

Carbon Offsets and Incentive Mechanisms

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What is a Carbon Offset?



- *General Concept:* A reduction in greenhouse gas (GHG) emissions achieved in order to compensate for emissions somewhere else
- *In a Trading System:* A permit to emit GHGs issued when a verified reduction occurs at an unregulated source of emissions

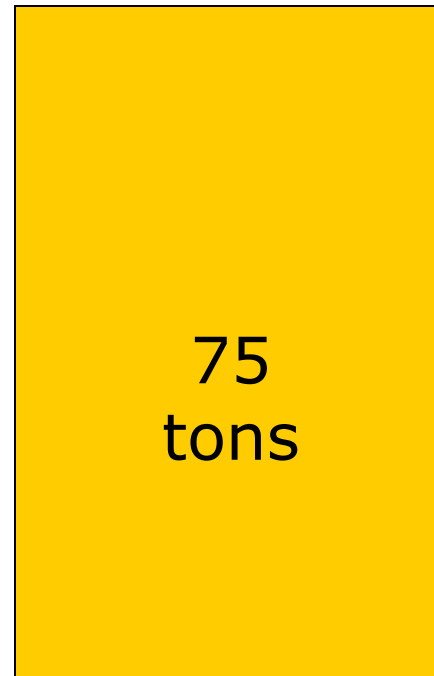
Carbon Offsets in Cap-and-Trade

No Offsets

capped emissions



uncapped emissions

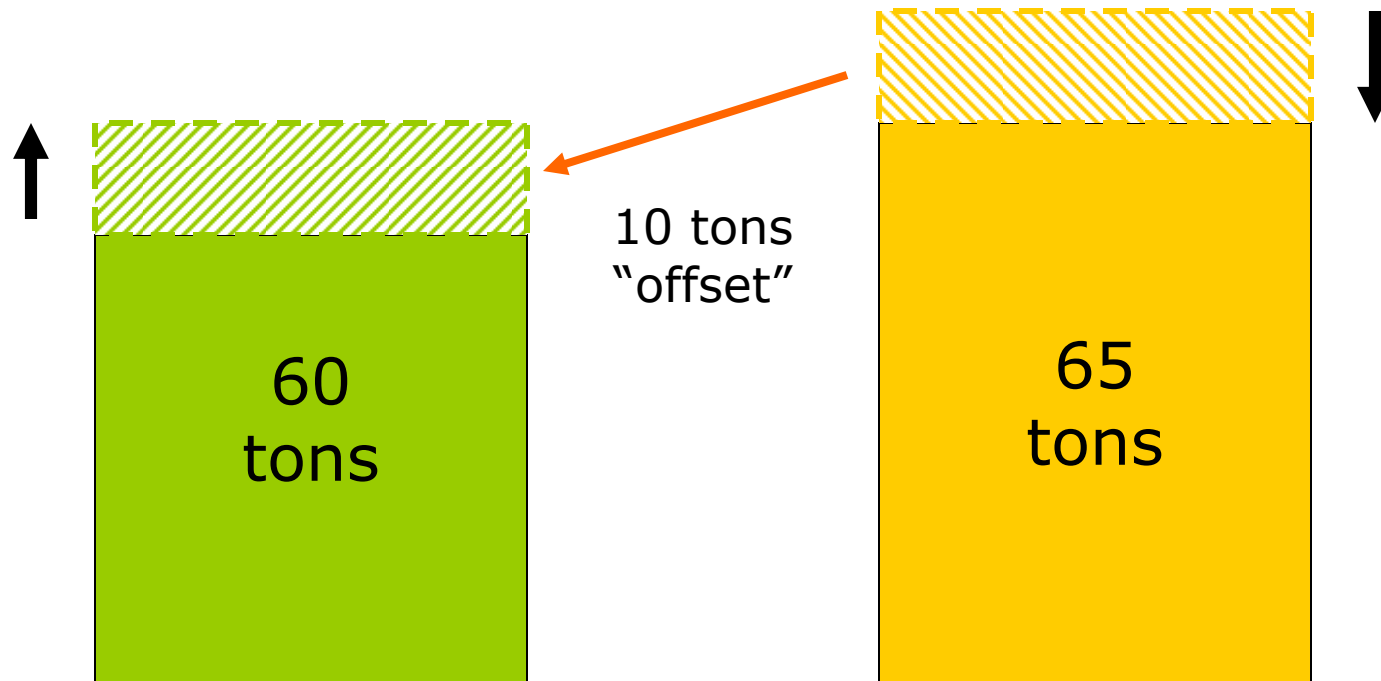


Carbon Offsets in Cap-and-Trade

With Offsets

capped emissions

uncapped emissions



Why Allow Carbon Offsets?

- To access low-cost reductions and reduce overall compliance costs
- To promote reduction opportunities that would otherwise go unexploited
- To promote secondary social, economic, and environmental benefits (e.g., “sustainable development”)
- To build political constituencies

Defining Criteria for Carbon Offsets

...enforceable?

How many are claiming ownership of the offsets from this efficiency project?



...permanent?



...real?

Or is it a product of incomplete accounting?



...additional?

Or would Facility X have been upgraded anyway?



...verifiable?

Has a 3rd party certified that the project is reducing emissions?



Three Elements of a Full Carbon Offset “Standard”

1) Accounting Standards

- Real
- Additional
- Permanent

2) Procedural Standards

- Verifiable

3) Contractual Standards

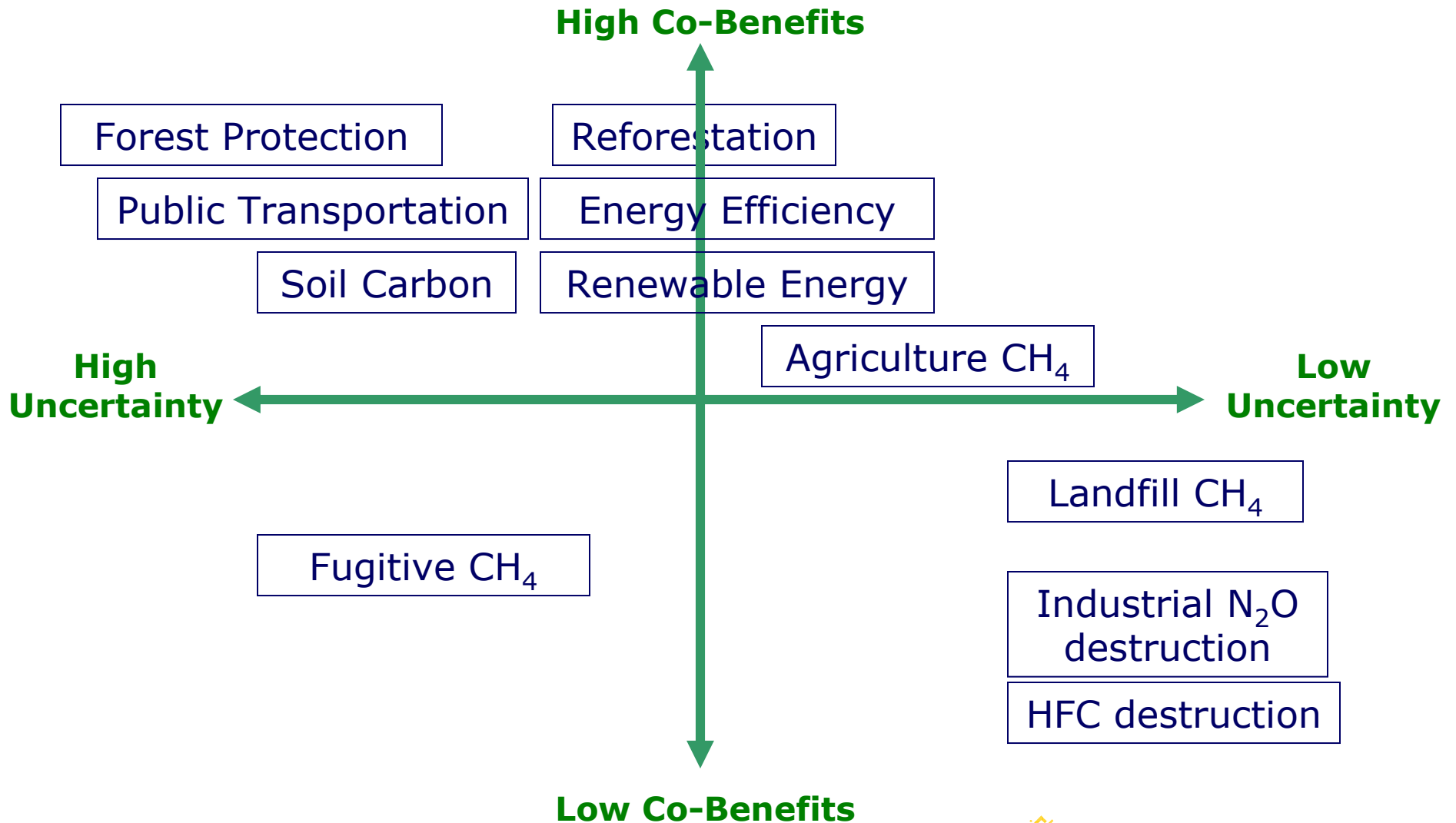
- Enforceable

What Projects Make Good Offsets?

- Those affecting emissions not covered by a cap
- Projects whose reductions are relatively easy to quantify with certainty
 - real, additional, permanent
- Projects with many secondary benefits



Tradeoffs: Certainty vs. Co-Benefits



Can Uncertainties Be Reduced?

- Yes, but there is a cost...
 - + Higher precision measurements
 - + More rigorous baseline analysis
 - + Methods to account for “leakage”
 - + Insurance against re-emission

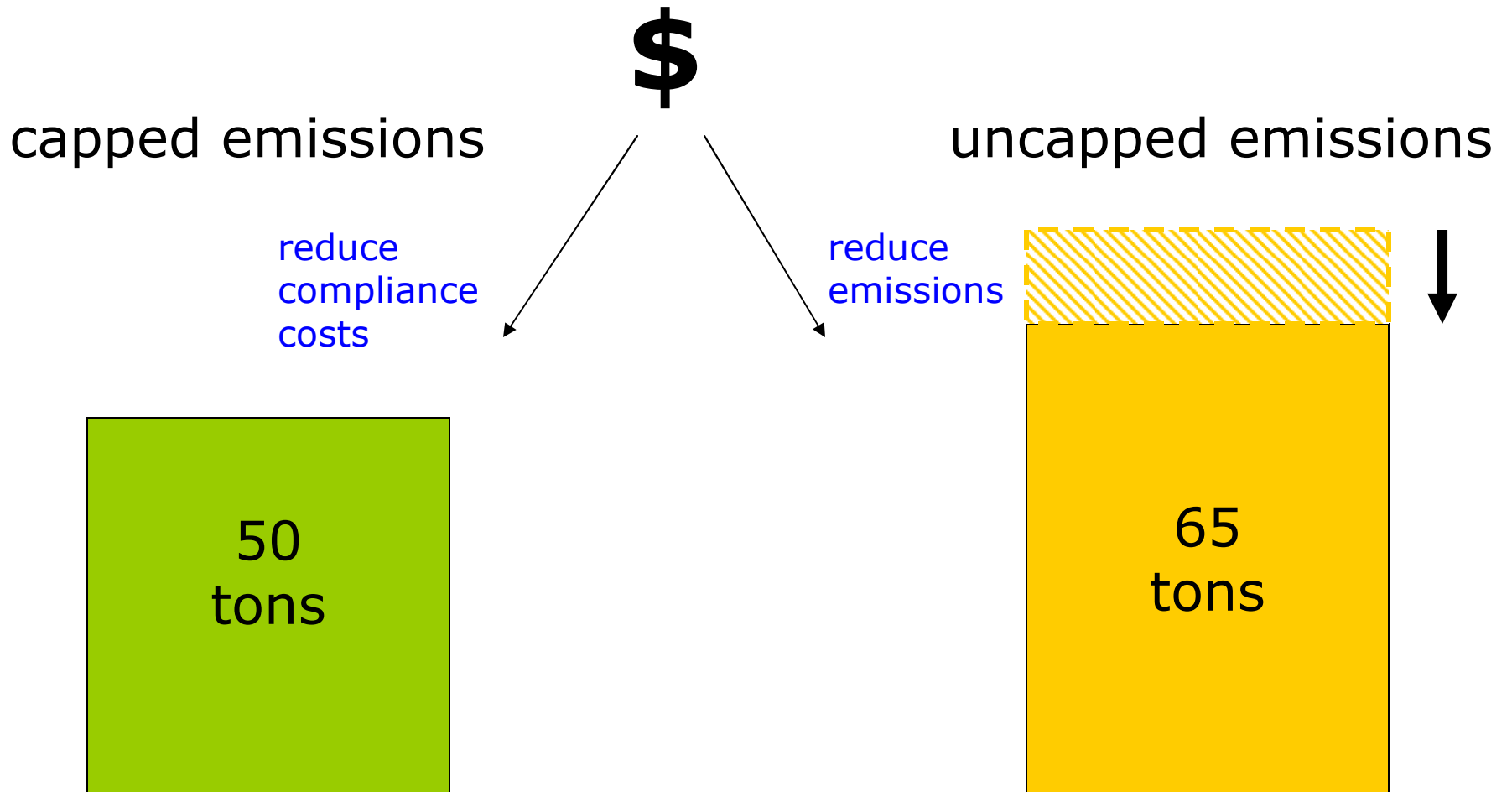
= Higher Overhead \$\$\$



Alternative: Incentive Payments

- Use auction revenues or allowance set-asides to fund activities that reduce GHG emissions
- Advantages:
 - Doesn't require the same level of scrutiny & cost to quantify GHG reductions
 - Can yield the same kinds of co-benefits
 - Can target capped or uncapped emissions

Alternative: Incentive Payments



Alternative: Incentive Payments

- Disadvantages
 - Investment comes from govt. coffers
 - May be hard to gauge the right level of investment
 - Greater uncertainty about emission reductions / benefits



A Role for Both?

