Opportunities for Carbon Offsets from Urban Forestry Projects

CLIMATE ACTION RESERVE

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The Reserve: Background and History

CLIMATE ACTION RESERVE

- Nonprofit organization founded as the California Climate Action Registry by state legislation in 2001
  - Encourage actions to reduce emissions
    - By developing protocols to track GHG emissions and reductions and having those emissions verified and publicly reported
- Renamed and expanded in 2008
  - Mission remains to encourage actions to reduce emissions

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Organizational Objectives

- Ensure that emission reduction credits (offsets) have true environmental integrity

- Show that carbon offsets can be a useful tool in addressing climate change

- Provide a offset registry that is rigorous while streamlined and user-friendly

- Link voluntary carbon markets with emerging compliance markets (CA C&T, WCI, RGGI…)

- Provide expertise on offset standards and policy

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Reserve Stats

CRTs registered	**24.4 million**
CARB-approved CRTs	**8.4 million**
CRTs retired	**3.7 million**
Projects submitted	**474**
Registered	*136*
U.S. States with Projects	**45**

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Offsets for Compliance

- Compliance obligation can be fulfilled with a mix of allowances and offsets
- Up to 8% of compliance obligation can be fulfilled with offsets
  - Example: If a facility has emissions of 100,000 $mtCO_2e$, then it can use up to 8,000 offsets for that period
- Offsets can only come projects under the four CARB-approved protocols
- Project must be submitted to and registered with a CARB-approved registry

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California Offset Demand

Compliance Period	Year	Allowance Budget (mt CO_2e)	Total Offset Demand
First (narrow scope)	2013	162,800,000	25,800,000
	2014	159,700,000	
Second (broad scope)	2015	394,500,000	91,784,000
	2016	382,400,000	
	2017	370,400,000	
Third	2018	358,300,000	83,104,000
	2019	346,300,000	
	2020	334,200,000	

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Market Pricing

Recent data from Finite Carbon and Evolution Markets

Prices chart showing bars: Non-CARB CRTs (~2), CARB CRTs (~8), Buyer Liable CCOs (~11.5), Seller Liable CCOs (~13.5), 2013 Allowances (~16). Y-axis labeled Prices, 0 to 18.

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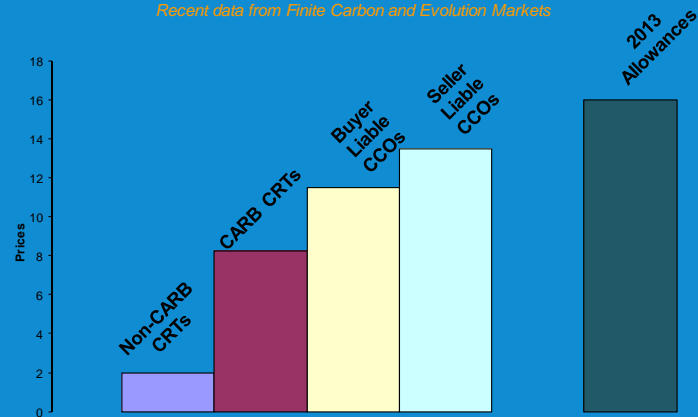
The Urban Forestry Protocol

- Urban Forestry Protocol
  - Adopted by CAR in August 2008
  - Adopted by CARB in October 2011
- But, it's the <u>only</u> one of the CARB-approved protocols with no projects
- Why?

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Challenges with Urban Forestry Projects

- Cost: Can be $70-$100/tonne

- Long-term commitment: 100 years

- Project size:
  - Typical first year verification cost is $8,000-15,000 <u>for other project types</u>.
  - 4,000 tonnes/year is a typical small scale offset project.
  - If 1000 trees generate ~60 CRTs/year, it requires ~66,000 trees minimum for a viable project.

- With a new project type, being the first one is always harder
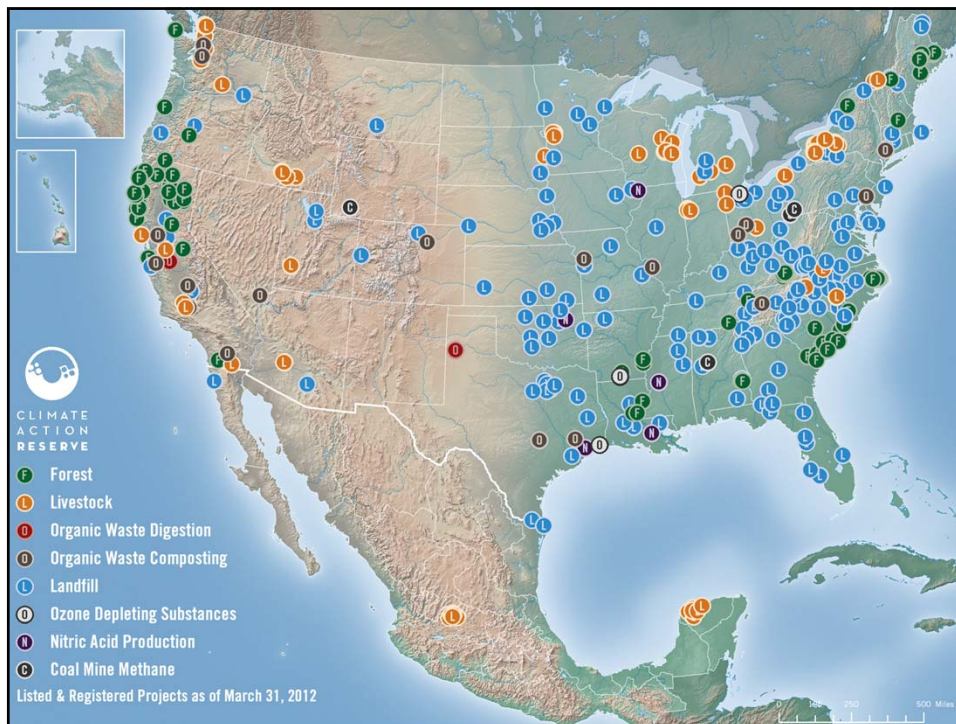 - Need someone willing to step up

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Key elements to a successful project

- LARGE scale
- Burning desire to be a leader and help advance the use of offsets to fund urban forestry—because the first few projects will be challenging
- Long-term vision for the urban forest, because of the long-term commitment involved
- Adequate funding, because the first projects are unlikely to pay their own way

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Forest
Livestock
Organic Waste Digestion
Organic Waste Composting
Landfill
Ozone Depleting Substances
Nitric Acid Production
Coal Mine Methane
Listed & Registered Projects as of March 31, 2012

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