# Offset supply in the California Carbon Market

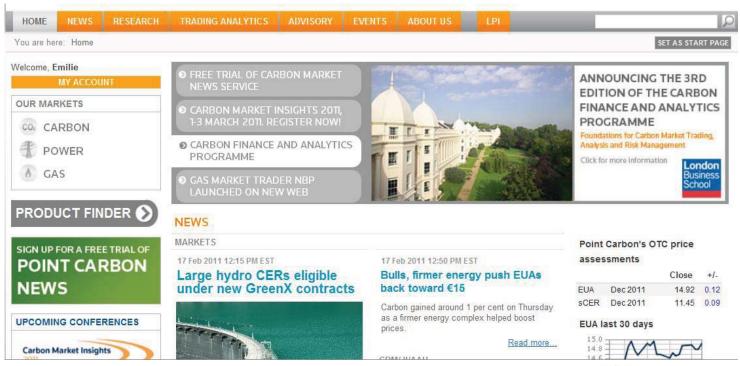
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Olga Chistyakova, Senior Analyst April 7, 2011 EPRI Offset Workshop San Francisco



#### **About Thomson Reuters Point Carbon**

- Leading provider of independent news, analysis and consulting services for power, gas and carbon markets.
- Carbon: News, Research, Offset database, Trading Analytics
- Acquired by Thomson Reuters in June 2010





Offset supply and prices: a model approach



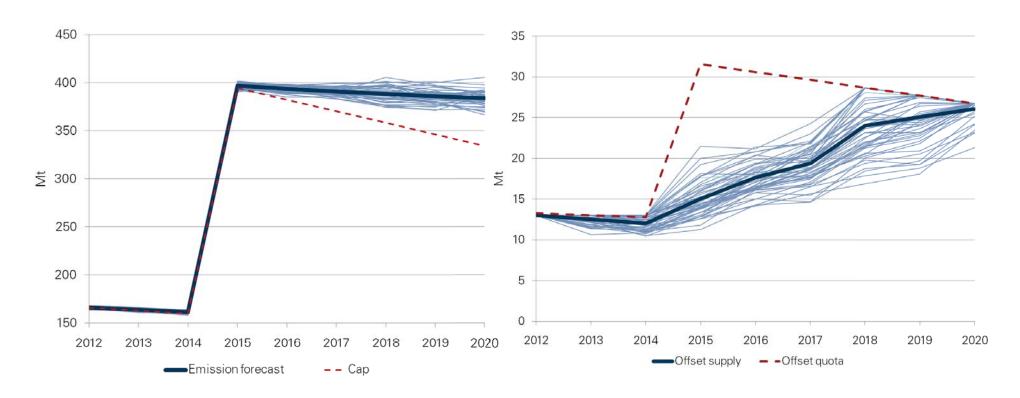
### What will drive the market?

- Market balance
  - What is the Emission-to-Cap (EtC)?
  - How many offsets are available?
    - Can we reduce emissions?



#### Forecasts are uncertain

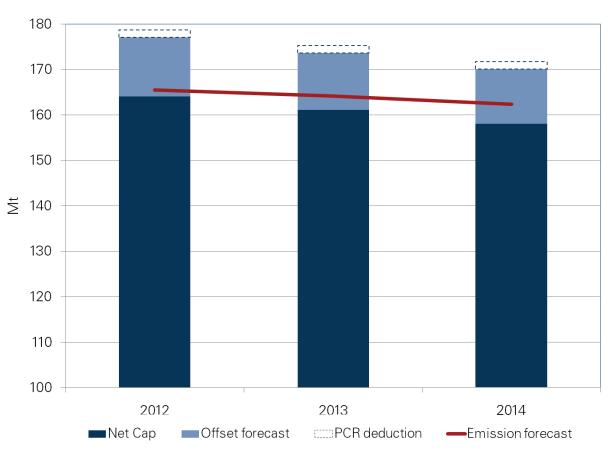
Using Monte-Carlo analysis to study the uncertainty





### First compliance period – not to worry

- Small EtC, can be covered with offsets
- Extra offsets provide cushion, allow facilities to build a private bank
- How much of a bank?
- How much early hedging?

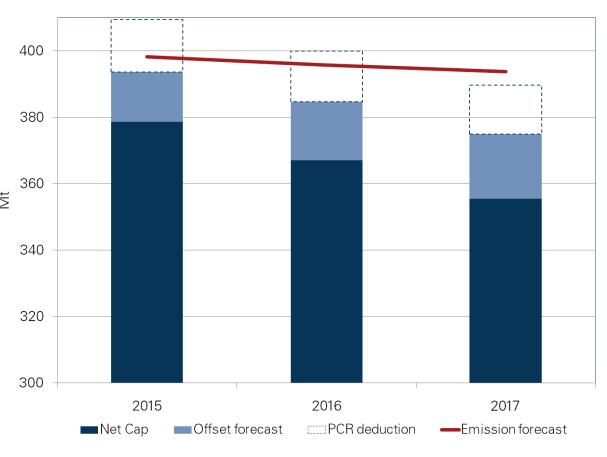




## Second compliance period – heads or tails?

 Greater uncertainty around impact of complementary policies and offset supply

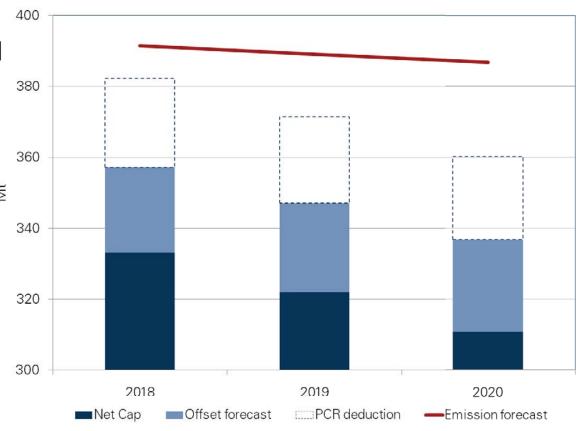
When is bank depleted?<sup>⁵</sup>





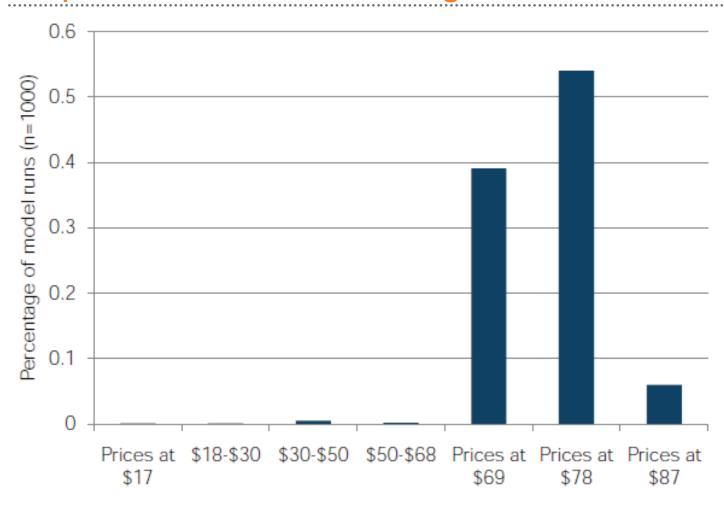
### Third compliance period – short short short

- Amount of abatement required cannot be covered by offsets
  - Unless emissions remain exceptionally low
- Bank depleted in all runs
- Main question is: which tier of the strategic reserve?
  - Will the reserve hold?



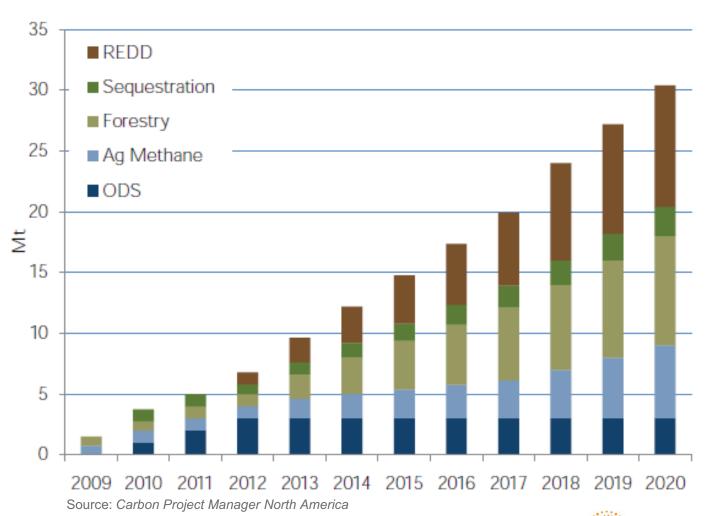


### All prices lead to the ceiling in 2020





## Model: Offset Supply 2012-2020



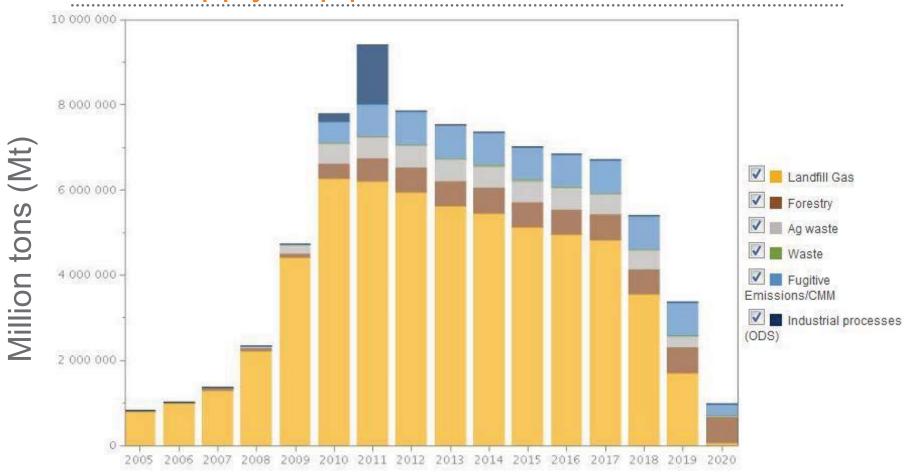
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# Supply and prices: the real deal



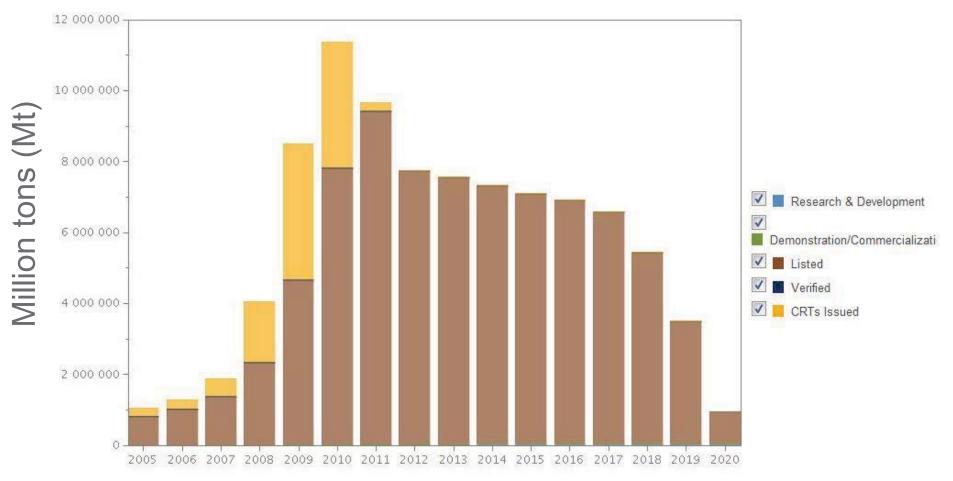


### CAR supply in pipeline: 2005-2020





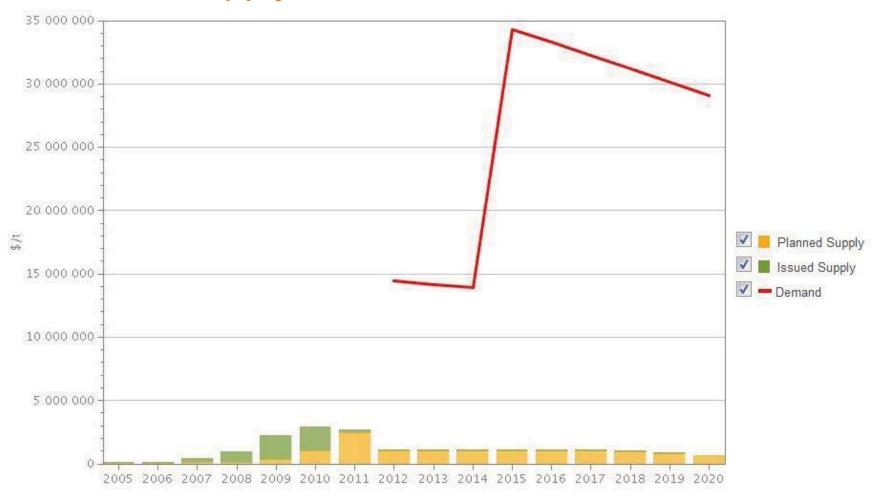
### CAR supply by stages: 2005-2020







### CARB supply vs demand: 2005-2020





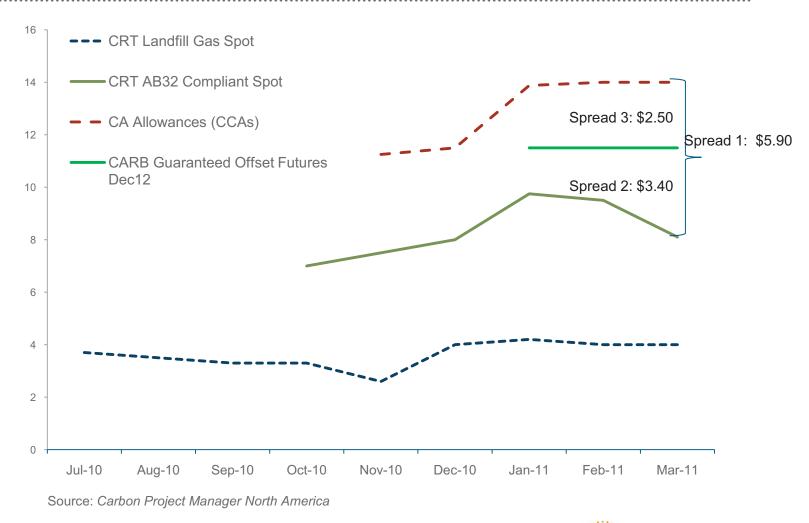


## CAR: time between stages: 2005-now

Time between stages by project type			
	Approval to listed (avg days)		THE RESERVE OF THE PARTY OF THE
Ag waste	49	413	428
Forestry	126	756	777
Fugitive emissions/CMM	21	97	139
Industrial processes (ODS)	43	145	179
Landfill gas	38	310	340
Waste	36	900	
Overall Average	61	323	351



### Market prices: July 2010 - now





# Thank you for your attention!

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