



WORLD BANK CLIMATE AND CARBON FINANCE UNIT
CARBON PARTNERSHIP FACILITY
MAY 2016 ANNUAL MEETING

**PRICING OPTIONS FOR NEW CREDITING INSTRUMENTS
PROGRAMS**

New Crediting Instruments Pricing

- ◆ No valid market reference exists to provide a reference point and guide the CPF to set the price and volume of ERs for the New Crediting Instruments (NCI) programs.
- ◆ CCFU's prior experience of pricing approach:
 - *CPF experience*: the original CPF pricing approach relied on a market reference point for primary market CERs, with a small risk premium or discount based on the risks of program delivery.
 - *PAF*: pricing mechanism that uses auctions where program entities bid for receiving funding support to deliver a certain amount of emission reductions.
 - *Investment analysis*: as a tool to demonstrate at the time of the investment decision a project needed result-based climate finance support to become financially viable (CDM additionality). Experience from bilateral programs.
- ◆ All these approaches are valid approaches, however due to low carbon prices in the international markets and the special characteristics of the NCIs (i.e. sectoral approach beyond CDM and own contribution), we do not believe that these approaches are the most suitable for the types of programs we are developing.

◆ “Mitigation specific” approach

- It covers a portion of ‘direct’ costs needed to promote sector development.

◆ “Mitigation relevant” approach

- It covers ‘indirect’ costs needed to mobilize resources for the sector development.

Mitigation Specific Approach (1)

- ◆ Based on the sector needs, carbon finance supports a portion of the net mitigation costs that are needed for implementation of the NCI crediting programs.
- ◆ Bottom-up approach: aggregates net mitigation costs based on the difference of average unit lifetime cost of abatement measures under project scenario and that of counterfactual carbon intensive measures under baseline scenario.
- ◆ The life time costs include financing costs, capital costs and O&M costs for both abatement technologies/measures and baseline technologies/measures.
 - Such costs can be aligned with the assumptions that the major policy maker uses to set the feed-in-tariff or service charge.
 - Financing cost should reflect the risks that the project investors face and cost of capital they have to bear from the relevant capital market (different for public utility and private sector IPP developers).
 - Capital cost take into account technological progress and learning curve for different technologies.

Mitigation Specific Approach (2)

- ◆ The *net* unit mitigation cost (\$) per tCO₂ reduction will required to be identified either through:
 - modelling technique for more accurate estimations and to assess impacts of different policy scenario; or
 - through the difference between lifetime costs of abatement technologies/measures plants ($\$_{\text{abatement}, i}$) and that of baseline technologies/measures ($\$_{\text{baseline}, i}$) and their potential for emission reductions (tCO₂e) during their technical lifetime, t.

$$\sum_1^t (\$_{\text{abatement}, i} - \$_{\text{baseline}, i}) \div \text{tCO}_2$$

Mitigation Specific Approach (3)

- ◆ Determination of carbon payment's portion- an illustrative example

Net mitigation cost		Financing for the mitigation cost		
Net mitigation cost	\$500 million	Carbon payment for 2 million tons over 5 years	\$15 million	\$7.5/tCO ₂ e
		Fiscal budget	\$285 million	
Total ER over 20 years	20 million tCO ₂ e	Passing through to end consumers	\$200 million	
Average unit abatement cost	\$25/tCO ₂	Total	\$500 million	

Observations:

- With the current price range, carbon payment only accounts for a small portion of net mitigation cost
- Arbitrary to allocate the sharing of net mitigation cost among several sources
- Ultimately depending on the buyer's WTP and the seller's willingness-to-sell

Mitigation Relevant Approach (1)

- ◆ Carbon revenues are only one of several finance sources that should be put in place to encourage private sector to invest in more mitigation technologies/measures.
 - A coherent, inter-related set of policy measures and actions is required.
- ◆ Under this approach, the costs that are required to establish an enabling policy environment in the country to support investment in mitigation technologies/measures will be considered.
 - Costs for development of investment-grade mitigation policies that takes into account hidden costs of current policies and barriers will be established.
- ◆ Carbon finance support to such activities, where justified, could be based on identification of 'critical' activities or components that are required for success of the program in the country.

Mitigation Relevant Approach (2)

- ◆ A detailed study may be required to:
 - identify such activities and main agencies to undertake these activities
 - estimate their implementation costs
 - assess the potential impact of such carbon revenue flows and
 - map out additional technical and policy support needs and additional financing required
- ◆ An operational plan will be developed to establish funding flow mechanism and coordination between lead agency and implementing agencies.

Example of critical activities

Renewables	Energy Efficiency
Feed-in-tariff design and payment mechanism	Information policy: labelling and testing
Resources mapping	Data management
Managing variability of renewables	Capacity building for EE auditing
Demonstration and pilot of new renewable technologies to discover the cost	Mobilizing financial sector and business model development