



**Center for
Clean Air Policy**

Issues and Options for the Design of an Offset Program within a Carbon Allocation System in Oregon

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Overview of CCAP

- Non-profit environmental think-tank, founded by bipartisan governors in 1985, to work with governments to develop practical strategies to protect air quality and climate.
- Designed emission trading and climate policy measures for the European Community and a range of developing and Eastern European countries.
- Developed seminal paper describing a load-based cap and design challenges for the state of California.
- Working with states since 1992 to build climate change leadership (including CA, CT, MA, MD, ME, NJ, NY, OR, WA, WI).



Presentation Goal and Overview

- The goal is to ensure a common understanding of offsets, including the major advantages and disadvantages and key design issues to inform future decision making.

Topics include:

- What an offset is and isn't in the context of a load-based cap
- Review of important offset design issues, framed as key decisions
- Next steps

What are Offsets?

- Avoided or sequestered emissions that occur outside of the boundaries of the load-based cap.

What is meant by “Inside the Cap Boundaries?”

- Under a generation-based cap, the cap boundaries include the covered emitting sources.
 - A generation-based cap covering the power sector would include the fossil-fired generating units.
- Under a load-based cap, the cap boundaries cover all power supply that serves Oregon power demand.
 - This includes fossil-fuel, renewable energy, and all other types of power servicing Oregon demand.
 - This also includes demand-side measures at customer sites that lowers demand and the need for supply.

Power Sector Compliance Options are “Inside the Cap”

- Load-serving entities (LSEs) have numerous core options to comply with the cap, including:
 - Purchasing lower-emitting power;
 - Changing their own generation mix (including adding new RE to their generating portfolios);
 - Running cleaner units harder, and dirtier ones less;
 - Supporting energy efficiency measures at their customer sites.
- This is a key advantage over generation-based caps.

No Power Sector Offsets Allowed under a Load-Based Cap

- Power sector measures that affect Oregon supply or demand cannot qualify as an offset as this would lead to “double counting.”
- However, one effect is that the initiator of the EE/RE project is not automatically rewarded under a load-based cap.
- Options for addressing this concern include:
 - Negotiating with the LSE for a share of the allowance or its value.
 - Auctioning allowances and giving proceeds to support energy efficiency and renewable energy.
 - Establishing an energy efficiency and renewable energy set-aside program within the cap.

Potential Universe of Offsets

- A wide universe of potential offsets, including:
 - Direct combustion emissions (industry, commercial, residential)
 - High-GWP gases (landfills, biodigesters, natural gas transmission, semiconductor)
 - Sequestration measures (forests, soils)

Key Decisions

- Should offsets be allowed?
- Which “additionality” tests should be used?
- How should “permanence” be addressed?
- Where can credits be earned?
- Should credits expire?
- Should limits be placed on offset creation or use?
- What sectors should be allowed to earn offsets?
- Should sectors that are strong candidates for future regulation be allowed to earn offsets?

Should Offsets be Allowed? (1)

Pros

- Compliance flexibility and cost savings.
- Gain experience in other sectors.
- Co-benefits (depending on program design).

Should Offsets be Allowed? (2)

Cons

- Need to demonstrate that offsets are high quality and can be traded on a 1 for 1 basis with an allowance.
- Transaction costs (private and public sector).
- Makes future regulation more difficult.
- Don't get reductions from the power sector, potentially locking in new capital investments.
- Offsets may be less important under a load-based cap.

Which “additionality” tests should be used? (1)

Alternative Definitions:

1. Additionality is a reduction in emissions beyond that already occurring in the “business as usual” baseline.
 - » Reductions from the baseline are assumed to be “additional.”
 - » Presumes that baselines are more objective than is actually the case.
2. Additionality is a reduction in emissions that would not have otherwise occurred except to generate carbon reductions voluntarily.
 - » Additionality can be shown through passing additionality “barriers” tests.
 - » Would not have occurred but for the offset program.

Which “additionality” tests should be used? (2)

- Without stringent rules for establishing additionality, any project that reduced emissions could apply for offset credit, reducing net reductions associated with the cap and impacting the environmental integrity of the offset program.

Which “additionality” tests should be used? (3)

Example “additionality” tests:

Common Practice Test. The proposed project must use methods and technologies that produce lower emissions than similar existing projects.

Investment Test. If the project is likely to make a significant rate of return, then likely it will be in the BAU scenario. If profits from the sale of offset credits are required for financial feasibility, then the project may qualify.

Regulatory Requirement Test. The proposed project must exceed all emission requirements that it is legally bound to meet. Only reductions beyond these requirements are potentially eligible.

Technology Test. If the only purpose of adopted technology is to reduce GHG emissions, then reductions can be considered additional.

Timing Test. Projects starting before the implementation of an offset program have difficulty demonstrating they were created for the purpose of creating offsets.

How should “permanence” be addressed? (1)

- Terrestrial and geologic sequestration offset projects do/may not achieve permanent reductions.
 - Fires and pests can affect afforestation. And these activities can be hastened by climate change!
 - New owners may decide not to maintain sequestration activities.
 - Eventually, trees die and decompose.
 - Geologic sequestration projects may risk leaks.

How should “permanence” be addressed? (2)

Methods for addressing permanence include:

- discounting,
- guarantees,
- delayed awarding of permits,
- early payoffs of credit values, or
- disallowing non-permanent offsets.

Where can credits be earned? (1)

- What is the state's willingness to tradeoff lower prices and greater offset supply for lower co-benefits and less control or certainty?

Scenario 1: Offsets must be produced in Oregon.

- Greatest co-benefits
- Greatest control
- Highest cost
- Smallest supply.

Where can credits be earned? (2)

Scenario 2 (3): Offsets can be produced anywhere in the US (or internationally)

- Lower costs
- Greater supply
- Few or zero co-benefits
- Could require programs in other states/countries to meet Oregon rules or could accept offsets created by other programs (potentially subject to limits)

Should credits expire?

Pros

- It is difficult to forecast business-as-usual emissions reductions from changes in technology and regulation. It may be the case that offsets allowed today would not qualify as additional in the future.

Cons

- Would affect compliance flexibility and cost savings.
- Would affect offset supply.
- Would not be enforceable unless banking of allowances is also disallowed.

Should limits be placed on offset creation or use? (1)

The state may opt to place limits on the creation or use of offsets to:

- ensure that some emissions reductions take place in the power sector, where long-term investments are being made, and
- hedge the possibility that offsets may not equate to the value of allowances.

Should limits be placed on offset creation or use? (2)

Limits could be based on:

- the share of compliance that may be met with offsets,
- allowance prices above which more flexibility is deemed to be needed, and/or
- based on the development of restrictive standards for offset development.

What sectors should be allowed to earn offsets? (1)

Terrestrial sequestration sectors (forests and soils)

- These sectors offer challenges with respect to:
 - project permanence,
 - baseline accounting,
 - leakage, and
 - project timing.
- However, these sectors also offer significant potential for earning offsets.
- Should the state allow offsets from these sectors?
- And if so, are there specific offset activities from these sectors that are of greatest interest?

What sectors should be allowed to earn offsets? (2)

Terrestrial sequestration sectors (forests and soils), cont.

Example offset project types include:

Afforestation – Establishment of trees on sites not currently forested.

Forest health thins – Cutting biomass to enhance forest productivity where cuttings are used to produce electricity, displacing BAU power resources.

Burying thinnings – Cutting biomass to enhance forest productivity with burial of cuttings in a landfill.

Converting hardwood to conifer.

Extend rotations

Reduce forest loss – Reducing conversion of forest to developed use.

Enhance yard trees

Increase no-till agriculture



What sectors should be allowed to earn offsets? (3)

Non-power emitting sectors

- Some sectors such as landfills, biodigesters and natural gas transmission offer straightforward accounting of emissions reductions and may be prime targets for building experience in offset development.
- Other sectors (e.g., direct emissions from commercial and residential sources) require upfront work to streamline offset procedures to facilitate participation.

Should sectors that are strong candidates for future regulation be allowed to earn offsets?

- As a next step, the state expects to consider options for controlling emissions from other sectors.
- If these sectors are allowed to earn offsets, they will have a strong financial disincentive to later engage in the design of a mandatory control program.
- If this is a concern, design options include:
 - development of sector baselines,
 - requiring an independent contribution towards the state target, and
 - use of a sunset date.

Next Steps

- Following today's discussion, I anticipate:
 - Updating the background paper to incorporate important changes and additions suggested by the group.
 - Assessing offset design options for a small number of source types or subsectors.
 - Developing a “strawman” proposal for reaction by this group.
 - Having one-on-one discussions with stakeholders to further understand their interests and concerns.
- On June 1st we will seek to identify placeholder decisions on whether to use offsets and how they might be designed.

Discussion Questions

- Should offsets be allowed?
- Which “additionality” tests should be used?
- How should “permanence” be addressed?
- Where can credits be earned?
- Should credits expire?
- Should limits be placed on offset creation or use?
- What sectors/subsectors are of highest priority for further evaluation?
- Should sectors that are strong candidates for future regulation be allowed to earn offsets? Under what conditions?