

# California State Senate Select Committee on Environment, Economy, and Climate Change

*Informational Hearing on AB 32 Market Mechanisms  
Offsets: Opportunities and Risks*



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# What is a GHG Offset?

- *In General:*

A verified reduction in greenhouse gas (GHG) emissions (or an increase in sequestration) that is used to mitigate for an emission elsewhere.

- *In a Regulatory Program:*

An emissions permit that is equal to the verified GHG emission reduction.

- Is valid to be used for compliance in accordance with the regulatory program rules.
- May only be generated from sources that are not included within the capped sectors.

# Offset Integrity



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- **Real**
  - Can be measured to a high degree of accuracy
  - Is based on an activity that has occurred, not one that is projected to occur in the future
- **Additional**
  - Occurs outside of any regulatory requirement
  - Would not have occurred but for the incentive provided by a GHG market
- **Verifiable**
  - Can be (and has been) independently verified
- **Enforceable**
  - Ownership is undisputed and enforcement mechanisms exist to ensure all program rules are followed
- **Permanent**
  - Is removed from the atmosphere for a minimum of 100 years



# Protocols Ensure Integrity

- Example: Forestry Project Protocol
  - *Real*: Detailed quantification methodologies that comprehensively account for sequestration and changes in GHG emissions
  - *Additional*: Benchmarks and eligibility requirements for ensuring additionality of project activities
  - *Verifiable*: Prescriptive monitoring and verification requirements
  - *Enforceable and Permanent*: Detailed requirements and enforceable legal contracts to ensure ownership and address reversals (impermanence)
  - *Co-Benefits*: Requirements for natural forest management

# Opportunities and Risks



- **Role and Benefits of Offsets**

- Provide economic efficiency, price pressure relief (if sufficient supply)
- Obtain reductions at unregulated sectors and bring non-traditional sectors into the effort
- Create positive co-benefits at offset project sites
- Spur/demonstrate new technologies
- Provide a common link among multiple programs

- **Offset Concerns**

- Need to exclude 'business as usual' emission reductions
- Market systems require effective regulation, oversight, and enforcement



# Offset Program Administration

- **GHG Accounting for Offsets**

- Screen protocol types based on availability of high-quality data for quantification and ‘business as usual’ determinations
- Rely on objective performance-based standards to ensure consistency and reduce subjectivity
- Employ conservative accounting to prevent over-crediting

- **Training, Accreditation, and Oversight of Verifiers**

- Establish and maintain verifier competency
- Conduct Quality Assurance tests on emission reduction reports

- **System Oversight**

- Establish and enforce ownership
- Provide and continually upgrade system security

# ARB Approved Offset Protocols



- **Forestry**
  - Carbon sequestration in forests for a minimum of 100 years in three project types: reforestation, avoided conversion, and improved forest management
- **Urban Forestry**
  - Carbon sequestration through urban tree planting projects
- **Livestock**
  - Capture and destruction of methane from livestock manure using anaerobic digestion (biodigester) technology
- **Ozone Depleting Substances**
  - Collection and destruction of potent GHGs from appliances and foams from U.S. sources



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## Bottom Line

- Offsets are an important part of cap and trade programs and provide multiple benefits.
- Robust standards, rigorous program administration, and assiduous oversight ensure offset integrity.

