

ADB's Ongoing and New Programs in Carbon Financing

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Toru Kubo

Clean Energy and Climate Change Specialist
Asian Development Bank

ADB's Role in Climate Change

Increase **SUPPLY** of projects

1. Underlying finance and services
2. Capacity Building for project development
 - Clean energy and other GHG mitigation projects
 - Adaptation projects
3. CDM Project technical support

1. Underlying Finance: Run-of-River Hydro Power Project

- 98 MW run-of-river type hydro project (Xiaogushan Hydro) in Gansu Province, PRC
 - Displaces 109 MW coal-fired power generation
 - ADB Loan: \$35 million (approved in 2003)
 - Total Project Cost: \$87 million
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- Total volume of ERs expected (10 year): 3.7 million tCO₂
- Also avoids annual emissions of 240 tons of particulate matter and 1,910 tons of SO₂
- Contracted ER volume (with World Bank): 2 million tCO₂
- Total Contract value: US\$8.50 million
- Contract price: US\$4.25/tCO₂ VER basis

1. Underlying Finance: Coalmine Methane Demonstration Project

- Capture of CMM from coal mining operation in Shanxi province, PRC
 - Using CMM as a fuel in a 120 MW generation plant (combined cycle)
 - Reduces methane release & displaces coal-fired power generation (baseline)
 - ADB Loan Approved in 2004: \$125 million
 - Total project cost: \$205 million
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- Total volume of ERs expected (10 yrs): 29 million tCO₂e
- Contract ER volume (with World Bank): 3 million tCO₂e
- Contract value: US\$12.75 million
- Contract price: US\$4.25/tCO₂e VER basis
- If all ERs sold at \$4.25/tCO₂e = US\$120 million

1. Underlying Finance: Near Term Projects

Country	Project Type
China	Agricultural Waste Utilization
Indonesia	Geothermal and Small Hydro
Fiji	Small Hydro
Bhutan	Renewable Energy
Pakistan	Rural Electrification and Renewable Energy
China	Waste Management (Landfill gas utilization)
India	Run-of-River Hydropower
Bangladesh	Waste Management (Composting)

⋮

2. Capacity Building: REACH Program

▪ **Netherlands Cooperation Fund**

- Country Studies (focusing on experience with RE, EE, GHG abatement technologies and policies) prepared for several countries
- National Technical Experts trained in conducting pre-feasibility studies
- Over 25 pre-feasibility studies covering various technologies
- Developed feasibility studies and CDM PDDs

▪ **Canadian Cooperation Fund**

- Guidelines and action plans developed for small-scale CDM activities
- PRC: Major CDM Capacity Building Study completed in China
- Indonesia: Carbon Sequestration and Biomass Energy Pilot Projects
- India: Capacity Building for CDM (focus on financial sector capacity building)

▪ **Danish Cooperation Fund**

- Multiple studies approved to promote renewable energy in rural areas and small towns

3. CDM Project Technical Support: CDM Facility

- Integrate CDM valuation in project financing
- Lower CDM transaction costs
- Facilitate credit transaction throughout project cycle

Integrate CDM Valuation



Lower CDM Transaction Costs

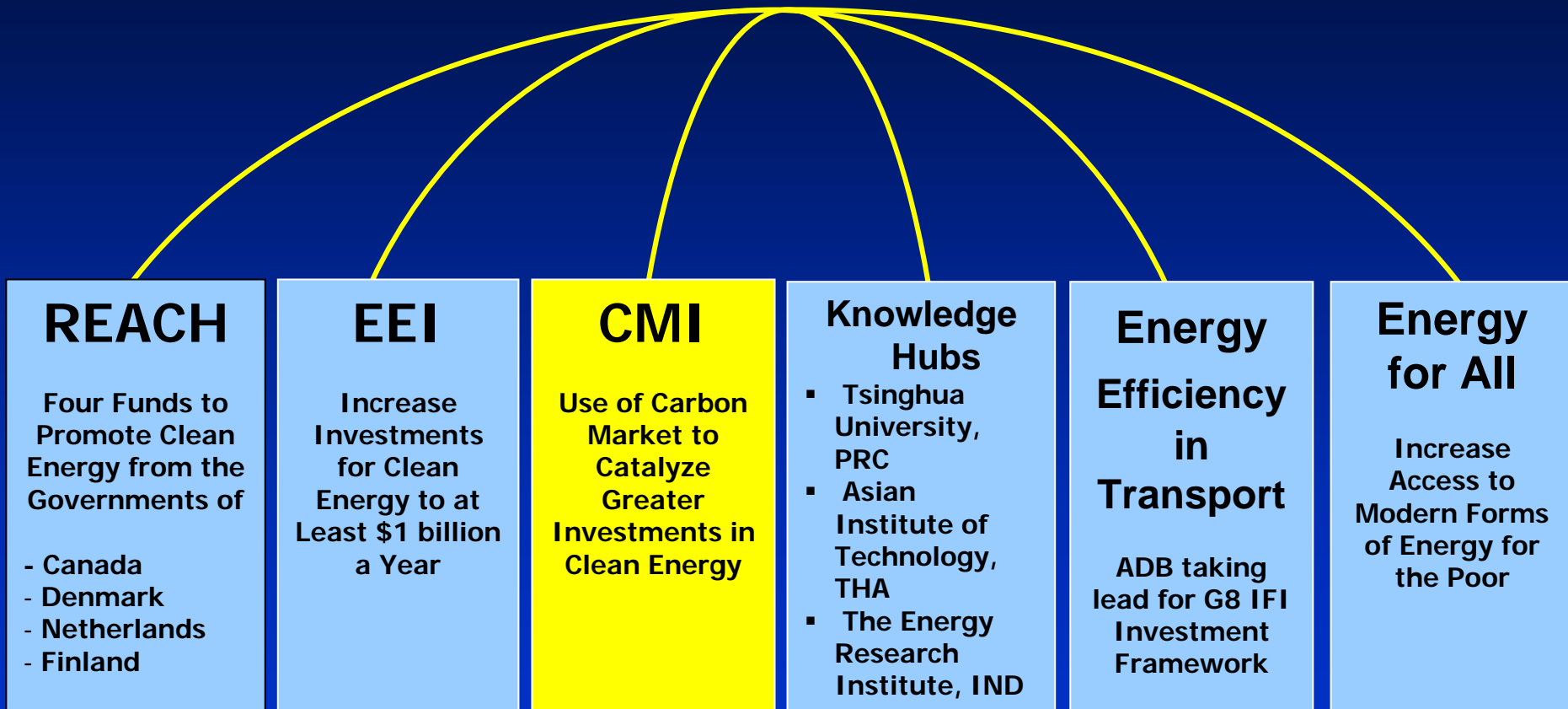
**General
Project
Analyses**

**Additional
Analysis for
Potential
CDM
Projects**

Facilitate Credit Transactions



ADB's Clean Energy and Environment Program



Carbon Market Initiative

*An ADB Initiative in support of
Clean Energy & the Environment*

Carbon Market Status

□ Supply Constraint

- Boost in demand for credits after Kyoto Protocol and EU-ETS came into effect in 2005
- Number of Kyoto Protocol signatories well behind in terms of their GHG reduction commitment targets
- Shortage of good projects with carbon credit content

□ Financing Gap

- Project development require upfront finance
- Current procurement programs mainly offer “pay-on-delivery”
- Projects heavily skewed towards countries/sectors favorable to foreign direct investment
- Post-2012 issue acting as further barrier towards using CERs for project finance

CDM Concept

Industrialized Country
(Annex B)

Developing Country
(non-Annex B)

Carbon Credits

(=GHG Emission rights)

Entity A

✓GHG Emissions

Entity B

✓Project Activity

✓Emission Reduction

Finance

Technology

(Capacity Building)

CDM Reality

Industrialized Country
(Annex B)

Developing Country
(non-Annex B)

Carbon Credits

Entity A
✓GHG Emissions

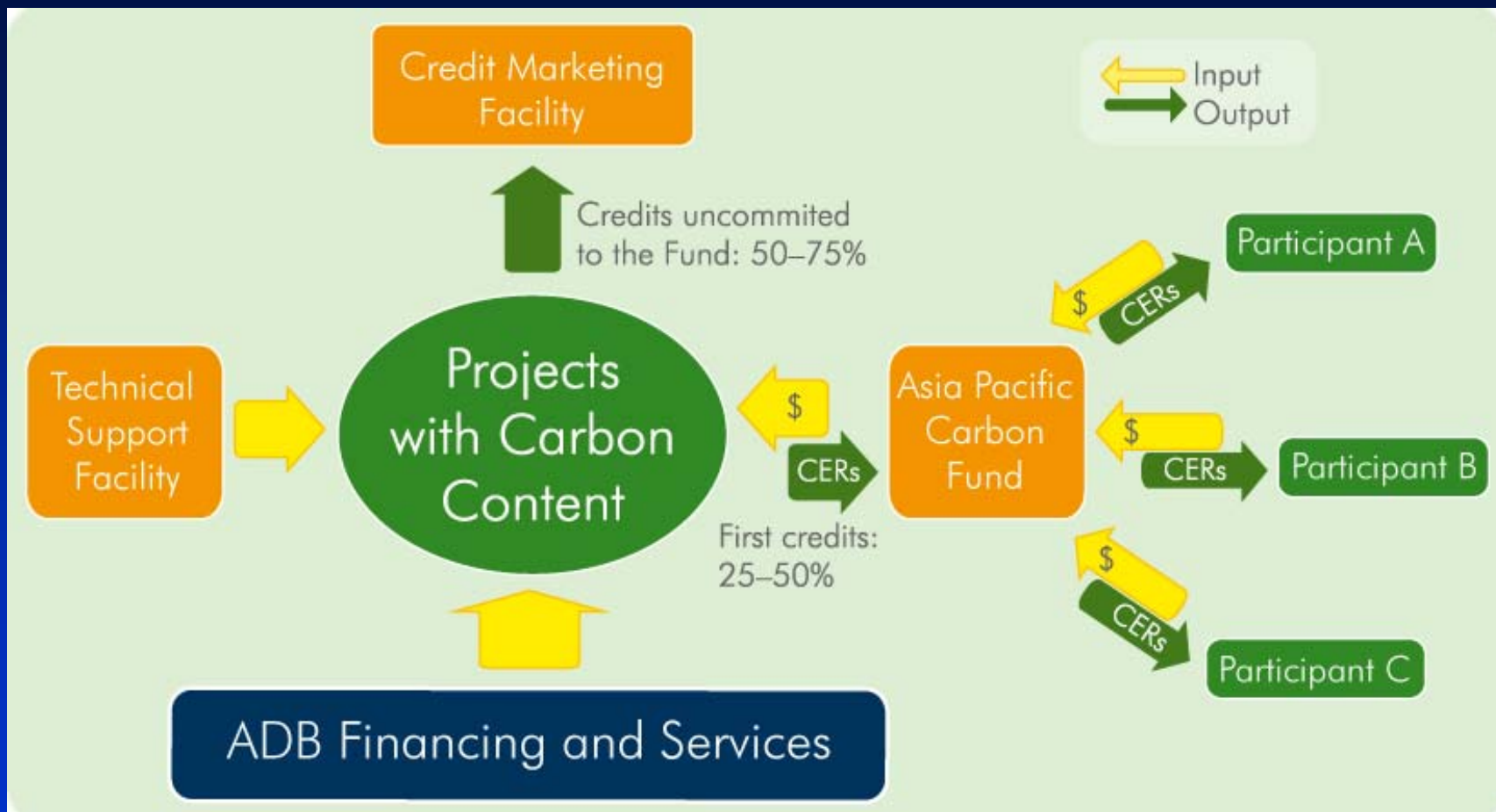
Entity B
✓Project Activity
✓Emission Reduction

Payment

Consultation with Project Developers

1. Need underlying finance
⇒ ADB long-term finance
2. Desire highest prices/best conditions for CERs
⇒ Dedicated credit marketing service
3. Prefer upfront payment for future credits
⇒ Upfront procurement vehicle
4. Require CDM implementation support
⇒ Comprehensive CDM technical support team

Carbon Market Initiative: 3 Components



Component 1: Asia Pacific Carbon Fund

- ❑ Co-finances projects alongside ADB
- ❑ Fills a critical project financing gap
- ❑ Can purchase 25-50% of expected carbon credits
- ❑ 100% Upfront payment of contracted credits
- ❑ Projects have strong development benefits and follows comply with ADB safeguard policies

Component 2: CDM Technical Support

- ❑ Upstream support in project preparation phase
 - Due diligence: technical, financial, legal, safeguards, governance
 - Capacity building trainings
 - Carbon credit valuation
 - Documentation preparation for credits (PIN, PDD, methodology)
 - Obtaining host country approvals
 - Facilitating project Validation & Registration
- ❑ Downstream support in project execution and commercialization
 - Implementation / commissioning
 - Monitoring & Verification
 - Certification & Issuance of CERs to sponsor/developer & fund

Component 3: Credit Marketing Service

- ❑ Assists with sale of credits *not* purchased by Fund
- ❑ Provides financial incentives for project completion
- ❑ Buyers will bid for credits offered
- ❑ Competitive process to achieve best prices & terms
- ❑ APCF investor can also participate as seller or buyer

Priority Target Projects

❑ Fugitive Methane Capture

- Coalmine methane
- Municipal waste management (landfill methane)

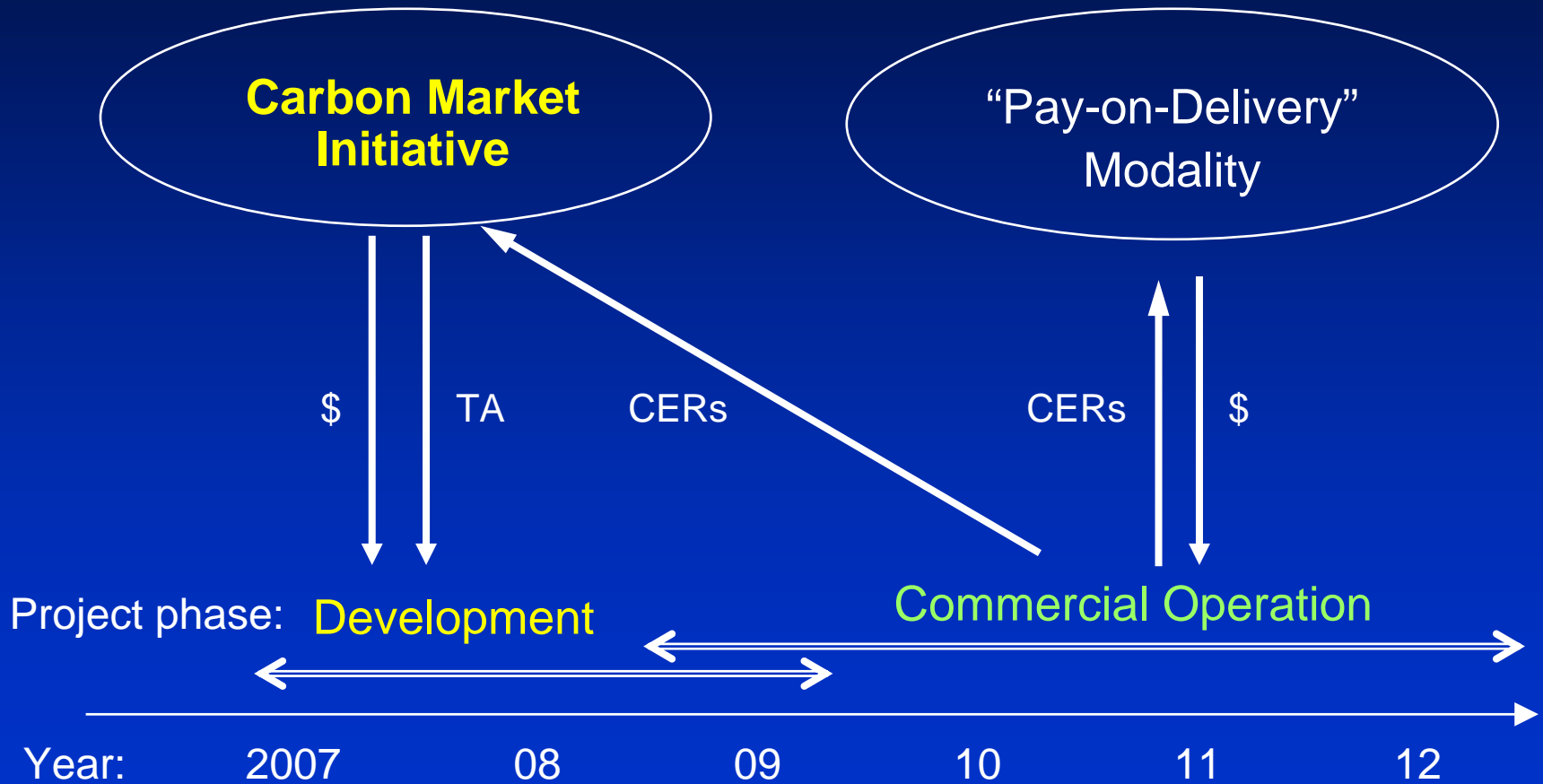
❑ Energy Efficiency

- Industrial technology
- Supply-side efficiency (e.g. upgrade of generation equipment)

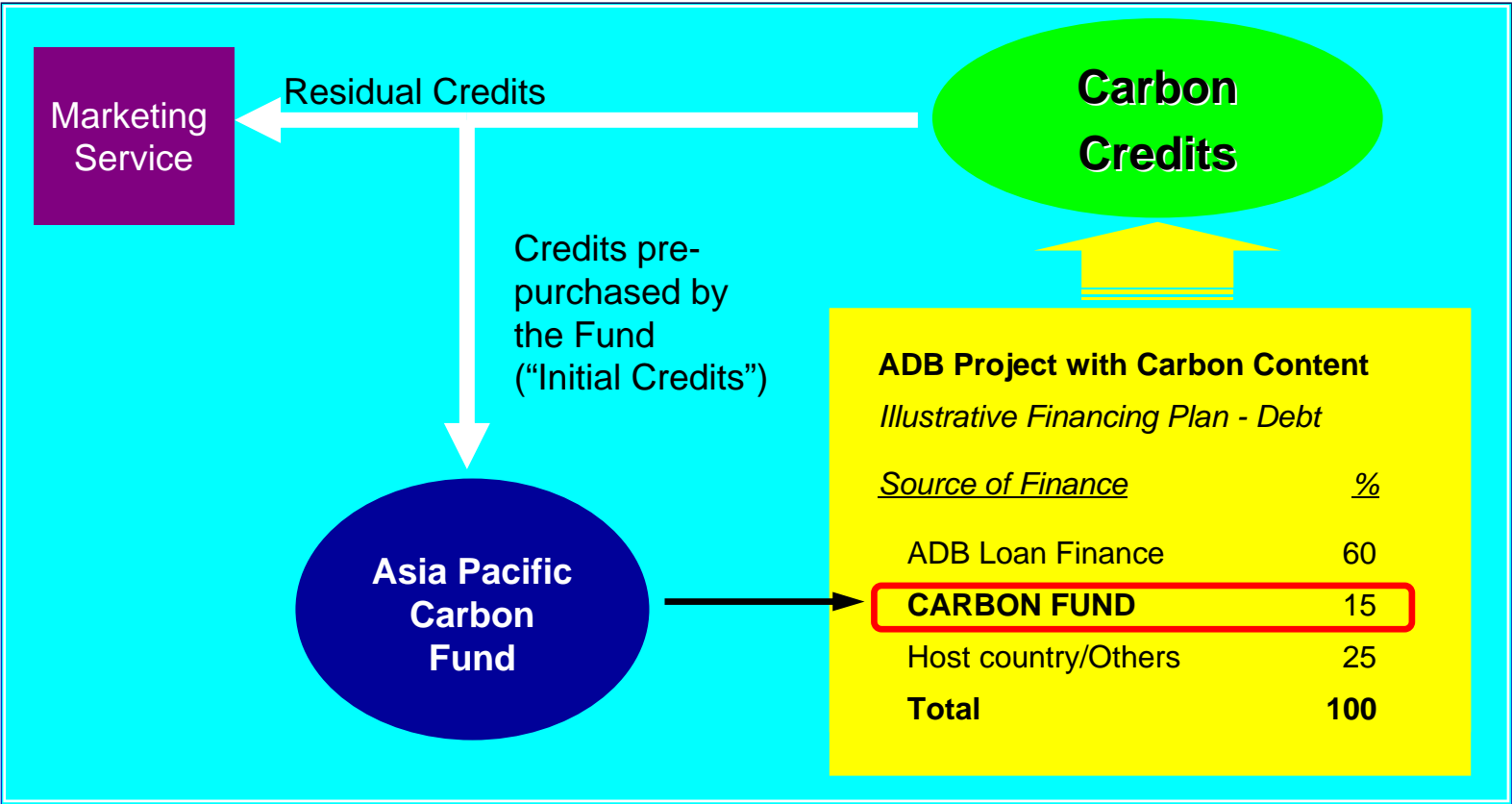
❑ Renewable Energy

- Biomass energy
- Small to mid-scale run-of-river hydropower
- Wind power
- Geothermal power

Timing of Intervention



Sample Project Financing Plan



CMI Workflow

1. Project Referral



2. Preliminary Review



3. Documentation



4. APCF

- Due Diligence
- Negotiation
- Board Approval

4. APCF

- Upfront Payment



5. Monitoring



6. Issuance/Transfer



7. Credit Marketing

Summary: Main Advantages

- Lower budget commitments to project financing plans
- Early stage co-financing at attractive terms
- Grant funds from ADB for project preparation
- Long term project implementation support
- Substantial market upside for residual credits

THANK YOU!

For inquiries on the CMI, please contact:

Toru Kubo / Josh Carmody

Energy, Transport and Water Division

Regional & Sustainable Development Department

Tel: (+632) 632-5912 Fax: (+632) 636-2198

E-mail: tkubo@adb.org / jcarmody@adb.org