

# California's Cap-and-Trade Program



**World Bank Partnership for Market  
Readiness Workshop:  
*Exploring Market-Based Approaches to  
Low Carbon Development in the  
State of Rio de Janeiro***

**August 27, 2013**



# Winrock International

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Mission-driven nonprofit organization that works in the United States and around the world to empower the disadvantaged, increase economic opportunity and sustain natural resources





# American Carbon Registry

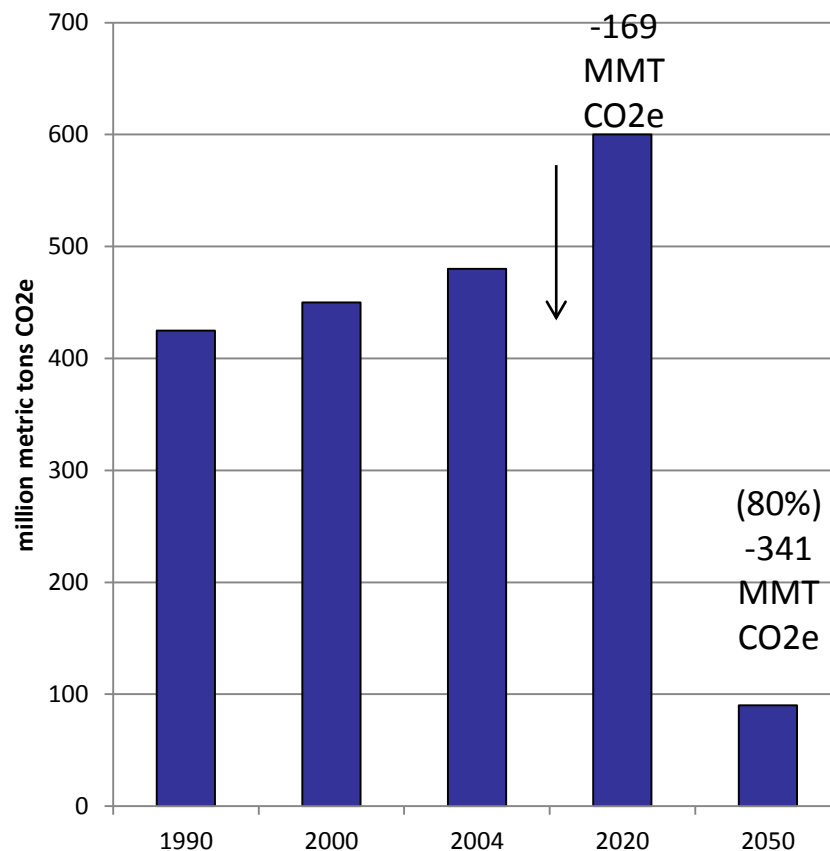
- Founded in 1996 as the first U.S. private voluntary GHG registry & joined Winrock in 2007
  - 38.5 million tons of emissions reductions issued
- Registry roles:
  - Develop and approve carbon offset accounting standards & methodologies / protocols
  - Oversee independent verification by accredited entities
  - Review and register GHG emissions reduction projects, including issuance of serialized offsets
- Approved in December 2012 as California Offset Project Registry & Early Action Offset Program
  - Supports ARB's implementation of the Cap-and-Trade Offset Program from ACR's Sacramento office



# California Global Warming Solutions Act (Assembly Bill 32) 2006

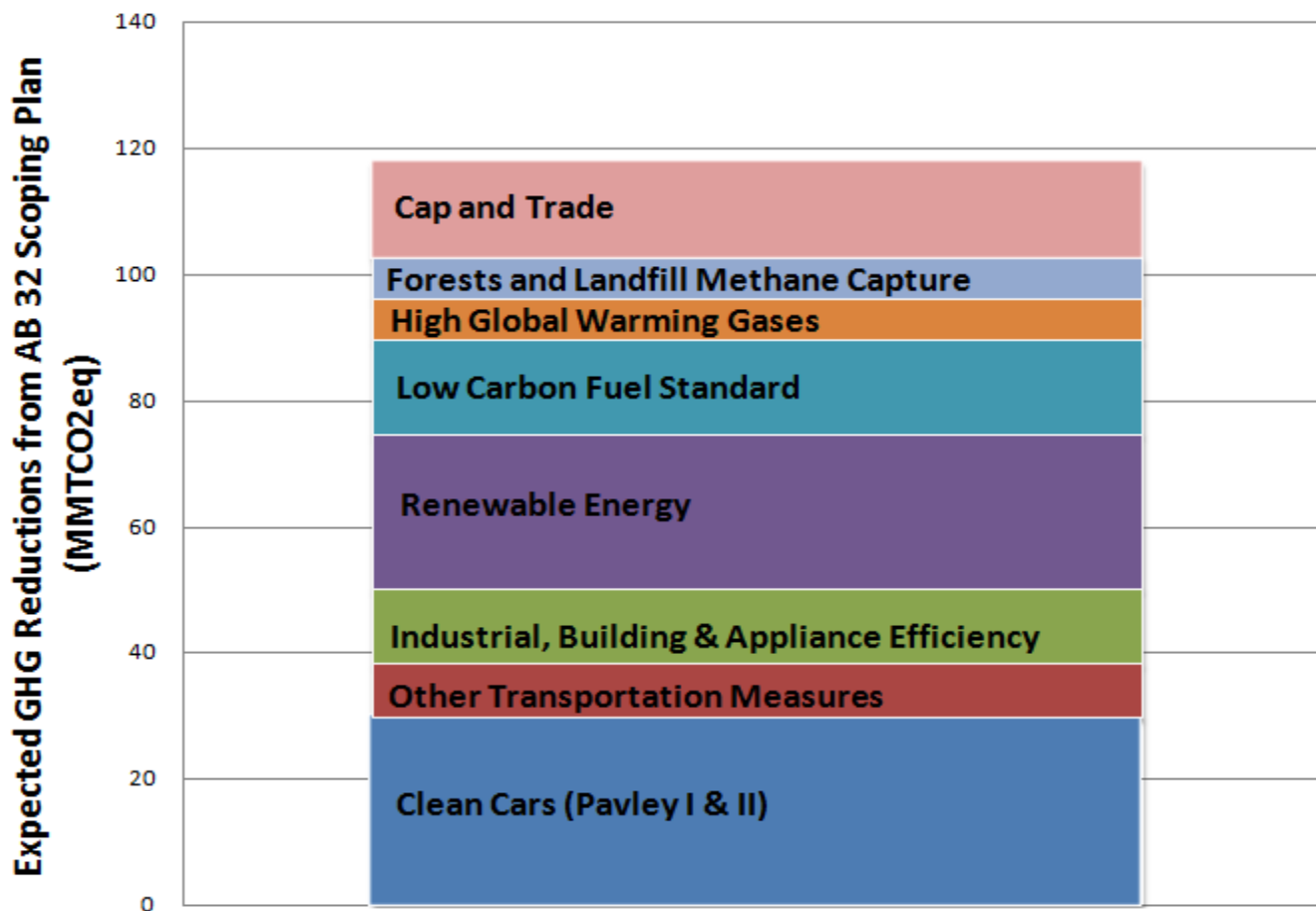


**Reduce 2020 emissions to 1990 levels & 2050 emission to 80% below 1990**



# Cap-and-Trade one of AB32 Complementary Measures

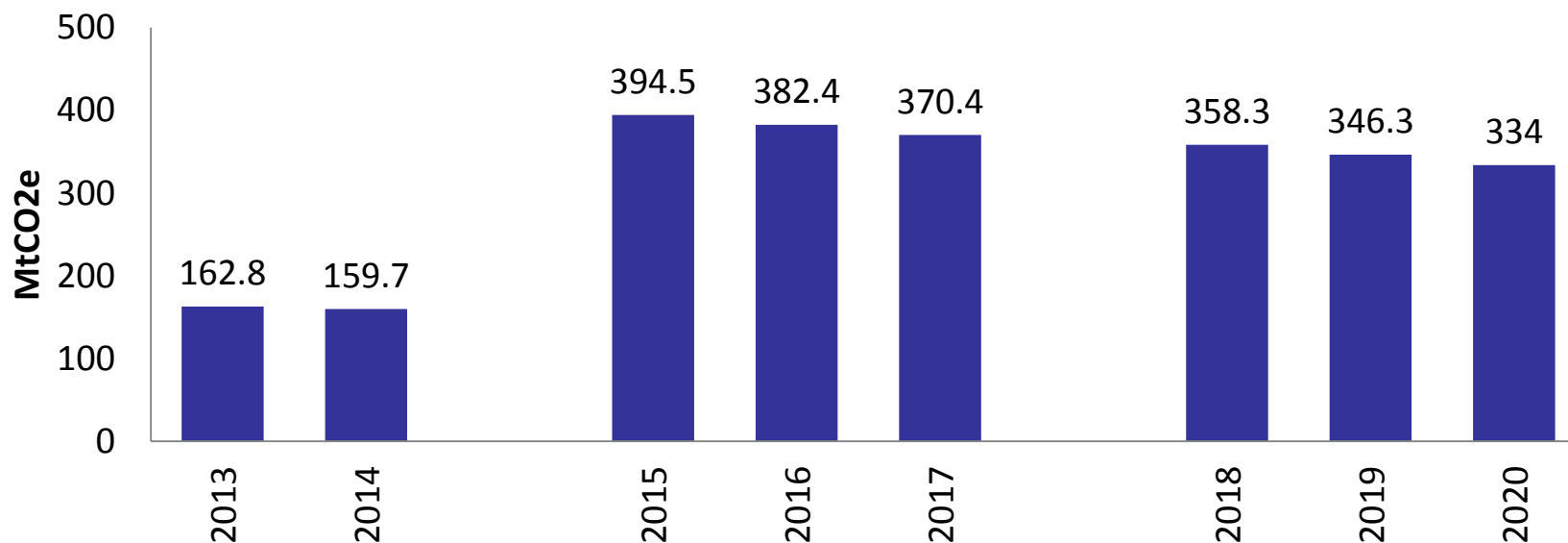
California's AB 32 cap and trade rule complements other regulations  
to reduce GHG pollution quickly



# California's Cap

## Capped sectors

- 2013-2014: electricity; large industrial facilities > 25,000 MTCO<sub>2</sub>e per year
- 2015: expands to distributors of transportation fuels + res/comm natural gas
- ~ 350 large businesses representing about 600 facilities



Total allowances between 2013 and 2020 = ~ 2.5 billion



# Lessons from Learning by Doing

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## EU ETS - Phase I / Phase II

- Allowance allocation (pilot phase) based on estimated emissions = over-allocation
- Over 95% free allocation = windfall profits
- Price instability due to inability to bank allowances
- Project-based offsets from CDM – additionality concerns

## California – Phase I

- Allowance allocation based on measured historic emissions
- Free Allowance Allocation + Allowance Auctions
- Program features for price stability = banking, price floor & allowance reserve
- Performance-based offsets from ARB protocols



# California Allowances

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## Allowance Allocation

- Free allocation to select industries for transitional assistance and to minimize leakage
- Free allocation to electric utilities to benefit electricity ratepayers
- A portion to a 'reserve' to contain prices

## Allowance Auction

- A portion of Allowances are auctioned quarterly
- Auction proceeds go to the State for appropriation - \$400 million to date – towards climate pollution reduction



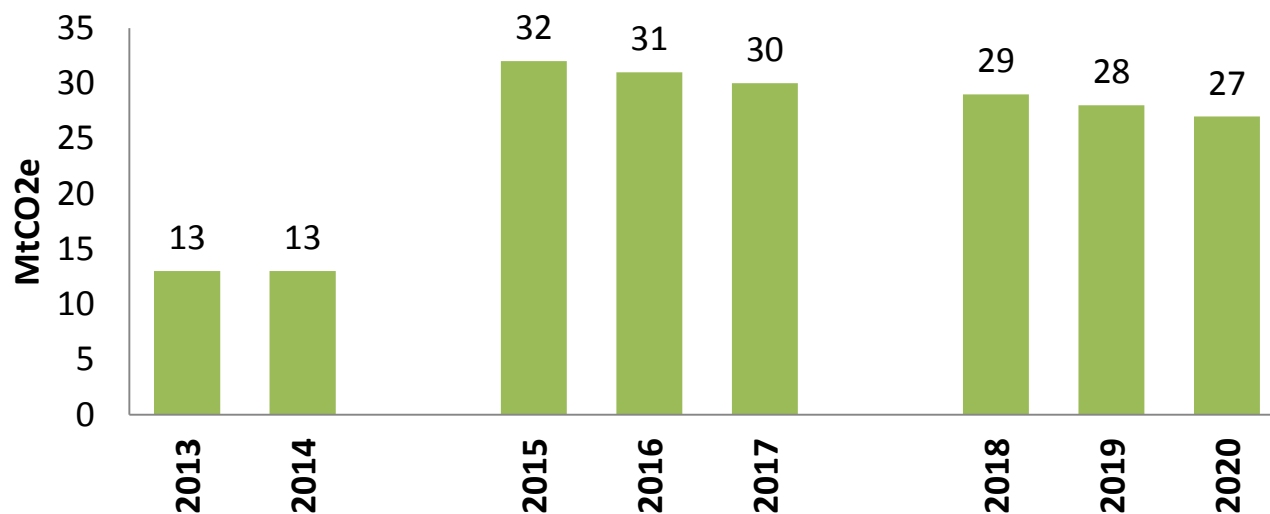


# Allowance Auction Results

Auction	V13 Volume	V15 Volume	V16 Volume	Reserve Price	V13 Price	V15 Price	V16 Price	# of Qualified Bidders
Nov '12	23,126,110 (100% sold)	39,450,000 (14% sold)	-	\$10.00	\$10.09	\$10.00	-	73
Feb '13	12,924,822 (100% sold)	-	9,560,000 (46% sold)	\$10.71	\$13.62	-	\$10.71	91
May '13	14,522,048 (100% sold)	-	9,560,000 (79% sold)	\$10.71	\$14.00	-	\$10.71	81
Aug '13	13,865,422 (100% sold)	-	9,560,000 (100% sold)	\$10.71	\$12.22	-	\$11.10	79

# Carbon Offsets

8% of compliance obligation =  
~ 203 million tons  
through 2020



## Sources of compliance offsets

- Offsets issued directly by ARB (for compliance or early action projects)
- Offsets issued by linked regulatory programs (eg: Quebec)
- Sector-based Credits (eg: REDD) – Subject to future rulemaking

## ARB Offset Requirements

- Must be real, additional, quantifiable, permanent, verifiable, and enforceable
- Must result from Board-adopted compliance offset protocols and approved Early Action methodologies
- Cannot be issued for GHG emission reduction activities covered under the cap

## Current Regulatory Offset Protocols (methodologies)

- U.S. Livestock
- U.S. Forests
- U.S. Destruction of Ozone Depleting Substances (ODS)
- U.S. Urban Forests
- Four “early action” protocols



# ACR as an Approved Offset Project Registry (OPR)

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- Compliance offset projects must register with an ARB-approved Offset Project Registry (OPR)
- OPR lists compliance offset projects, oversees verifier conflict of interest evaluation & process of verification by ARB accredited VB, and issues Registry Offset Credits
- Once approved by ARB, issued Registry Offset Credits can be cancelled on OPR and issued by ARB as ARB Offset Credits on CITSS
- OPR responsible for ongoing coordination with ARB, reporting, and conducting annual audit (representative sample of at least 10% of annual offset verifications)

# Offset Invalidation

## Offsets can be Invalidated by ARB for up to 8 years if

- Issued by another program for the same period
- Overstated by more than 5%
- Not in accordance with regulations

## Buyer Liability

- Firms holding an invalidated credit must replace that credit with a compliance instrument



## Risk Mitigation

- Invalidation timeframe can be reduced from 8 to 3 years with a second regulatory verification
- ARBOC (3) / CCO (3): Buyer takes invalidation risk for three years
- “Golden” ARBOCs (CCOs): Seller takes the risk of replacing invalidated credits

# CA Carbon Prices

*Evolution Markets Inc. – Prices are indicative based on current market conditions & subject to change*

Dec '13 V13  
California  
Carbon  
Allowance  
(CCA)

Dec '13 ARBOC-3  
(CCO-3), Buyer  
takes three years  
invalidation risk



Dec '13 Golden  
ARBOC (CCO) =  
Seller takes  
invalidation risk

Early Action  
Offset Credit  
(US ODS,  
Livestock,  
Forestry)



# Offsets Update

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## **Compliance Offset Projects**

- 14 projects listed (by both OPRs): ODS and Forestry
- First ROCs issued by ACR (307,000 ODS)

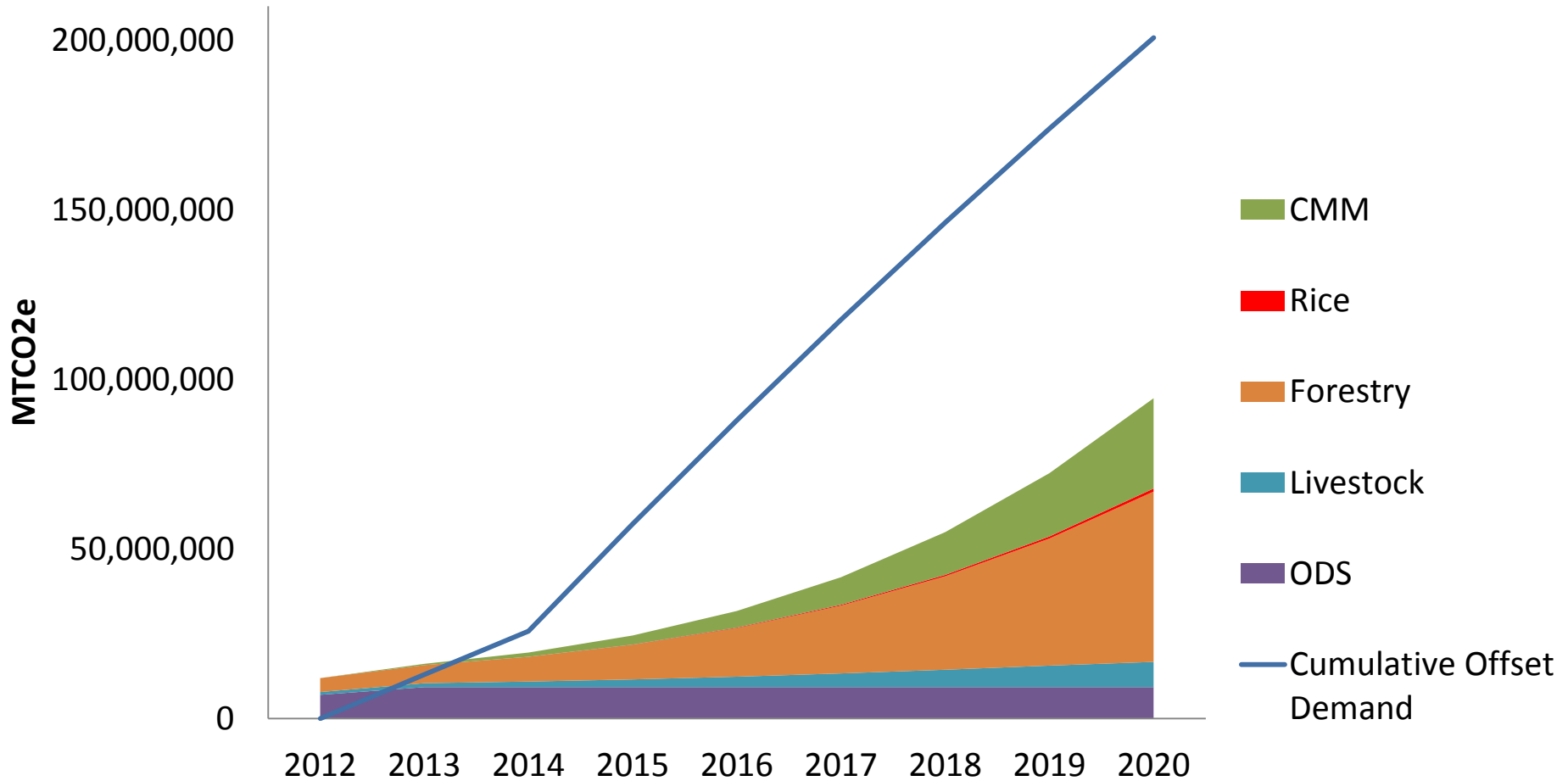
## **Early Action Offset Projects**

- 59 projects listed by ARB

**First ARB offset credits (ARBOCs) likely issued this summer**



# ACR Offset Supply Forecast



By 2020 expected shortfall of 134 MMTCO<sub>2e</sub>





# Market Linkage

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- ARB approved California and Québec linkage in April 2013
- Linkage effective January 2014
- Implementation via WCI
  - Joint tracking system for issuing & trading allowances & offsets
  - Platform for joint auctions
  - Coordinated market monitoring and surveillance
  - Processes for day-to-day market operation
  - November 1 report to Governor on linkage implementation status



# Further Information

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