



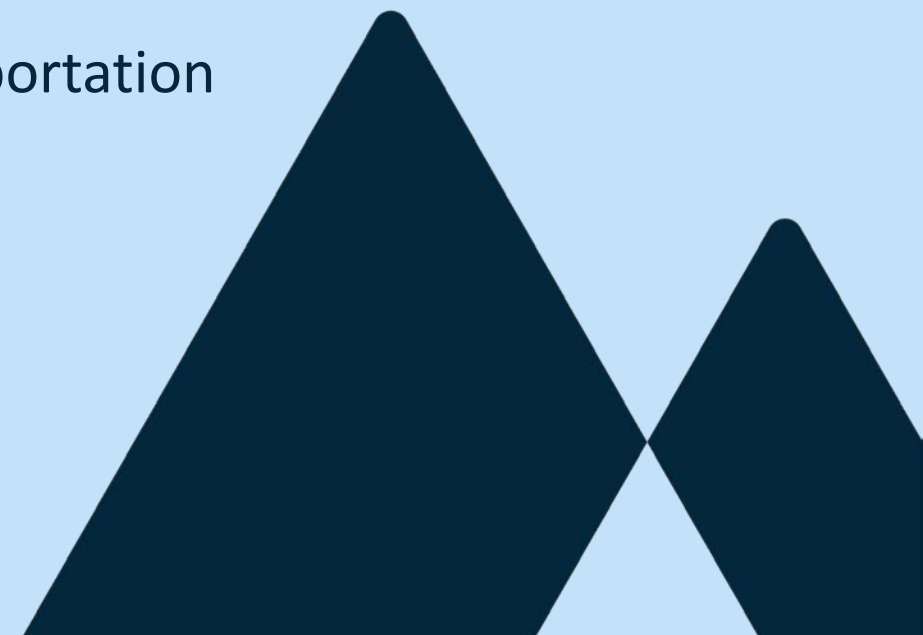
# Options for Managing Costs in Carbon Markets

Transportation and Climate Initiative

Technical Workshop: Regional Cap and Invest for Transportation

Karen Palmer

APRIL 30, 2019



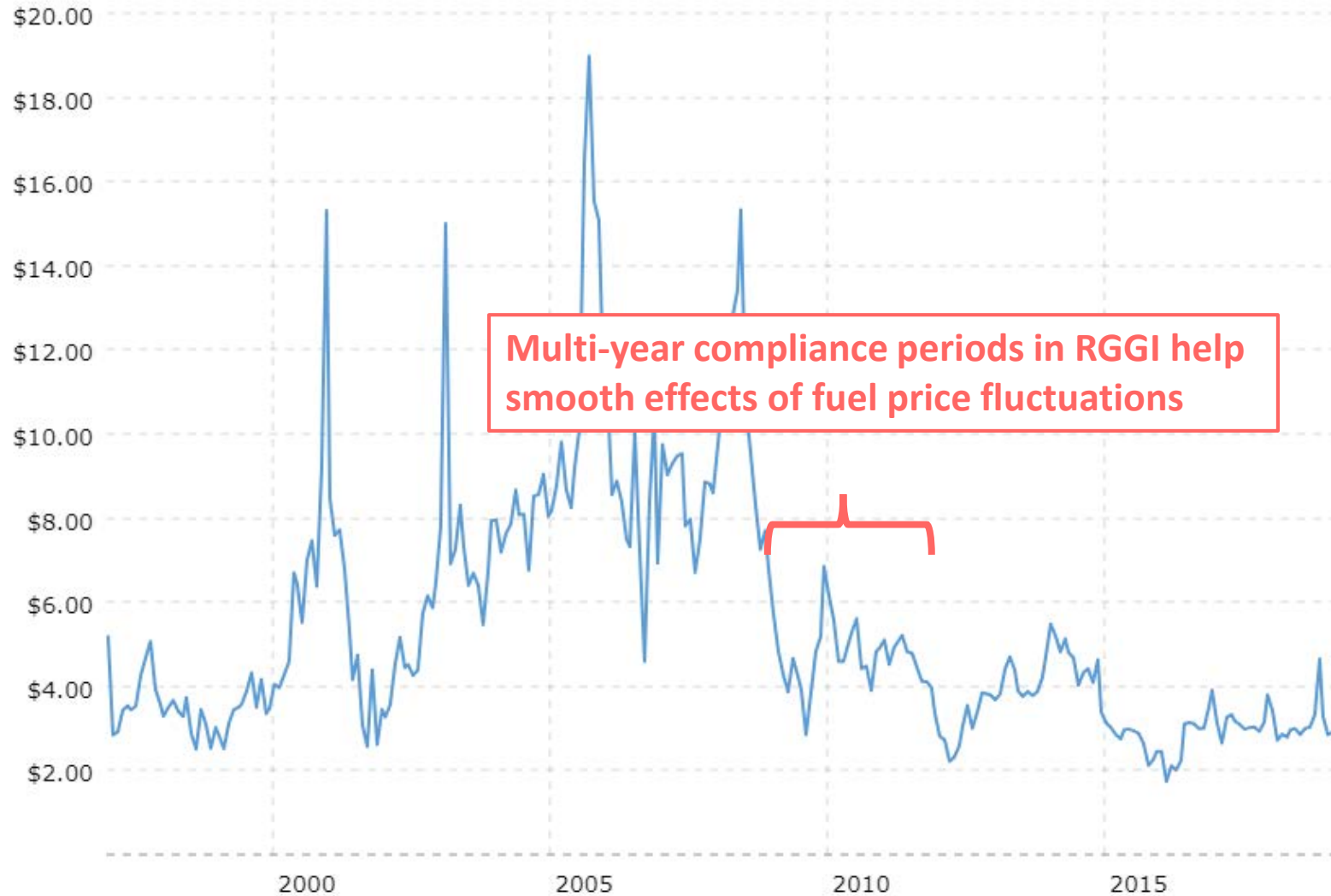
# Uncertainty Abounds....Embrace It

- The energy landscape has many moving parts
  - E.g., weather, fuel prices, economic conditions, technology costs
  - Consequently, costs of climate policy are difficult to predict
  - Very high and very low costs could be problematic
- Flexible Policies (C&T/C&I) can accommodate uncertainties
  - Policy design choices matter for managing costs
- What can we learn from existing carbon markets?
- What is new and different about transportation?



# Natural Gas Price Fluctuations Have Been Large

Source:  
Macrotrends



# European Experience

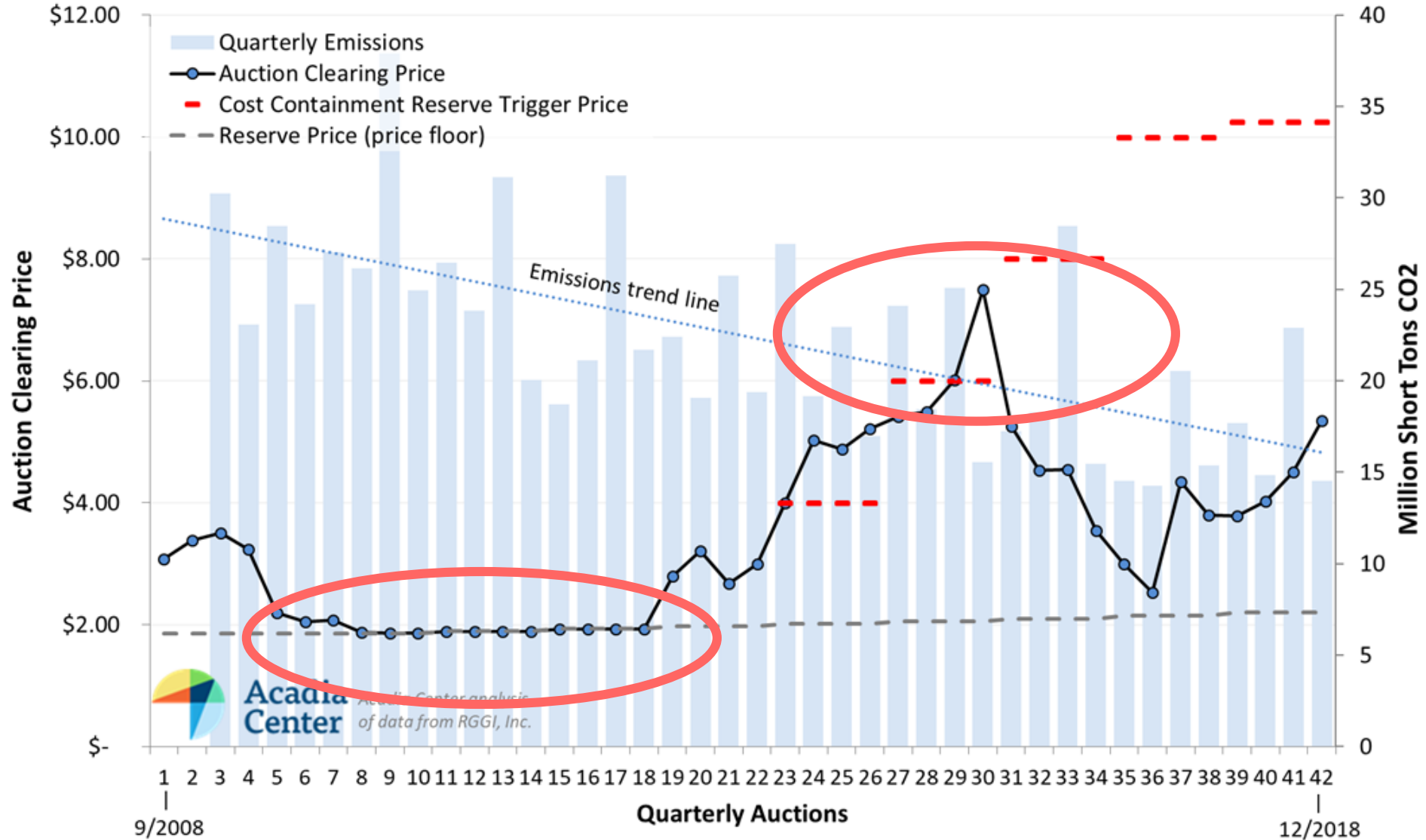
Inability to bank allowances from Phase 1 for use in Phase 2 contributed to price collapse in EU ETS.



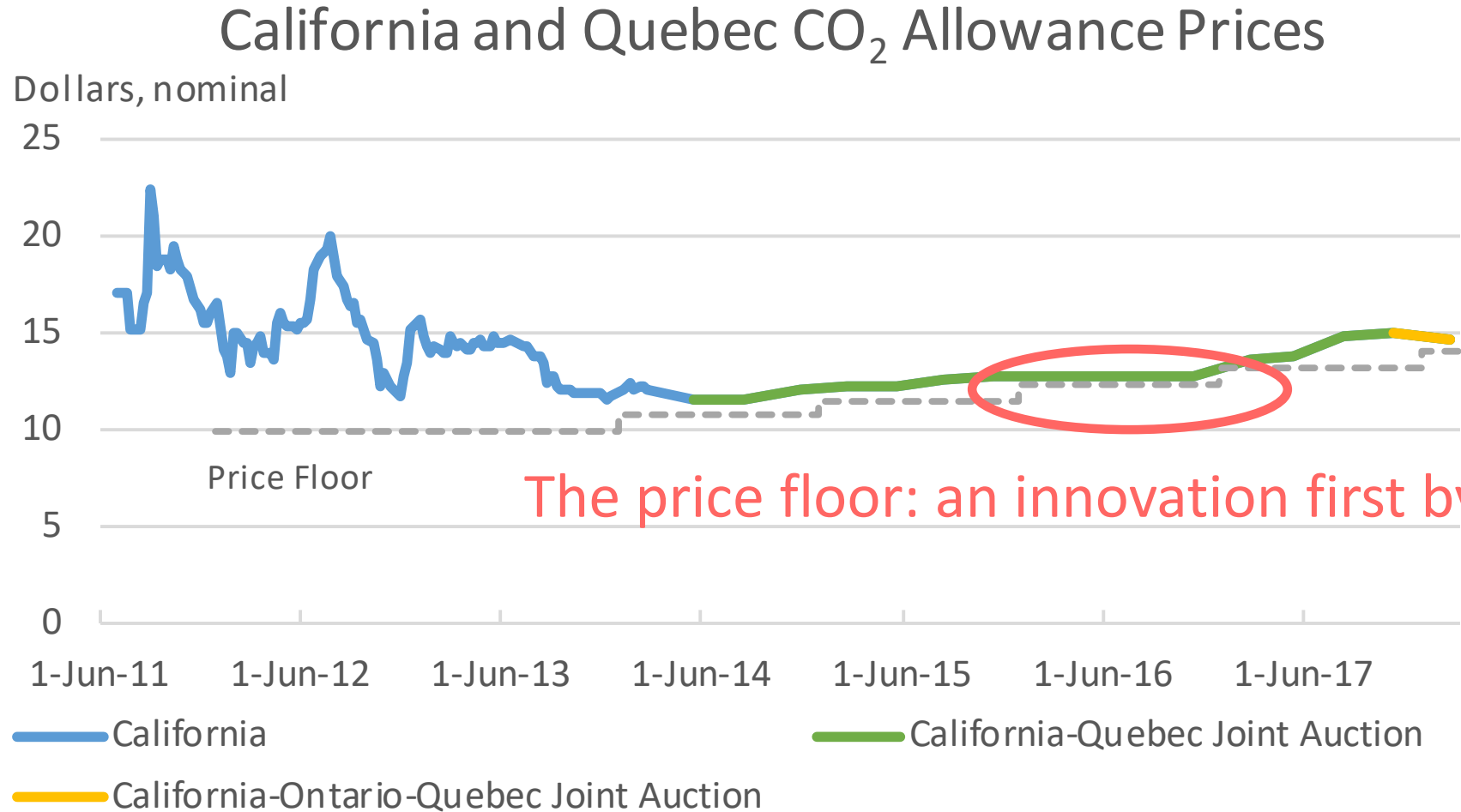
Source: Phases 1 and 2 OTCs spot prices, Thomson Reuters; Phase 3 nearest future contract prices, ICE.



# RGGI's Price Floor Was Crucial



# California and Quebec Allowance Prices

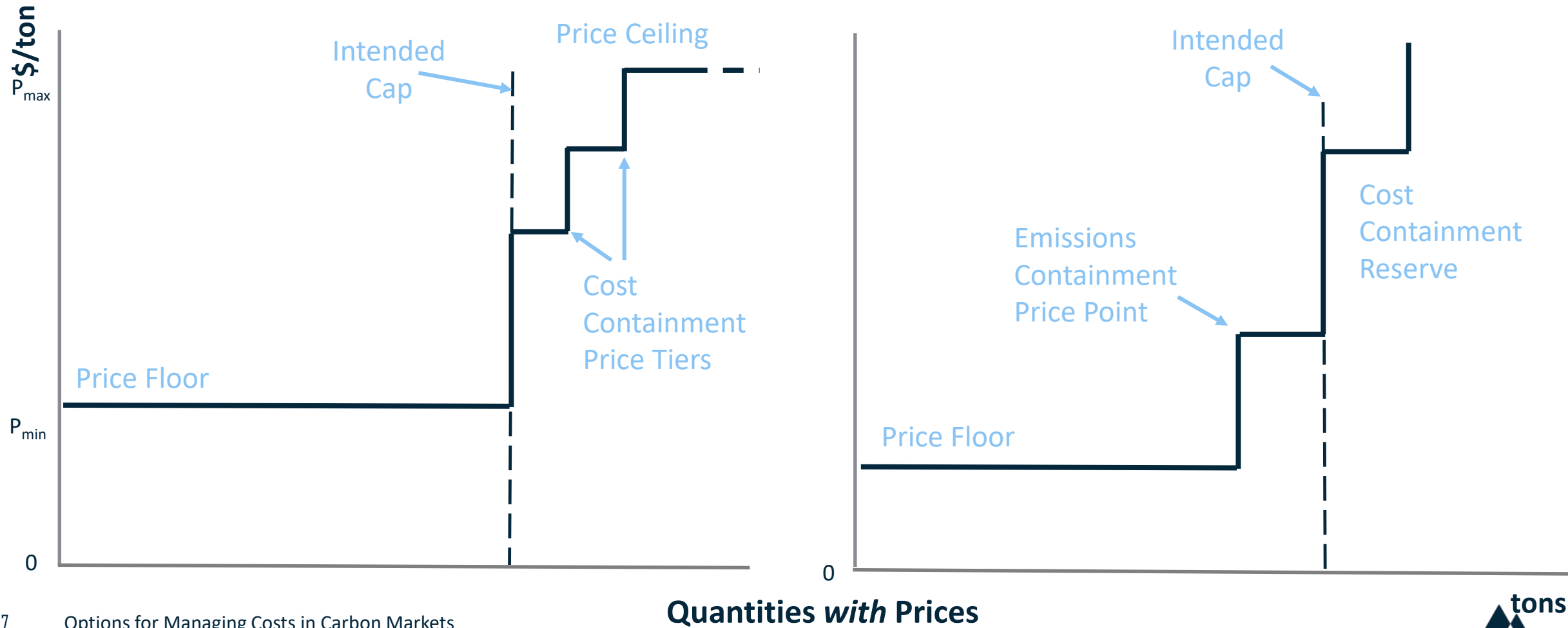


Note: Auction prices are used where market prices are not available.

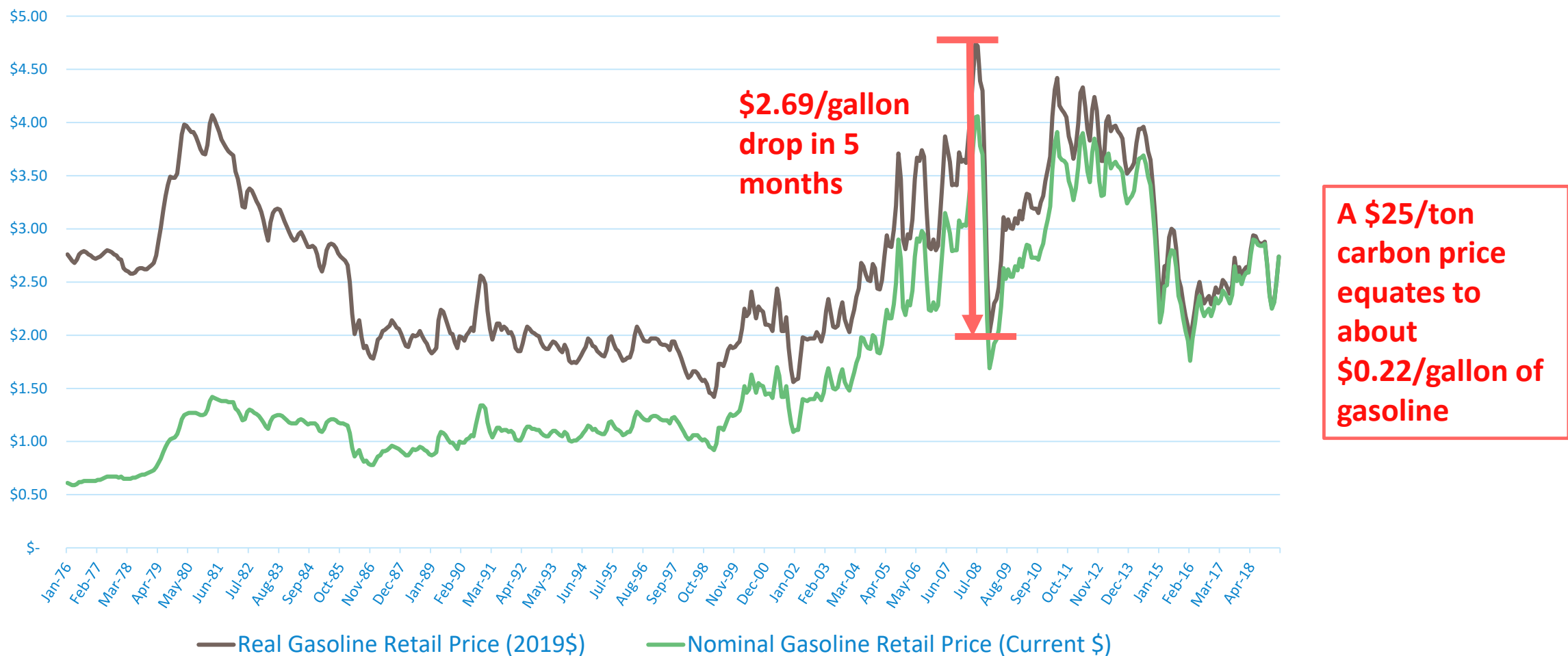
Sources: Thomson Reuters; California ARB; Quebec MDDELCC.



# Supply in N. American Carbon Trading Programs



# Gasoline Prices Fluctuate over Time





# Ways to Manage Costs in Transport C&I

- Multi-year Compliance and Allowance Banking
- Price Responsive Supply
- Expand the Market
  - Link across states
  - Link across sectors (RGGI)
- Offsets
- Investments
  - Reduce VMT by investing in alternatives
  - Reduce emissions through infrastructure and new technologies
  - *Revenue for investments more predictable if costs managed*

**Despite appearances to the contrary, distributing allowances for free is not a way to manage costs to consumers of carbon pricing policy.**





# Thank you.

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