

California's compliance times

14th annual EPA LMOP Conference
Baltimore, Md
January 19, 2011

Olga Chistyakova

Point Carbon: a Market Intelligence Provider

- **Leading provider of News, Analysis and Advisory services to global energy and carbon markets**
- 180+ employees. Oslo (HQ), London, Kiev, Tokyo, Washington DC
- More than 15,000 subscribers in 150 domains

News

Policy

09 Sep 2010 05:59 PM EST

Chile to weigh options for domestic ETS



Chile's energy ministry selected a consultancy to help it decide whether to launch a domestic ETS.

[Read more...](#)

EU ETS



09 Sep 2010 01:00 PM EST

EU ETS could increase CO2 output without tighter supply

The EU ETS could become a hindrance unless the bloc lowers its cap, a new report said.

[Read more...](#)

International policy



09 Sep 2010 04:54 PM EST

US union challenges China over clean tech at WTO

A US labour union has charged China with cheating international law to boost its clean energy sector...

[Read more...](#)

Thomson Reuters has acquired Point Carbon AS
[Click here to read more](#)

Carbon Trading for Aviation
September 20 - September 21, 2010. Geneva, Switzerland
Be ready for the 2012 EU Aviation Carbon Trading Scheme!
Email us for registration & info: training_ymq@iata.org

Launch of NEW WEB Power Market Trader EEX & Nord Pool
[Click here for more info](#)

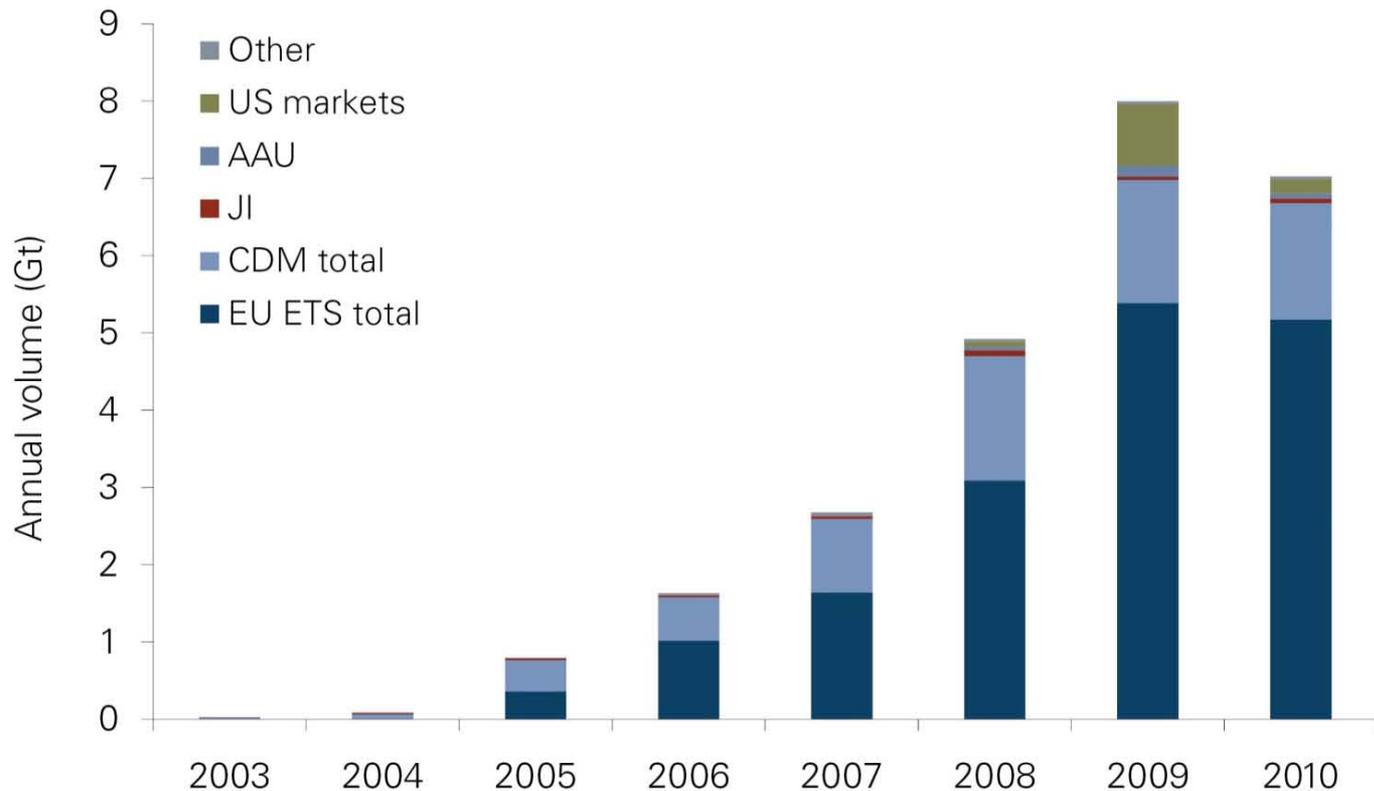
Carbon 2010 - free
Carbon 2010 - free download

- News
- Conferences
- Training courses
- Advisory services
- Trading Analytics & Research
- Comprehensive data on carbon and energy markets

Global carbon market growth

Expansion, then retrenchment

Annual transaction volume in global greenhouse gas emission markets, 2003-10.



Source: Point Carbon

Table 3: 2009 US offset market volumes and values

		Volumes (Mt CO ₂ e)	Value (\$M)
Exchange based	CCX CFIs	6.4	\$5.8
	CAR	0.8	\$4.0
	Subtotal	7.2	\$9.8
OTC and bilateral markets	CAR	7.2	\$48.2
	VCS	2.1	\$9.7
	ACR	1.8	\$3.5
	Other	1.1	\$2.4
	Subtotal	12.2	\$63.8
Total		19.4	\$73.6

Sources: Carbon Project Manager North America, CCX, CCFE

- Low volumes and low prices
- CAR was the largest segment of the market

Table 8: Pre-compliance versus voluntary in 2009

		2009 Pre-compliance		2009 Voluntary	
		Volumes (Mt CO ₂ e)	Market value (\$M)	Volumes (Mt CO ₂ e)	Market value (\$M)
Exchange based	CCX: CFI Contracts	3.8	\$3.5	2.6	\$2.3
	CAR: CRT Contracts	0.6	\$3.0	0.2	\$1.0
	Subtotal	4.5	\$6.4	2.8	\$3.3
OTC and bilateral markets	CAR	5.3	\$35.7	1.9	\$12.5
	VCS	0.9	\$4.1	1.2	\$5.6
	ACR	0.4	\$0.9	1.3	\$2.7
	Other	0.2	\$0.5	0.9	\$1.9
	Subtotal	6.9	\$41.2	5.3	\$22.6
Total		11.3	\$47.6	8.1	\$26.0

Source: Carbon Project Manager North America, survey

- Pre-compliance overall made up close to 2/3 of the traded US Market
- CAR was pre-compliance driven

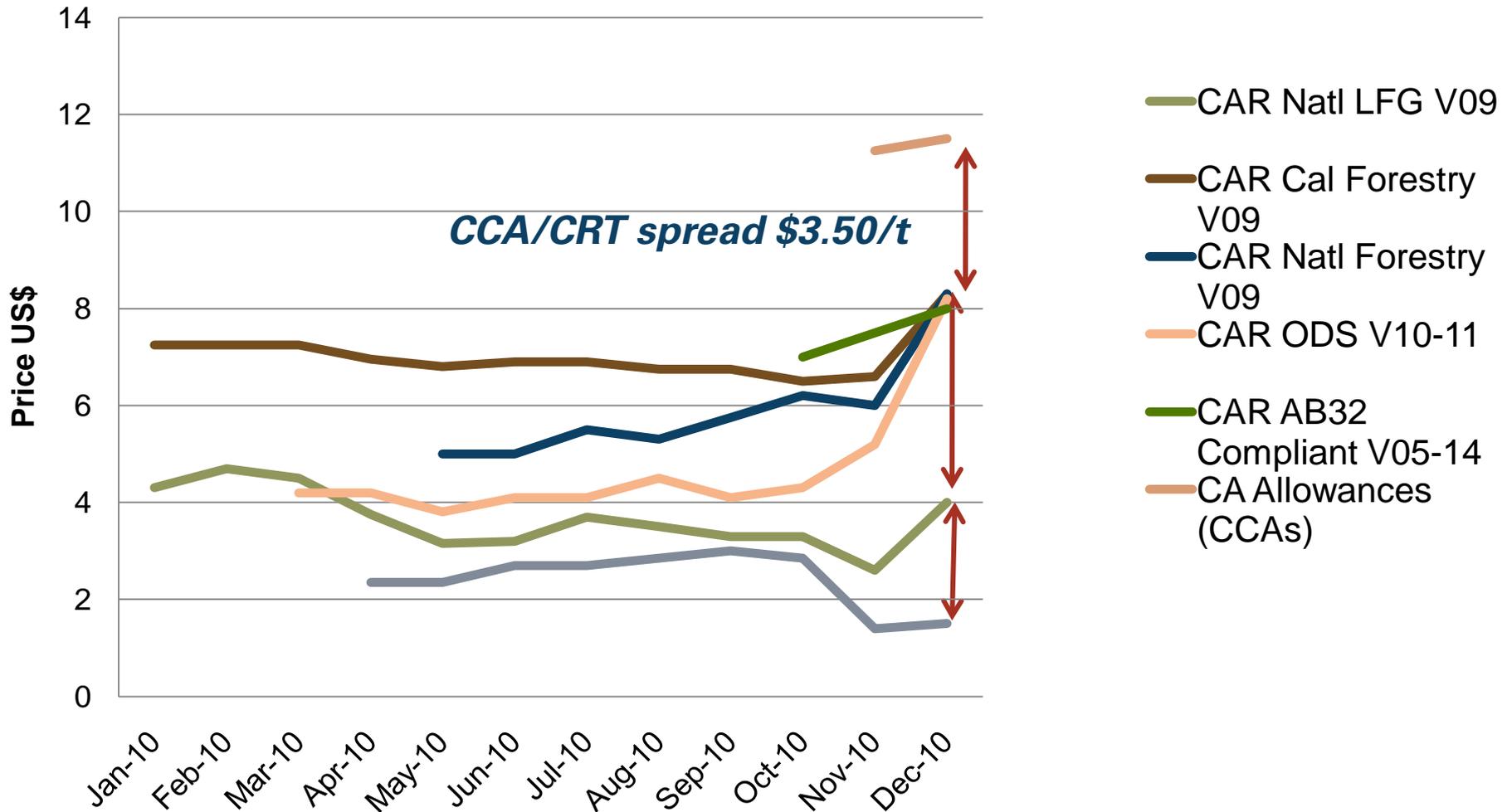
California offsets: the basics

- 2012-2020: 8% of entity's emissions per year
 - 214 million tons CO₂e from US-based projects
 - recommends Mexico (non-ODS), Canada for later
- 4 domestic project types
 - U.S. ozone depleting substances
 - Urban forest (forest buffer account)
 - U.S. forest (creation of forest buffer account)
 - Livestock manure (digesters)
- Potential international sources: Sectoral credits (TBD)
 - Requires approval by ARB
 - REDD by 2015, first sectors from existing partnerships with Acre, Brazil & Chiapas, Mexico
 - 20% of 214 Mt in phase 1 and 2, 40% in phase 3
- Projects start date: Jan 1, 2007 (may differ for non-ARB issued credits)

California offsets: early action

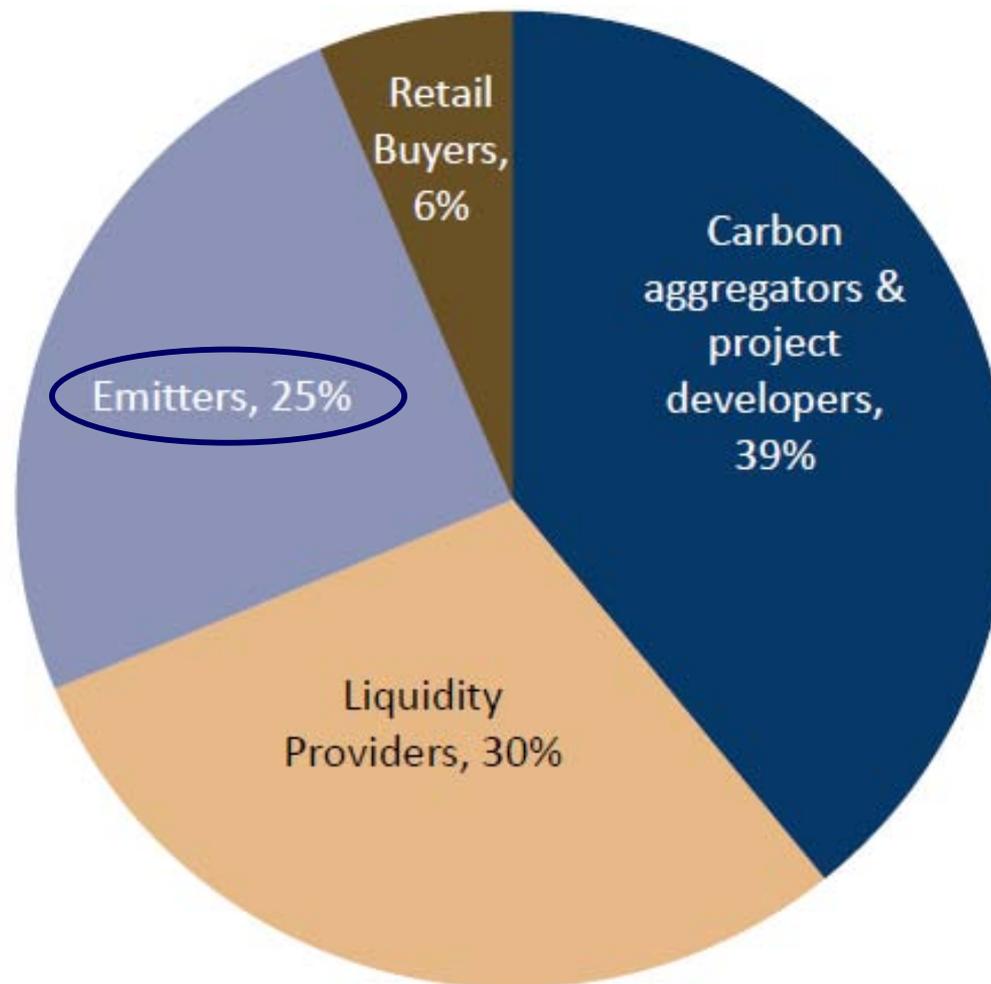
- Jan 1, 2005 - Dec 31, 2014
- Project start date: prior to Jan 1, 2012
- 4 project types from U.S. based projected
 - U.S. ozone depleting substances (CAR Ver. 1.0)
 - Urban forest (forest buffer account) (CAR Ver. 1.0-1.1)
 - U.S. forest (CAR 2.1 or 3.0-3.2)
 - Livestock manure (digesters) (CAR Ver 1.0-3.0)

NA offset price changes in 2010



Prices shown represent average bid/offer and do not imply transactions.

Who is buying US offsets?

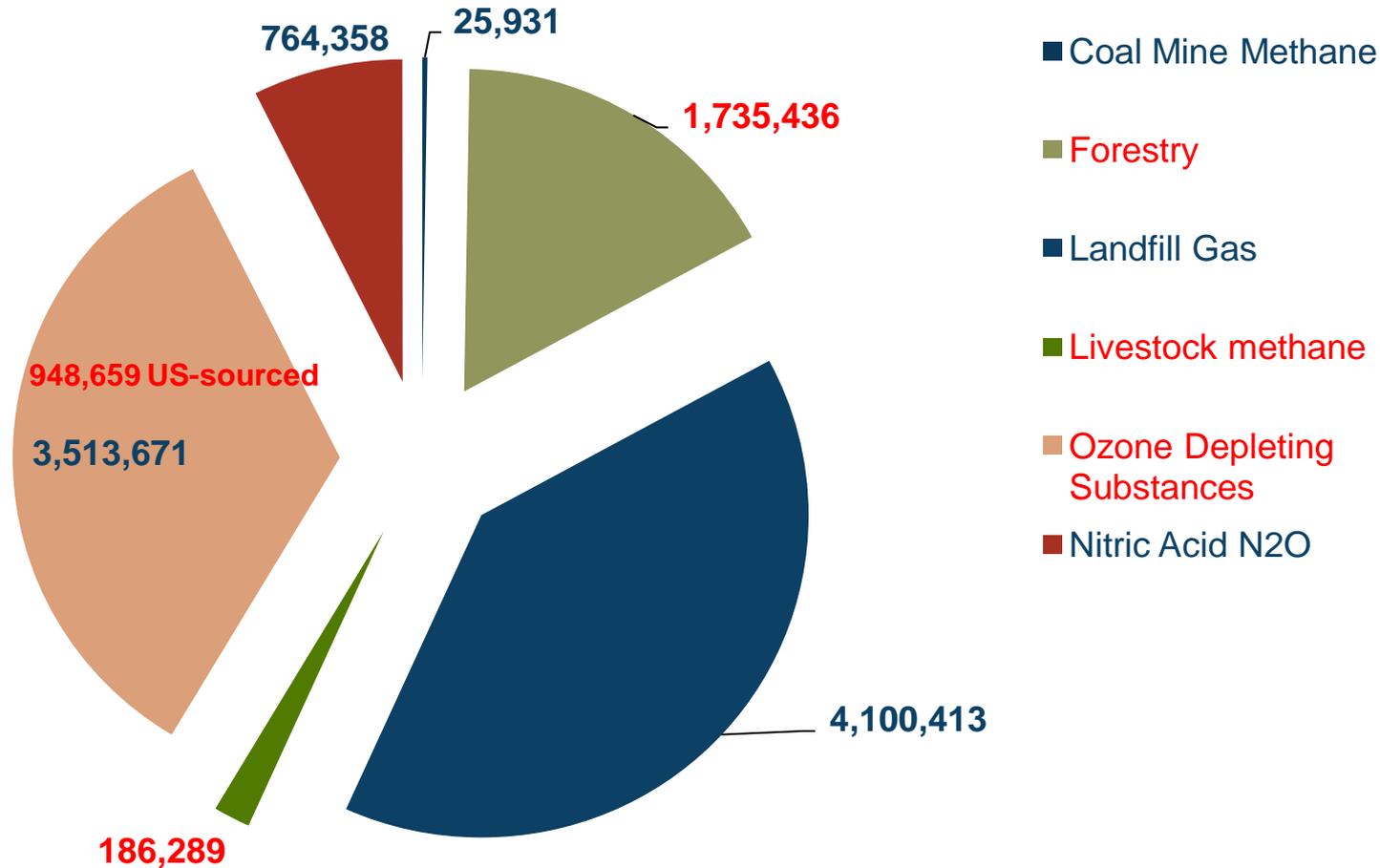


Source: Point Carbon Survey

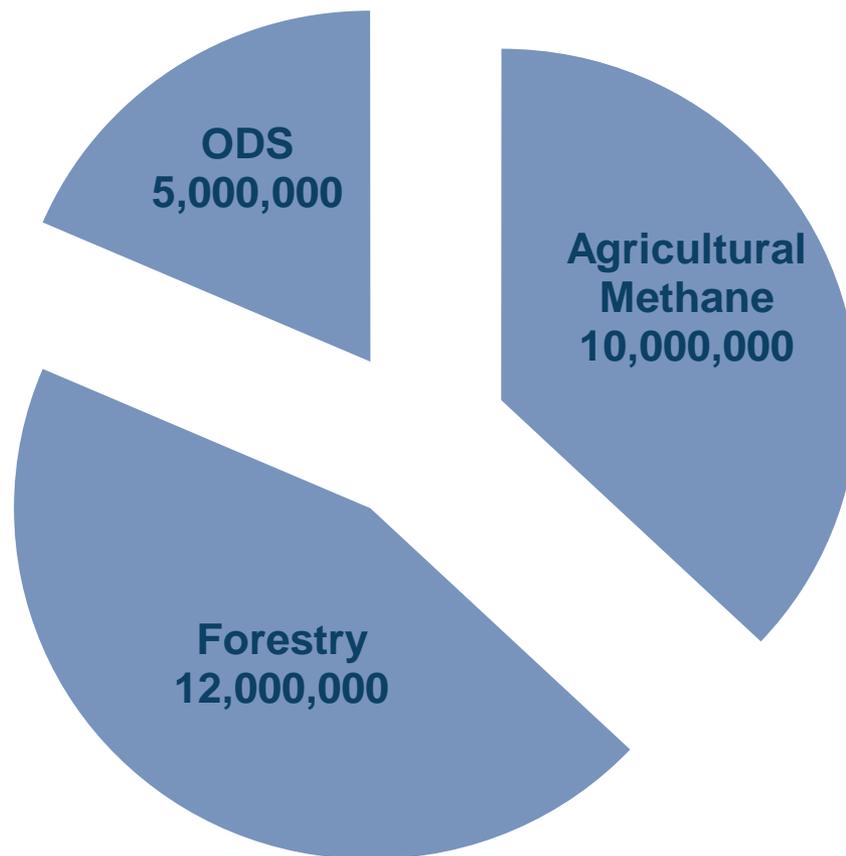
Emitters (utilities, industrials) have yet to fully enter the market

Issued CRTs to date: 10.3 Mt

Issued CA eligible CRTs: 2.8 Mt

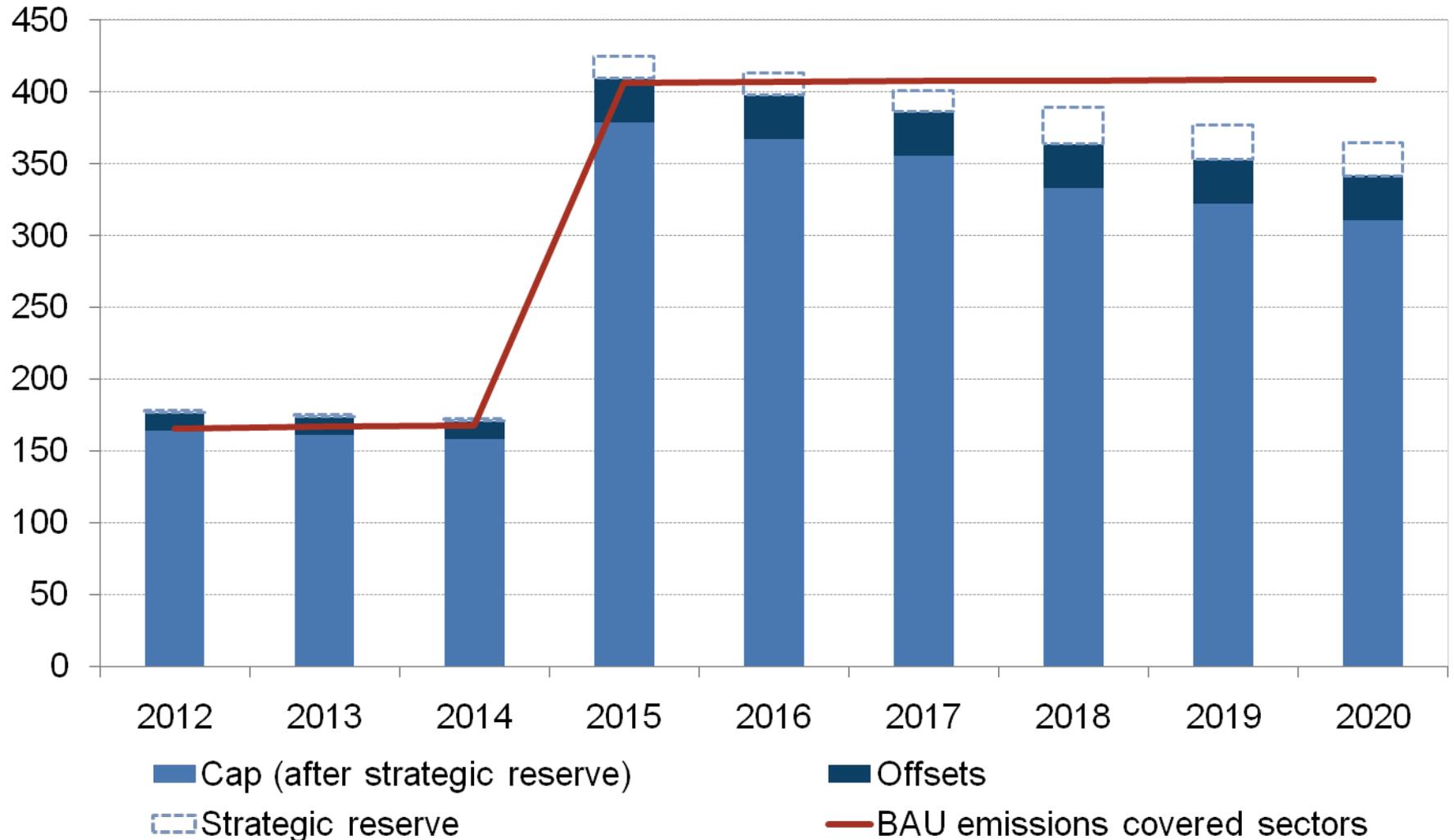


2005 – 2014 CRT Supply



**Total: 27 million CRTs
(significant ODS supply potential untapped)**

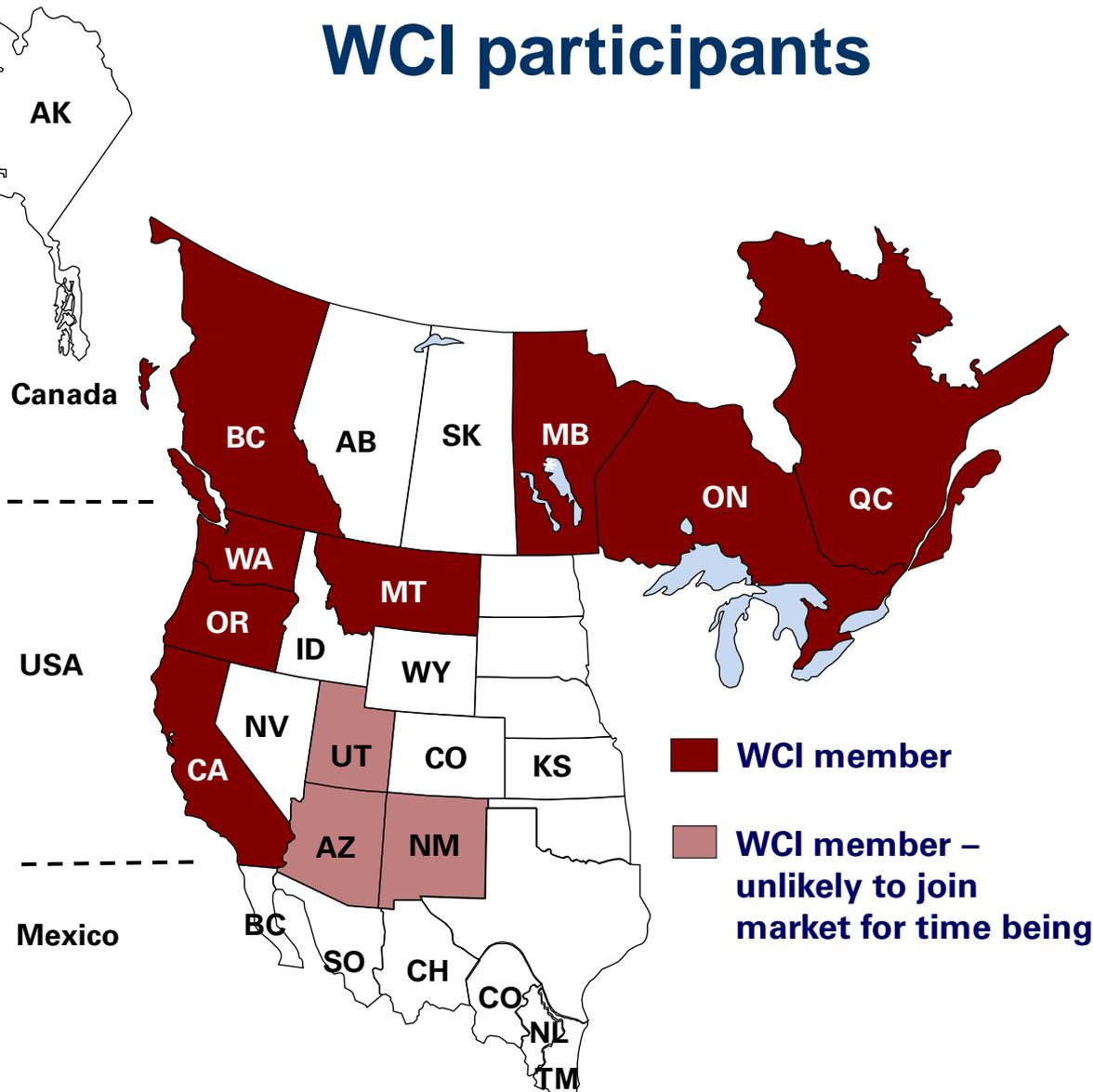
CA strategic reserve tightens cap post-2015



Fair Price Assessment: California

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Price	\$10	\$11	\$11	\$13	\$19	\$30	\$47	\$64	\$82

WCI participants



Market participants Round 1 (2012 start)

British Columbia (BC)
California (CA)
New Mexico (NM)
Ontario (ON)
Quebec (QC)

Round 2 (2015 start)

Oregon (OR)
Washington (WA)
Manitoba (MB)
Montana (MT)

Other WCI participants:

Arizona (AZ)
Utah (UT)

Conclusions

- CRT-based offset supply not sufficient
- Additional protocols to be announced in February will aim to provide necessary supply
- Voluntary markets can provide carbon revenue at \$1.50-\$3.00/t
- Allowance price to range between \$10-82 from 2012-2020
 - Offset prices to create trade at a spread

Thank You!

Olga.chistyakova@thomsonreuters.com

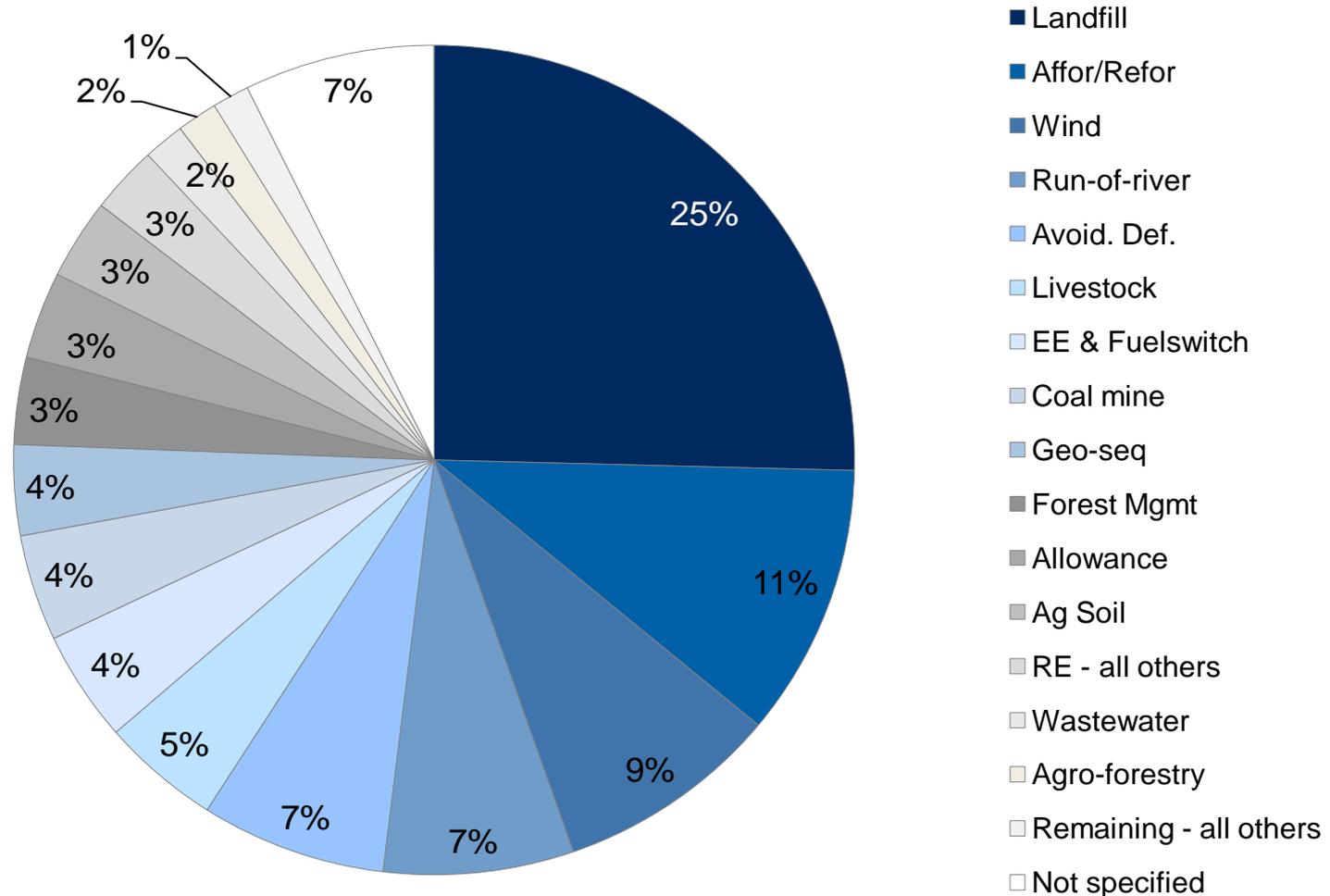
202-289-3930 ext. 269

**On behalf of
Molly Peters-Stanley
Ecosystem Marketplace**

+1-202-298-3005

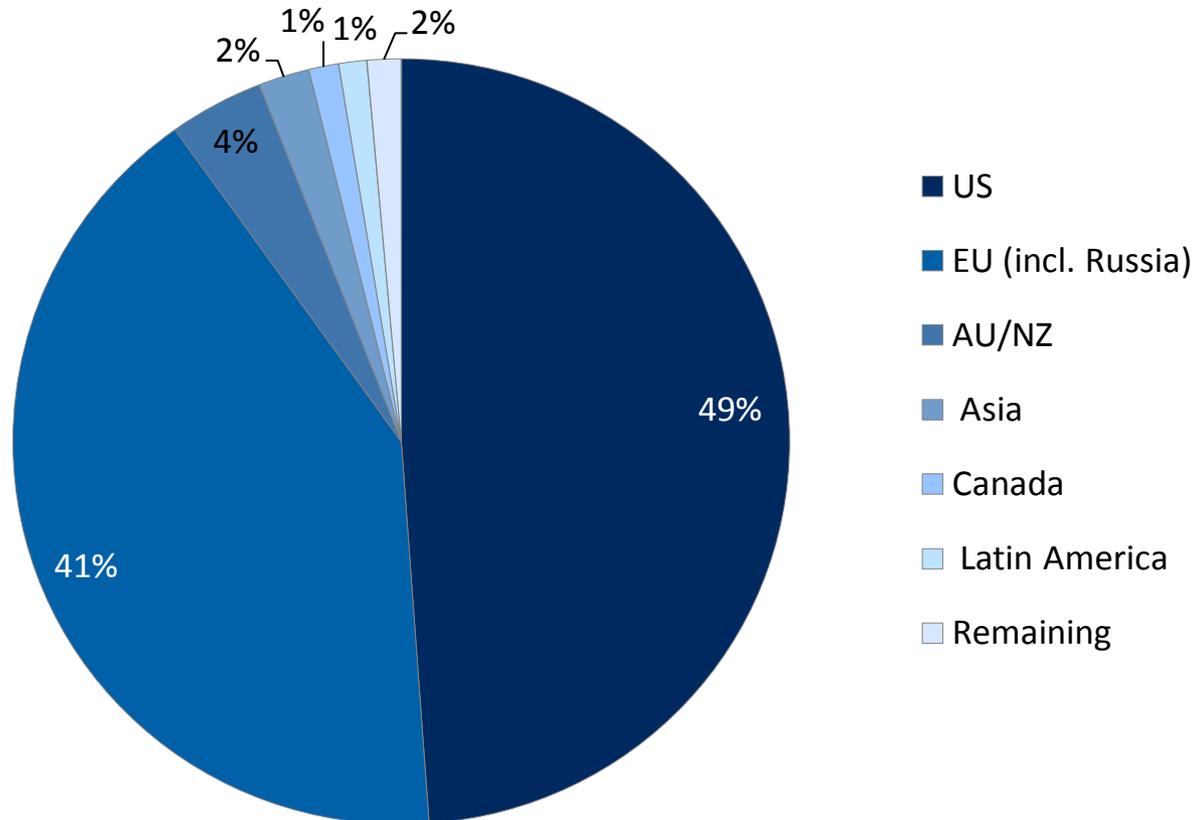
mpeters-stanley@ecosystemmarketplace.com

Non pre-compliance, LFG credits purchases are King



Source: "State of the Voluntary Carbon Markets 2010", Ecosystem Marketplace

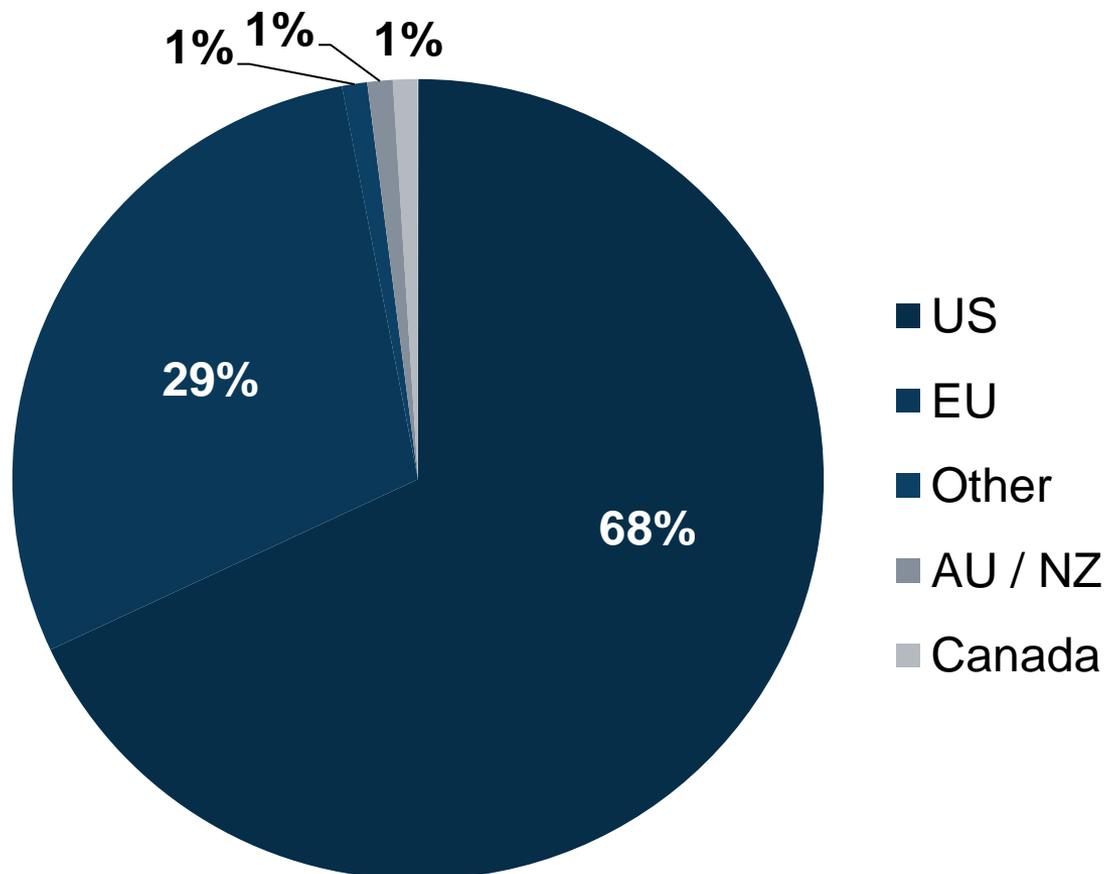
U.S. leads in pre-compliance offset purchases



Source: "State of the Voluntary Carbon Markets 2010", Ecosystem Marketplace

Discounting for Pre-compliance, US leads in LFG credit purchases

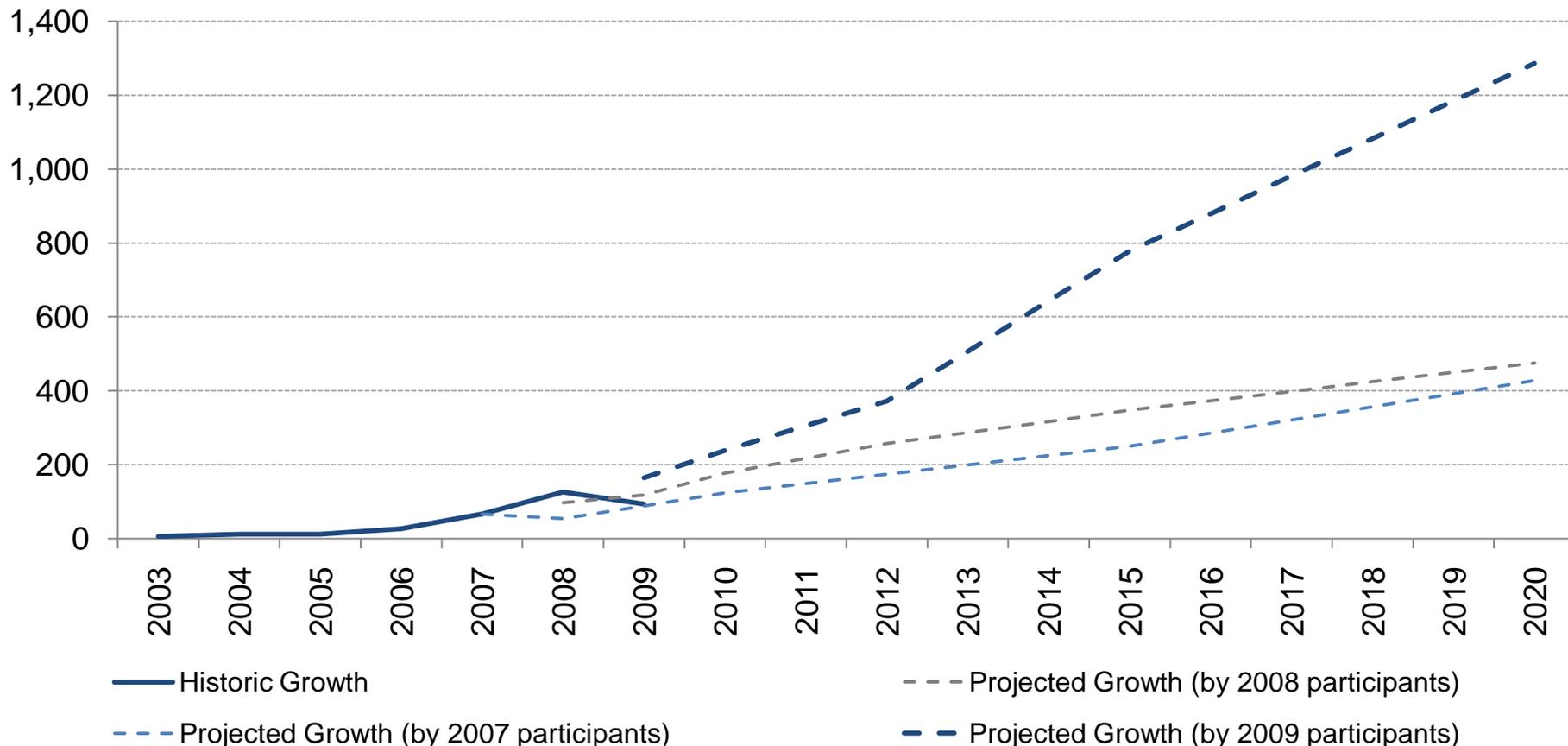
Customer Location, % of 10.2 MtCO₂



Source: "State of the Voluntary Carbon Markets 2010", Ecosystem Marketplace

Discounting for Pre-compliance, US leads in LFG credit purchases

Projected Market Growth for the Voluntary Carbon Markets, according to Participants



Source: "State of the Voluntary Carbon Markets 2010", Ecosystem Marketplace