

Managing Risk in California's Carbon Market:

Overview and Trading Activity

**Prepared By:
Lenny Hochschild
Evolution Markets, Inc.**

California Cap in million mtCo2e



Compliance Period I (2013 - 2014)

2013: 162.8

2014: 159.7

(CP I offsets max demand: 25.8M)

Compliance Period II (2015 – 2017)*

2015: 394.5

2016: 382.4

2017: 370.4

(CP II offsets max demand: 91.8M)

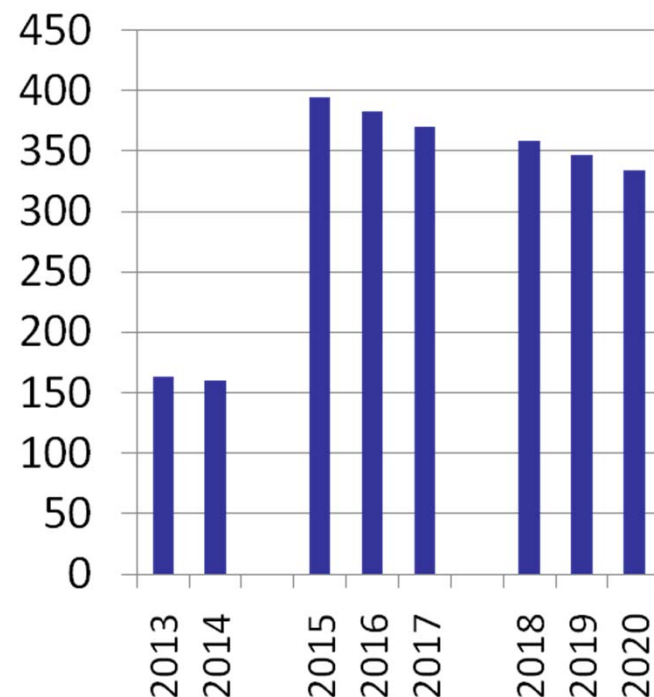
Compliance Period III (2018 – 2020)

2018: 358.3

2019: 346.3

2020: 334.0

(CP III offsets max demand: 83.1M)



Total approximate Allowances from 2013 – 2020: **2.5 billion**

Total max offsets demand through 2020: **201 million** (8% of compliance obligation)

* **Transportation sector emissions added to the cap**



Early Action Credits



- **Golden CCO's – The solution to Buyers Liability**
- **CCO(3) – Primary vs. Secondary**
- **CCO(8) – Primary vs. Secondary**
- **Early Action Credit CRTs (Forestry, Livestock, US ODS)**
- **Non Early Action Credit CRTs or Other such as REDD**

Future California Offsets?

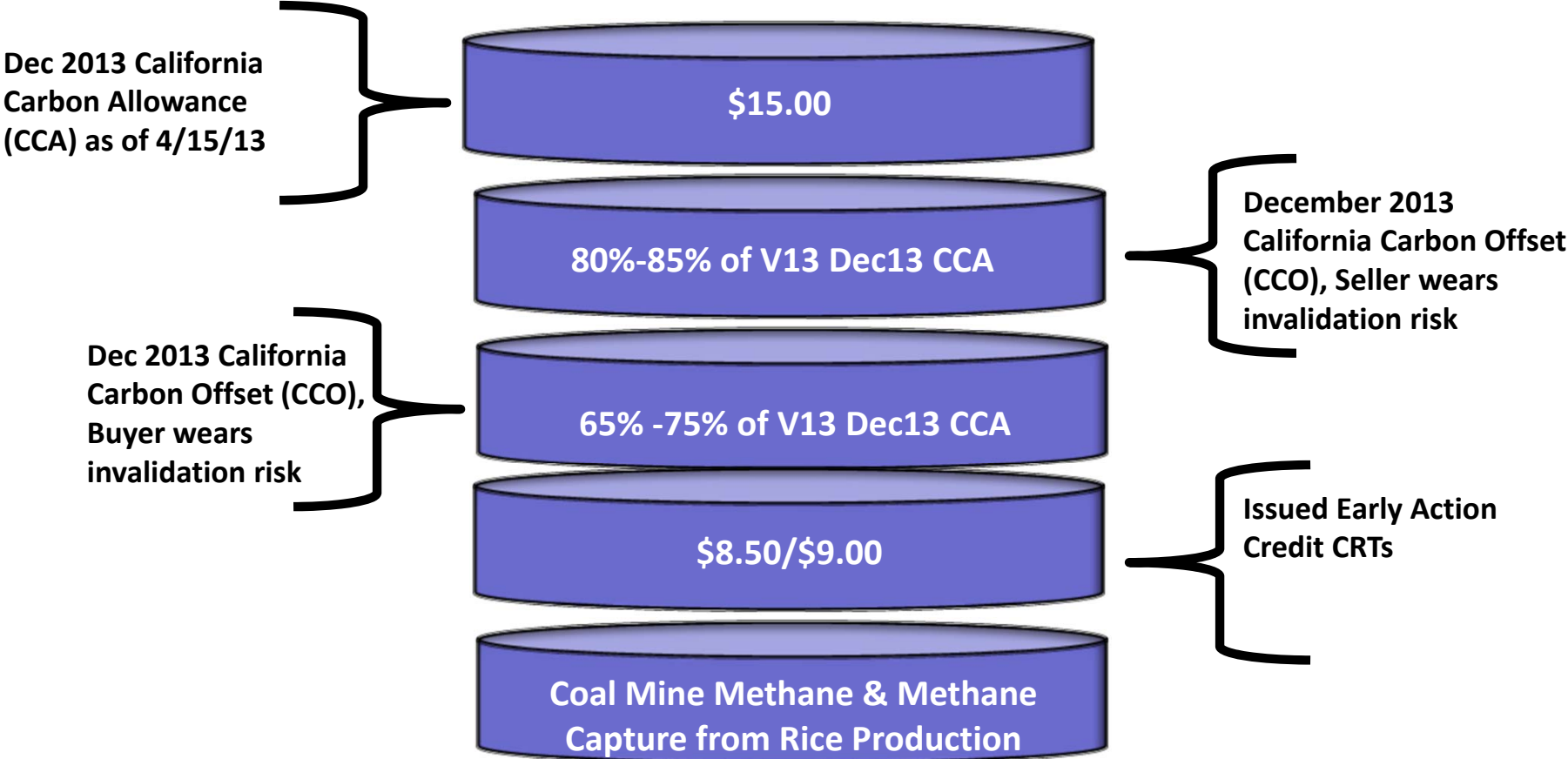


- **CMM** (CARB Study: 50MM / Developers: 30MM)
- **Methane Capture from Rice Production**
(CARB/Developers: 3MM)
- **REDD** (volume: too many unknowns)
- **Others (MX ODS, Nutrient management etc...)**

Compliance & Pre-Compliance Products



Note: all prices are indicative based on current market/regulatory conditions and are subject to change.



DEMAND VS. SUPPLY BASE CASE

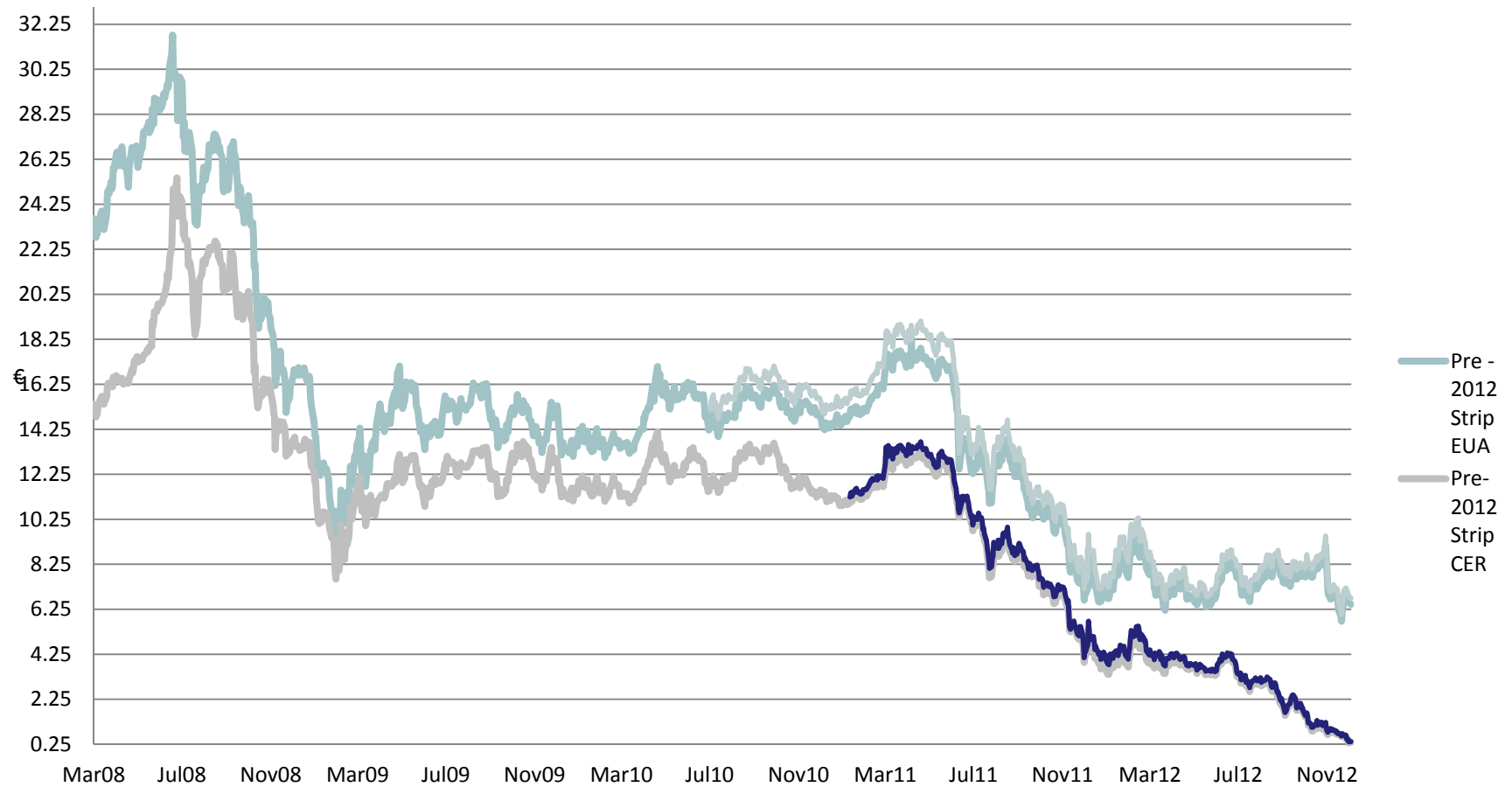


| CAPPED EMISSIONS | 2011 | 2012 | 2013 | 2014 | 2015 |
|--------------------------------------|--------------------|------|----------------------|----------------------|----------------------|
| CEMENT | 6,221,404 | | | | |
| IN STATE ELECTRCITY | 34,921,146 | | | | |
| COGENERATION | 9,622,361 | | | | |
| GENERAL COMBUSION | 12,587,386 | | | | |
| REFINERY & HYDROGEN | 35,132,812 | | | | |
| OIL & GAS PRODUCTION | 12,559,822 | | | | |
| SUB-TOTAL | 111,044,931 | | | | |
| ELECTRIC IMPORTS | 46,000,000 | | | | |
| LESS BIOMASS & BIOGAS | (16,800,0000) | | | | |
| TOTAL EXCLUDING TRANSPORTATION FUELS | 140,244,931 | | 140,244,931 ? | 140,244,931 ? | |
| TOTAL INCLUDING TRANSPORTATION FUELS | 403,000,000 | | | | 403,000,000 ? |
| ALLOWANCE CAP LESS P.C.R. | | | 161,172,000 | 158,103,000 | 378,720,000 |
| OFFSET SUPPLY ASSUME 6% UTILIZATION | | | 8,414,696 | 8,414,696 | 24,180,000 |
| BASE CASE SUPPLY | | | 169,586,696 | 166,517,696 | 402,900,000 |
| NET CUMULATIVE POSITION | | | 29,341,764.86 | 55,614,529.72 | 55,714,529.72 |

Historical EUA/CER Graph



EUA & CER: Price Action



California Carbon: Who is Involved?



*Compliance Entities and their approximate Allocations**

Load Serving Entities:

Investor Owned Utilities: 90%

Municipalities: 90%

Irrigation Districts: 90%

Cooperatives: 90%

Independent Power Producers: 0%

Power Importers: 0%

California Refineries:

Process Emissions from the refineries 90%

Product Emissions: 0%

Industrials:

Cement: 90%

Oil and Gas Producers: 90%

Food Processors: 90%

Steel & Glass Manufacturing: 90%

Natural Gas Distribution Companies

Financials:

Banks with California Power & Gas Desks

Environmental Hedge Funds

Global Energy Trading Companies

Power Marketers

Offset Developers:

Forestry (U.S. and Int'l)

ODS

Livestock

Other (CMM, Rice, Nutrient Management)

** Benchmarking by sector provides either >, <, or = 90% to each Facility.*

Contact Information



Lenny Hochschild
Managing Director
Evolution Markets Inc.

3 Embarcadero Center
San Francisco, CA 94141

tel. +1.415.963.9138
mob. +1.415.269.3092
email lennyh@evomarkets.com
website www.evomarkets.com