sing carbon credits to shape
nergy demand in the transport
ector

edits for reducing greenhouse gas emissions

arbon Credits

.12 of the Kyoto Protocol: Clean Development Mechanism (CDM)

rtified Emission Reduction (CER)

easured in tCO2e

th an environmental and a financial asset

Environmental asset: reducing GHG emissions which cause global warming & climate change

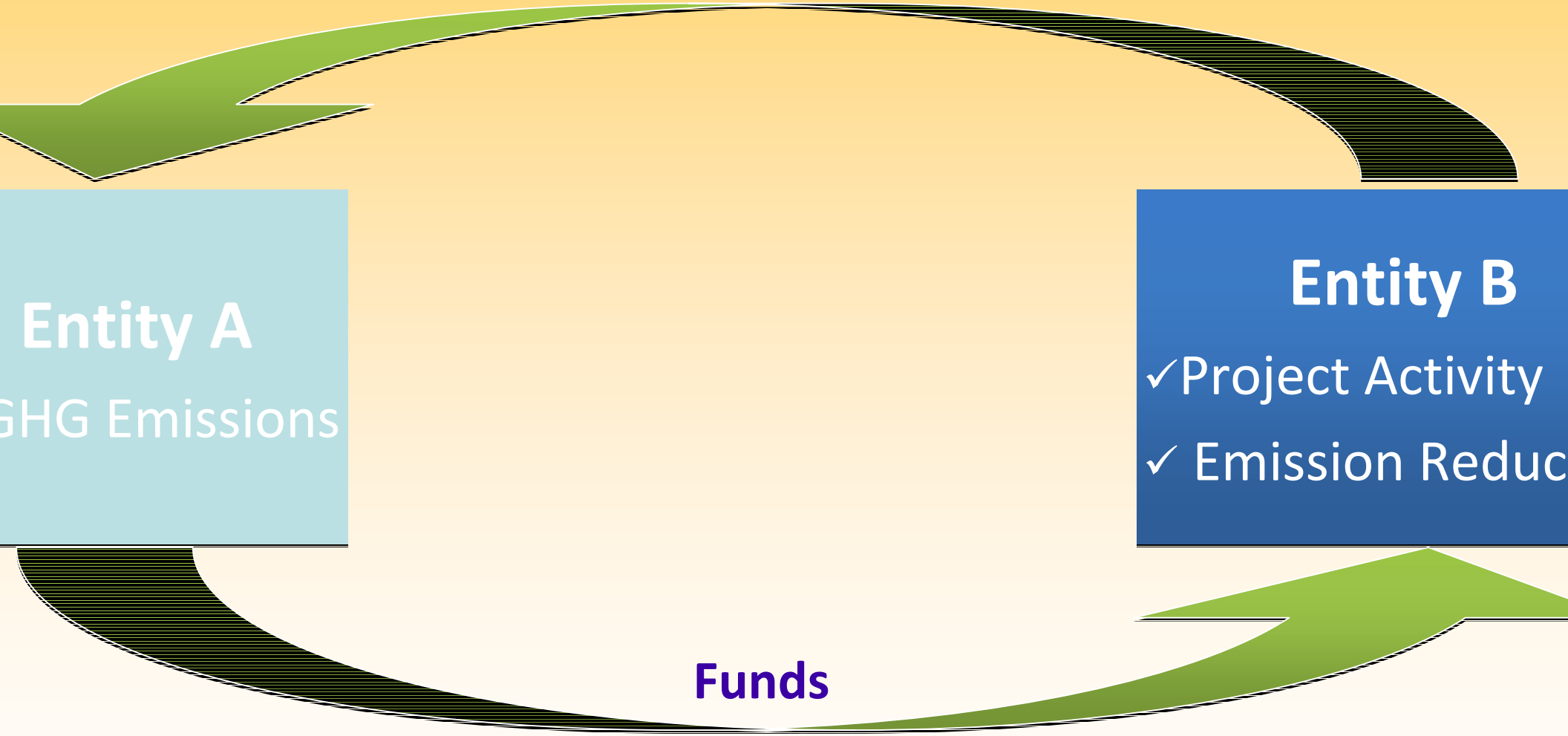
Financial asset: openly being bought and sold in

CDM Idea

trialized Country

Developing Cou

CARBON CREDITS



Entity A

GHG Emissions

Entity B

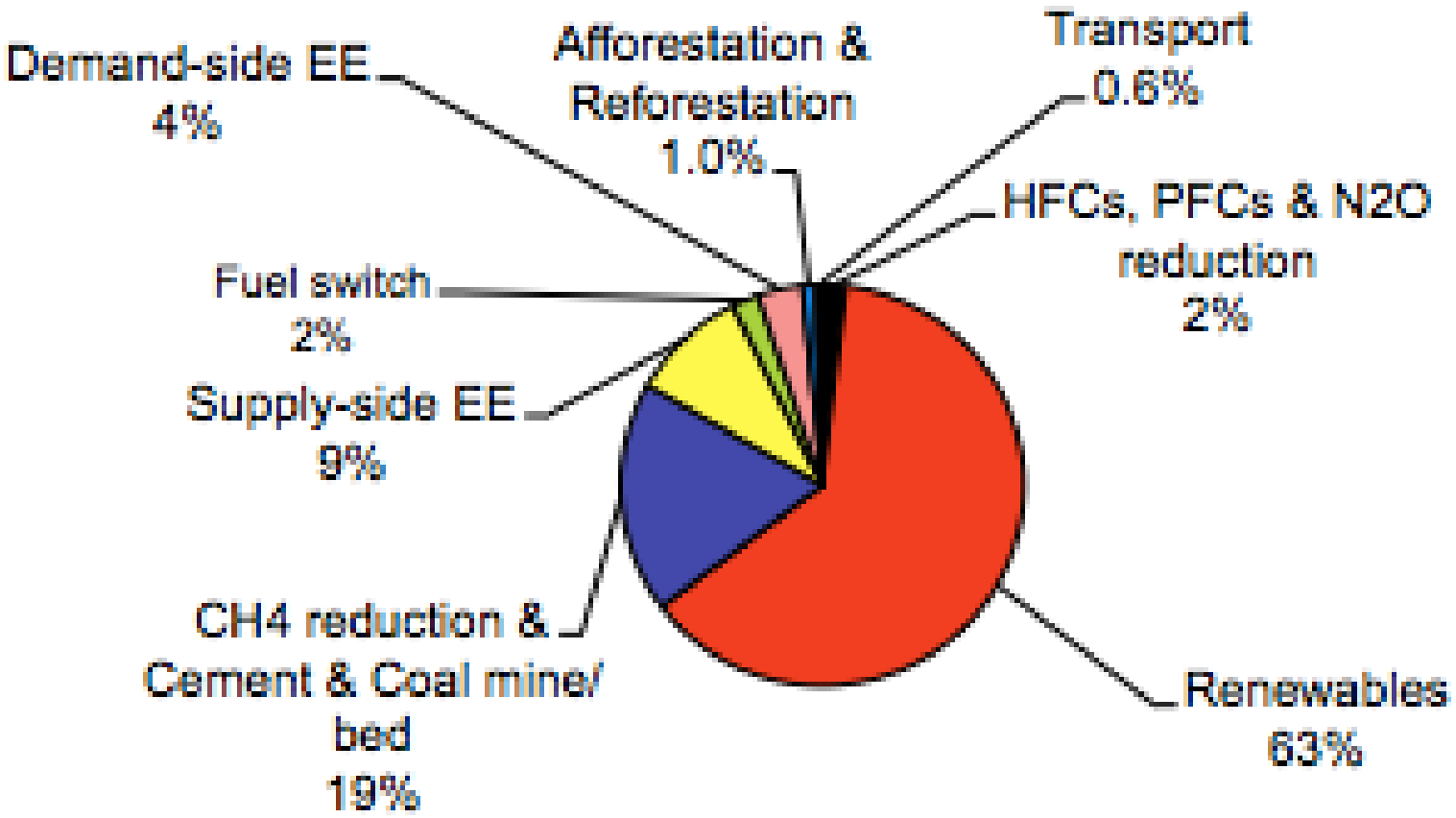
✓Project Activity

✓ Emission Reduc

Funds

Technology

(Capacity building)



source: UNEP RISO Center

otal Projects: 6,292

Transport vs RE Projects

Transport	RE Projects
n-point source	point source
mplexity in ermining baseline	baseline emissions relatively simple
mplex monitoring	simple monitoring
all volumes per ject	large CER volumes per project
h transaction costs	Lower transaction costs

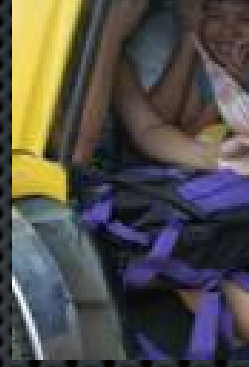
ase Study: Retrofit Kits
or two-stroke tricycle taxis


SUSMARYOSA
SAIBIEN
HANES


TZ 7404


895


VETERANS
BATODA
1193
BATODA
774




BACHAO SUR
FOR HIRE
4
LEA•REA•GIA
X1465

nan Impact of Pollution - Philippines

ational

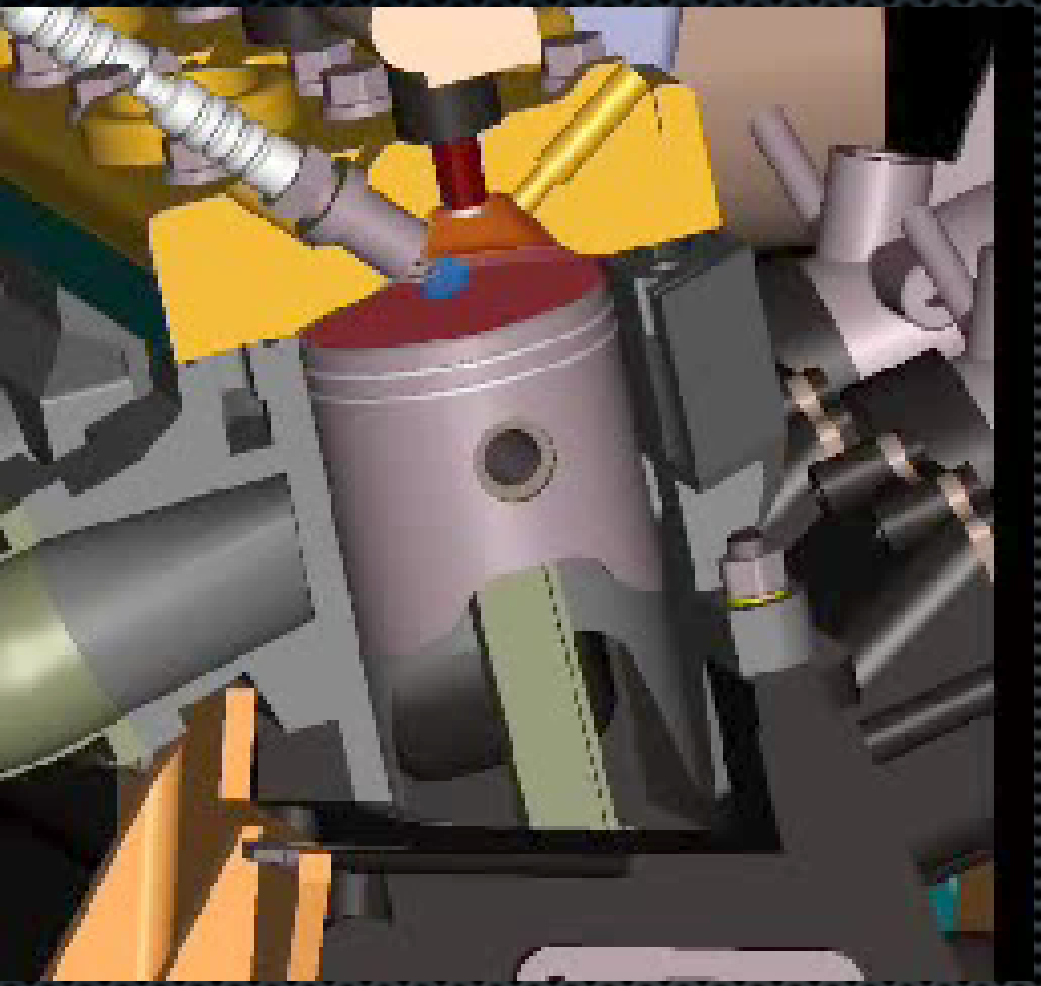
ty 2-stroke units are
igh emitters of CO,
IC, and particulates
1 tricycle =>50
utomobiles)

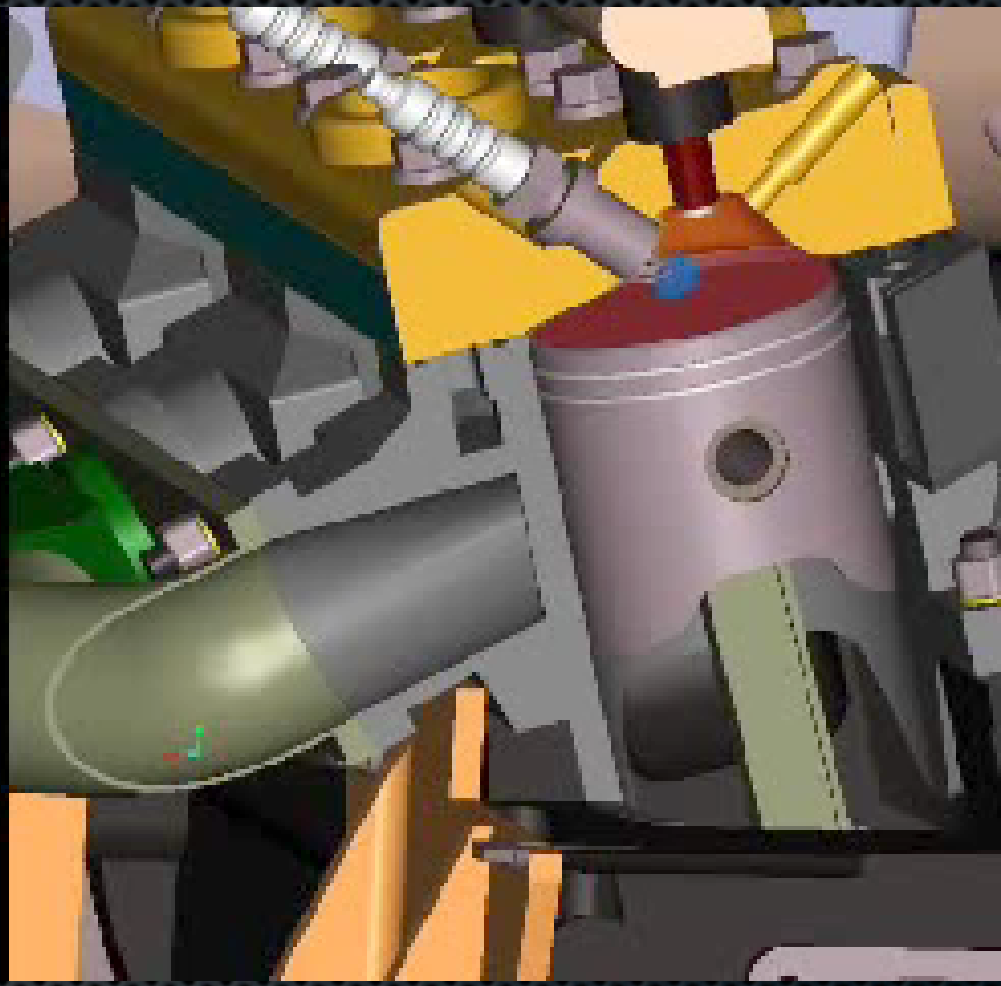
2-stroke ban is an
nrealistic &
neffective solution:

Carbureted 4-strokes
offer limited GHG
emissions reduction

- direct injection 2-stro
engines are cleaner
than carbureted 4-
stroke engines
- Carbureted 4-stroke
replacement is very
expensive and delive
zero economic payb
to the driver
- Dirty 2-stroke units w
merely be transferre
elsewhere

Carburetion vs. Direct Injection





Carbureted
2-Stroke

Direct Injecte
2-Stroke

hallenges

Communicating local conditions

User Perception

Market penetration

R&D costs

Funding

Economies of scale vs. Market conditions

Model specific retrofit kits

Country/community specific practices

(TODAs)

...DM related issues and challenges

- ...k of data – data must be generated and verifiable t... ...ermine an appropriate baseline.
- ...nstant route - may not be the case in practice for m... ...ycle taxi situations in the Philippines.
- ...hicle lifetime - forever? How to prove and validate ...ime of vehicles used for a very long time. How to ...ve conservativeness of data?
- ...seline fuel efficiency (how to measure efficiency un... ...ide variety of driving conditions, weather condition... ... practices)
- ...M Specific research and surveys (lifetime, efficienc... ...ance)

ecommendations

- pecific conditions for project implementation
- roject developers and CDM consultants nee
  think differently for small scale transport
  ojects. (timing, data gathering etc)
- dditions to transaction costs due to project
  ecific data gathering and research.
- eed for country specific baseline data to be
  sily accessible.
- ecessity of PoA for small transport projects

ow do we transition?

s for thousands of drivers and operators

hly flexible and convenient.

hly pollutive

sustainable

o this . . .

ass transport

gh capital costs

gh efficiency

hallenges

cial/economic dependence on the tricycle

litical will

/hat needs to happen?

National Level

.Programs / incentives

.Political will

Local level

.financing

.long term planning

ernational Level:

st-Kyoto international agreement to reduce
GHG emissions

ecial rules for transport projects

aFiS Inc.

Cab conFines oil torn Sun

aFiS Inc.

arbon Finance Solutions

aFiS Inc.

rbon Finance

lutions

layan@cafisinc.com

3 2 891 1119

hank You

laraming Salamat

an Silayan, Managing Director

aFiS Inc.