Carbon Offsets - An effective climate tool or indulgences for the rich?

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Topics

What are carbon offsets?

- Kyoto - Clean Development Mechanism

Examples

Characteristics

Pros

Cons

Recommendations

What are carbon offsets?

The purchase of someone else's carbon reduction to reduce your carbon footprint.

Offsets can involve reducing, avoiding, destroying or sequestering GHGs (metric tons of CO_2e).

In the US this is strictly a voluntary market.

In Europe offsets are part of the mandatory ETS via CDM and JI.

European Offsets

The European Trading System (ETS) is a combination allowance trading and offset purchase system - like the proposed Waxman-Markey energy/cap-and-trade bill in the US.

Clean Development Mechanism (CDM) allows European nations to buy credit from developing countries.

Joint Implementation (JI) allows offsets in other ETS countries usually 'transition economies'.

Examples

Flaring or capturing landfill methane

Reforestation

Destruction of high GWP pollutants

Replacing incandescent with CF lightbulbs

No-till farming

Wind energy projects

Costs range from $2/ton to over $40/ton

Offset Characteristics

Additionality

Permanence

Reduction or Avoidance

Verification

Ownership - single sale

Existing or Future (to be created)

Offset Characteristics

Additionality

Would the project be done without the sale of offsets?

Are you paying for something that is being done or would be done anyway? If so, should you get credit for a 'carbon reduction'?

Offset Characteristics

Permanence

Will or could the carbon reduction reverse itself?

Reforestation projects can burn down, get sick and die, etc.

Offset Characteristics

Reduction or Avoidance

If you are offsetting car travel you probably want reductions (Scope 1*).

If you are concerned with your electricity usage, avoidance makes sense (Scope 2*).

*Greenhouse Gas Protocol

Offset Strengths

Offsets provide financial support for projects

They can reduce carbon emissions.

Are a low cost carbon reduction method.

Easy for the buyer.

Can be purchased in units that match carbon emission activities (plane trip, event, etc.)

Offset Weaknesses

Can be difficult to verify reductions.

Can have a 'Rebound Effect'.

Are a tiny part of the solution.

- 2007: Offsets 65 million tons vs. 40 billion tons

Can reward existing or mandatory behavior.

Can reduce incentives to make actual reductions (allows baseline to increase).

Let rich people off the hook - INDULGENCES


Repentance and Redemption
Forgive me, for I have S.U.V.'d
Go thy way. Thy sins are offset.

Offset Weaknesses

Can reduce incentives to make actual reductions (allows baseline to increase).

Without actual domestic reductions we continue to build houses, cars, appliances that emit more carbon than necessary. Without reductions there is no incentive to change infrastructure or energy consuming products to be low-carbon or no-carbon.

Baseline increase makes reaching any GHG target more difficult and expensive.

Recommendations

Businesses:

If being carbon neutral is important offsets are almost required.

If carbon neutrality is not an issue then in-house reductions provide much more assurance about reductions.

A mix of in-house and offsets can be very effective (if verified, etc offsets are used).

Recommendations

Individuals:

Personal carbon reductions are best.

Is global warming your primary issue?

Consider your offset budget

- Could $100 spent on offsets be better used?
- Examples: Poverty alleviation or climate adaptation; environmental groups; political candidates; land conservancy groups, etc.