

California Environmental Protection Agency



Air Resources Board

***Low Carbon Fuel Standard
Rulemaking:***

Cost Containment Provision

April 4, 2014

Agenda

1. Design of the Cost Containment Provision

- Option 1: Credit Clearance
- Option 2: Credit Window

2. How to determine a Price Cap

3. Explore establishing a Price Floor

4. Next Steps

Need for Cost Containment Provision

- Currently, regulated parties must meet carbon intensity standards each year.
 - Existing provisions offer flexibility to meet the standards.
- ARB staff anticipates that there will be sufficient credits available for future compliance.
- A cost containment provision enhances the LCFS:
 - Provides confidence in the durability of the regulation
 - Strengthens the incentives to invest in low-CI fuels
 - Increases certainty regarding the maximum cost of compliance

Design of Cost Containment Provision

- Purpose:
 - Ensure that the LCFS achieves its GHG emissions reductions goals within a reasonable and predictable range of costs.
- Goals:
 - Provides additional compliance options
 - Strengthens incentives to invest in low-CI fuels
 - Increases certainty regarding the maximum cost of compliance

Agenda

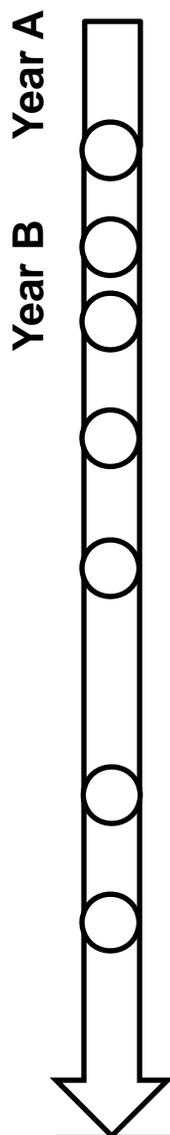
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Option 1: Credit Clearance

- The credit clearance process would only be activated if there are insufficient credits available for compliance.
- Regulated parties could carry remaining deficits after purchasing their *pro rata* share of credits.
 - Improves confidence in the durability of the regulation
- Clearance credits would be offered at or below a pre-determined price
 - Provides a strong and transparent price cap

Option 1: Credit Clearance

Year-end Clearance Process



RP's report to ARB year-end credit positions.

ARB determines if a shortage exists & issues a call for excess credits.

RP's with excess credits report to ARB the number of credits (if any) they intend to pledge into credit pool.

ARB calculates and reports to RP's with outstanding deficits their *pro-rata* share of credits.

Private negotiations take place between RP's seeking to sell and acquire clearance credits.

RP's with outstanding deficits submit final compliance report to ARB, after purchasing their *pro-rata* share of clearance credits.

ARB assigns any carry-over deficits to RP's' cumulative compliance accounts, and considers those RP's in compliance for Year A.

Option 1: Credit Clearance

Calculation of Pro-rata Credit Obligation

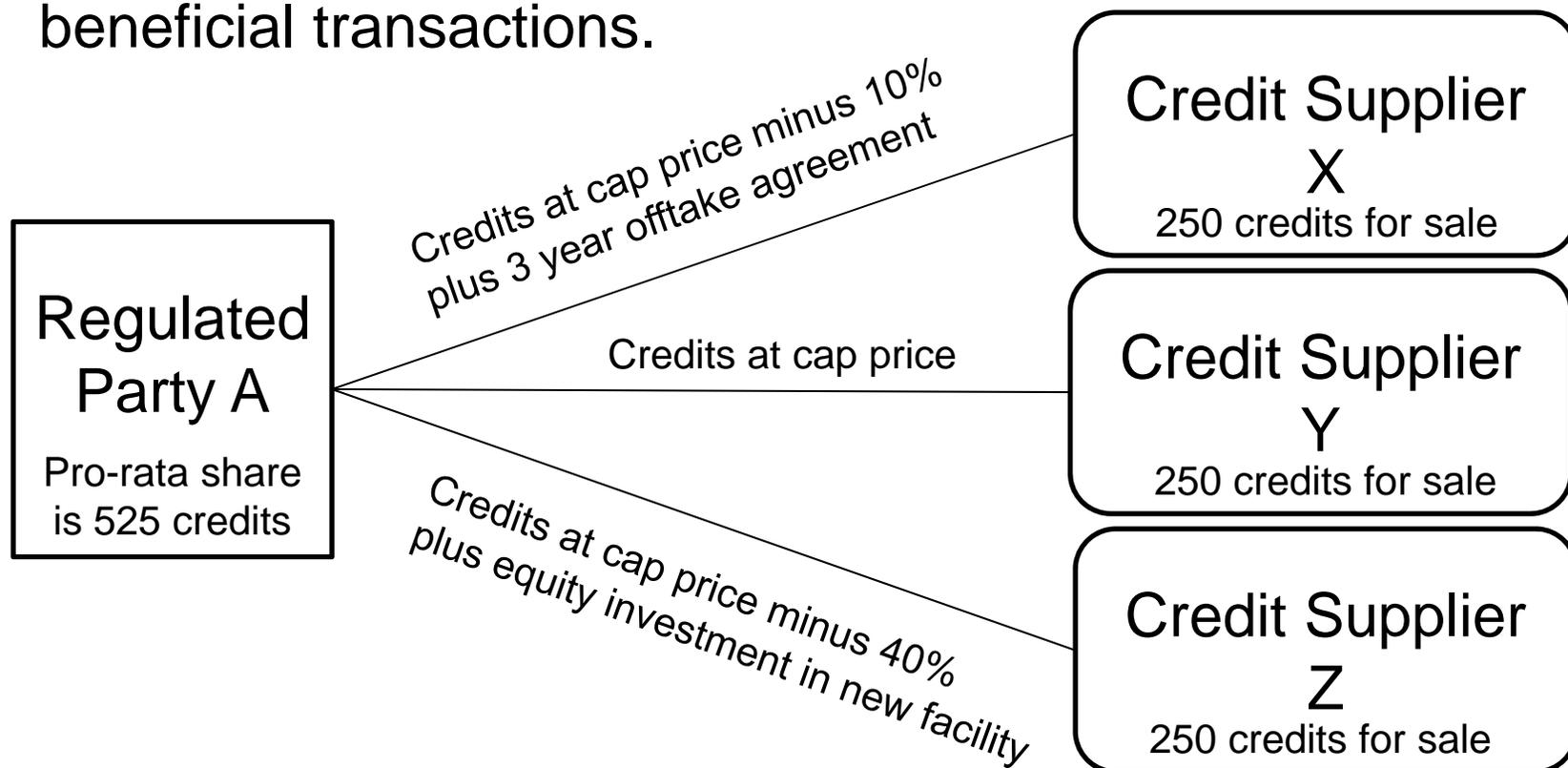
- Example:
 - RPs need 1,000 more credits
 - Three credit suppliers offer 250 credits each to be sold in the credit clearance market (750 total credits available)

Regulated Party	Additional Credits Required	Pro-rata Share of Compliance Shortfall	Credits Purchased via Clearance Process	Debt Carryover
Regulated Party A	700	70%	525 (= 750 * 70%)	175
Regulated Party B	0	0%	0	0
Regulated Party C	300	30%	225 (= 750 * 30%)	75
TOTAL	1,000	--	750	250

Option 1: Credit Clearance

Credit Clearance Transactions

- Provides buyers and sellers flexibility to negotiate mutually beneficial transactions.



- After purchasing its share of clearance market credits, Regulated Party A will have fully complied for the year.

Option 1: Credit Clearance

Benefits to Regulated Parties

Conventional Fuel Suppliers

- Prevents destabilizing increases in credit prices.
- Increases certainty regarding the maximum cost of compliance.
- Enables compliance without having to pay for credits or fuels the market has failed to produce.

Low-Carbon Fuel Suppliers

- Prevents destabilizing increases in credit prices.
- Improves market durability, increasing investor confidence and increasing supplies of low-CI fuels.
- Ensures that producers and investors can more confidently assess the market value for low-CI fuels and credits, stimulating investments.

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Option 2: Credit Window

- Regulated parties with outstanding deficits can purchase and retire compliance-only credits.
 - Improves confidence in the durability of the regulation.
- Compliance-only credits would be offered for sale by ARB at a pre-determined price.
 - Provides a strong and transparent price cap.
- Funds collected from the sale of compliance credits would be distributed to low-CI fuel producers to further incentivize production.

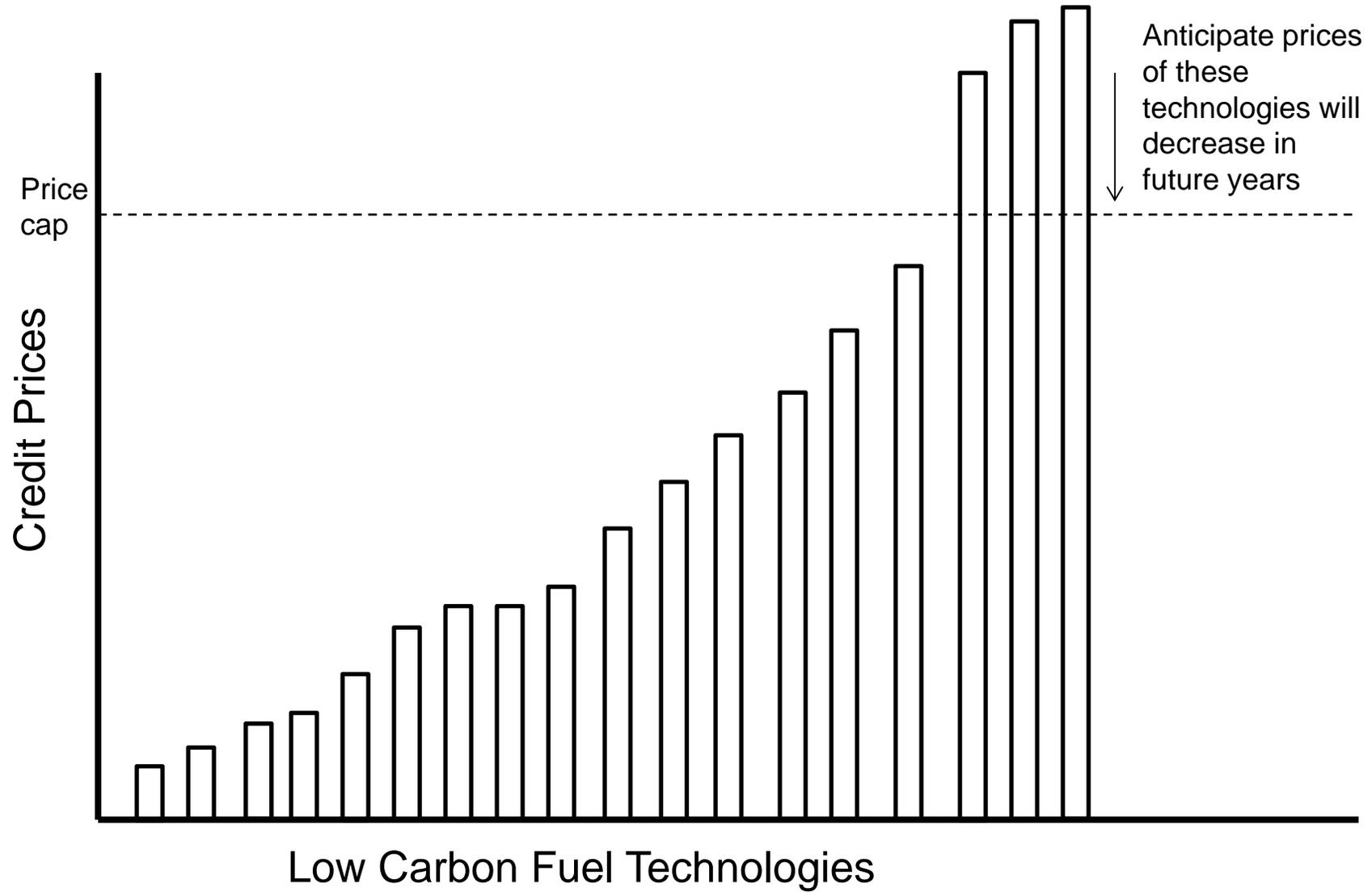
Comparison of the Options

Design Feature	Credit Clearance	Credit Window
CCP credits represent real CI reductions	Yes	No
ARB collects funds	No	Yes
Easy to develop and implement	Yes	No
Establish confidence in credit prices Certainty regarding cost of compliance Recipient of revenues from CCP	Increased Low-CI fuel producers	Increased Uncertain
Preserve Environmental Benefits Extract maximum environmental benefits in the current year LCFS targets are fully met in the long- term	Yes Yes	Uncertain No
Strengthens incentives to produce and invest in low-CI fuels	Yes	Yes

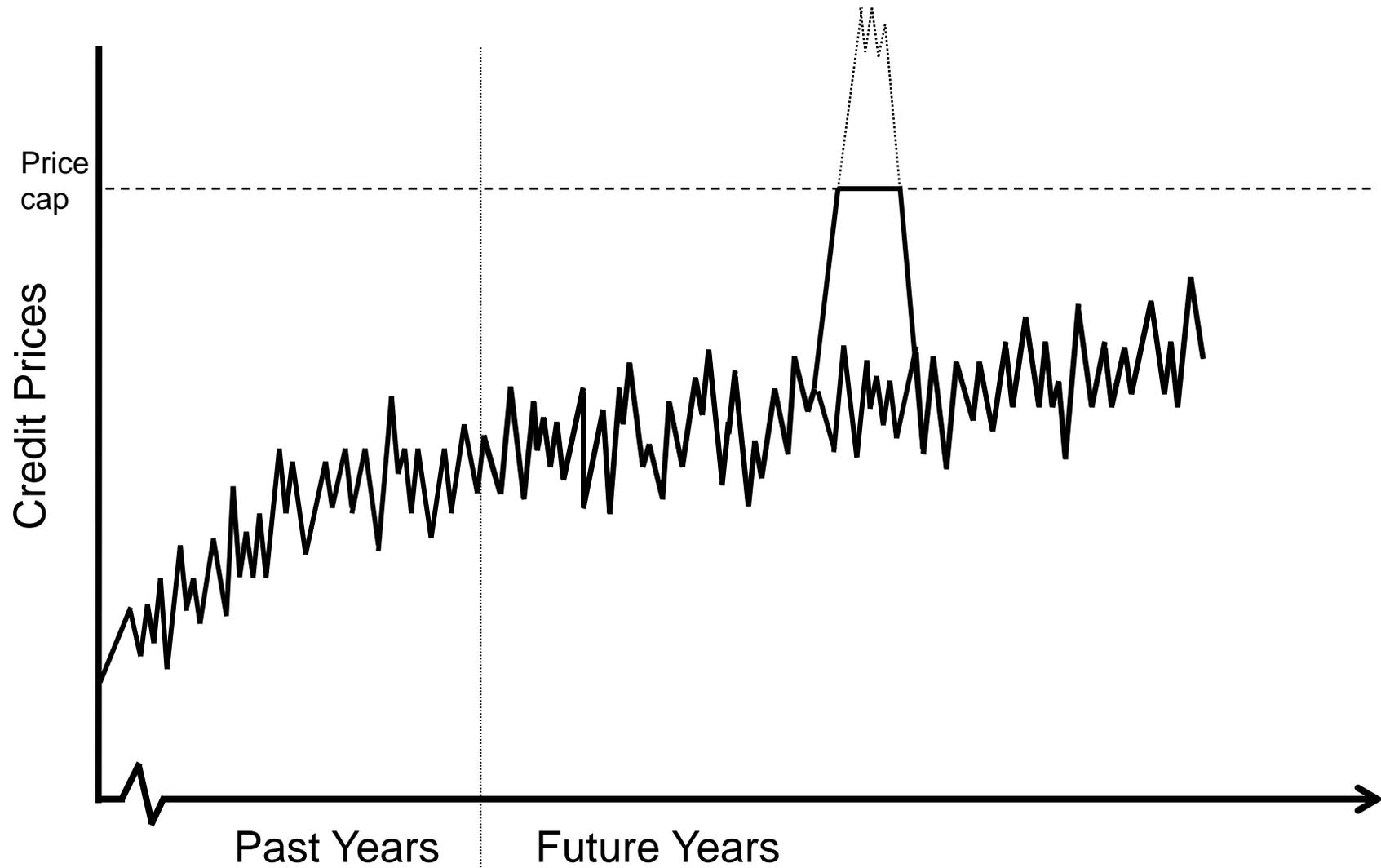
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1. Design of the Cost Containment Provision
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- 2. How to determine a Price Cap**
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Price Cap



Price Cap



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Price Floor

Benefits

- Stimulate investments in low-CI fuels
- Provide a clear market signal regarding the minimum credit price
- Lenders have more confidence in the value of LCFS credits
- Facilitate long-term business planning for low-CI fuel producers.

Potential Drawbacks

- Risk of setting floor at incorrect level:
 - Too high: lost gains from trade
 - Too low: may not deliver intended benefits
- May artificially inflate cost of compliance
 - May not deliver additional environmental benefits

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Summary and Next Steps

- LCFS market is functioning well.
- A cost containment provision can improve market certainty and benefit oil refiners and low-CI fuel producers.
- Next steps:
 - Continue to refine options and share progress in workshops
 - Staff is engaged in an analysis to inform where the price cap should be set

Contact Information

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[**http://www.arb.ca.gov/fuels/lcfs/lcfs.htm**](http://www.arb.ca.gov/fuels/lcfs/lcfs.htm)

Thank You