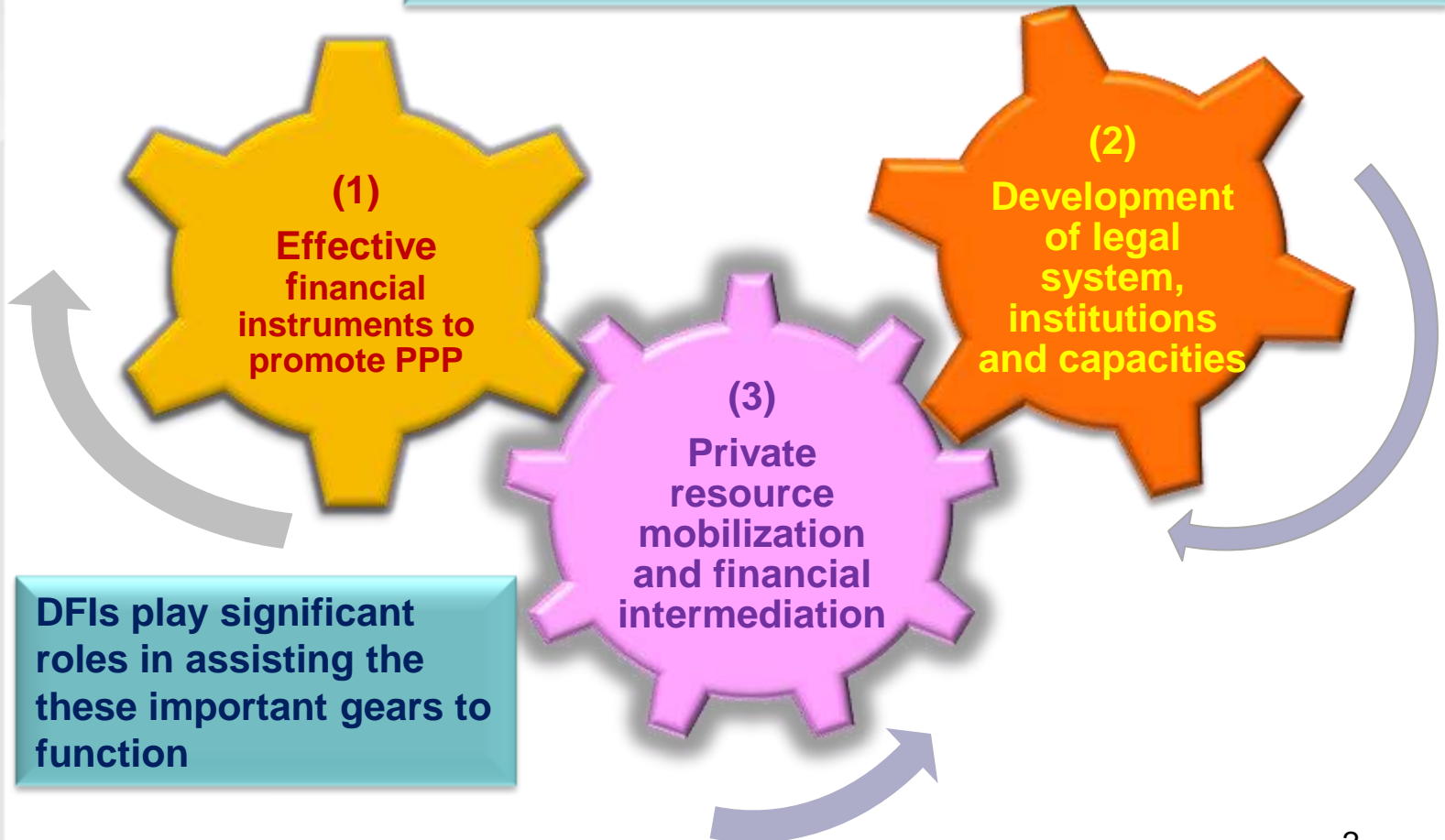
**Holistic approach  
for Low Carbon Development  
Institutional reform for better business environment  
& financing for sustainable renewable energy**

**COP19 Side Event  
“Japan’s technological contribution  
to realize low carbon society on a global scale”**

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# 1. Challenges and Roles of DFIs

Promotion of private investment in developing countries requires reasonable business environment and bankable project that guarantee stable investment returns in medium term



## 2. JICA's Roles and Activities

- JICA, established in 2008, is the primary DFI of the Government of Japan, responsible for its bilateral ODA program.
- JICA contributes to addressing global development issues through a combination of financial and technical assistances that support developing countries with infrastructure development as well as institutional and capacity development
- JICA has recently strengthened the operation of PPP through financial support of feasibility study preparation and direct private sector financing for such projects.

# JICA's Contribution to the Geothermal Development in Indonesia

## Policy Target

To develop new geothermal power of 4,757 MW (2010-2014)

**State Enterprise**

1,445 MW  
(30% of total Geothermal)

Assisting the development of 5 geothermal power plants (total 480MW) through provision of ODA loans (total 1.1 billion USD)

Geothermal Development Acceleration Program and other programs

Pertamina/PGE

PLN

JICA

**IPP**

3,312 MW  
(70%)

Providing policy recommendations & technical support to the Government of Indonesia for the promotion of IPP

Gol

Framework for IPP promotion

Exploration Fund

Feed-in Tariff

Improved Tender Procedure

# JICA's Contribution to IPP Promotion in Indonesia

## Before

## JICA's contribution

### Revenue

**Average Selling Price (kWh)**

Uncertainty of PLN purchasing at IPP bid price

**Off take volume & guarantee**

- Site prioritization not available for new investments
- Off take guarantee not secured

### Profit

### Expendi ture

**Capital costs**

Very high and uncertain capital costs due to up-stream exploration uncertainty

**Operation costs**

Lower operation costs compared to other sources

### Pricing model study (2009)

Provided a model of geothermal power price and the benchmark price, explored Feed-in Tariff

### Geothermal Master Plan Study (2006-2007)

Provided priority listing of promising sites and road map for geothermal development

### Exploration Fund Design Study (2010-2011)

Proposed an idea for exploration risk mitigation measure by setting up government fund to take the exploration risk

### Capacity Development for CGR (2010-2013)

Support Center for Geothermal Resources (CGR) for resource data collection and analysis

### Improvement of tender process

## **Conclusion;**

- (1) The policy and legal frameworks, institutions and capacities in developing countries are the critical issues to ensure favourable investment climate and quality of investment, which will lead to mobilize private investment with advanced technology in low carbon development.
  
- (2) Development Financial Institutions like JICA should play this kind of role in (1) above, along with their own financing for low carbon projects or programs.