

## OFFSETS

### American Clean Energy and Security Act of 2009 (HR 2454) & California Global Warming Solutions Act of 2006 (AB 32)

Category	HR 2454 (as passed in House 6-26-09)	AB 32 CARB Scoping Plan & CAR Forest Protocols	California Impacts	ETAAC Issues
<b>ABBREVIATIONS</b>	<p><b>Title VII, PART D:</b> Offsets  <b>PART E:</b> Reduced Deforestation – International  <b>TITLE V</b>—Agricultural and Forest domestic offsets et al.  <i>NOTE: Some ambiguities in ACES language</i></p>	<p><b>SP</b> = Scoping Plan for AB 32  <b>WCI</b> = <b>Western Climate Initiative:</b> CA is member state  <b>CAR</b> = <b>Climate Action Reserve:</b> National offset Registry <b>CRTs</b>=Climate Reserve Tonnes= carbon offset credits  <b>MOU</b> = Governors’ Sub-national MOU for International Offsets</p>		
<b>OFFSET QUANTITY: SYSTEM</b>				
<b>QUANTITY AUTHORIZED</b>  <b>§722 (d)</b>	<p>2 billion tons offsets allowed annually:                      Domestic: 1 Billion Mt CO2e/yr                      Internatn'l: 1 Billion Mt CO2e/yr</p> <p>-EPA Administrator can increase Int'l offsets to 1.5 BMt if available domestic offsets less than 0.9 billion tons at prices generally equal to or less than emission allowance prices ( C)</p> <p>Total offsets may be increased or decreased by Presidential recommendation to Congress</p>	<p><b>SP:</b> Offsets in Scoping Plan pegged to WCI market design: =49% of total allowances authorized from 2012-2020 under declining program cap</p> <p><b>SP:</b> " <i>..While some offsets provide benefits, allowing unlimited offsets would reduce the amount of reductions of greenhouse gas emissions occurring within the sectors covered by the cap-and-trade program (p.37)</i>  <i>"... (The WCI) limit will help provide balance between the need to achieve meaningful emissions reductions from capped sources with the need to provide sources within capped sectors the opportunity for low-cost reduction opportunities that offsets can provide."</i></p>	<p>Offsets offer low-cost compliance option and have strong impact on cost containment for CA emission sectors.</p> <p>EIA analysis of ACES (8/09) also indicates:  <i>"... compliance with emissions caps that is generated through offsets could exceed actual reductions in covered emissions.."</i></p> <p>Uncertain availability and offset quality, esp. in early years:                      -CBO estimates US offset demand at:                      ~230 MMt in 2012 and ~300 MMt in 2020.                      Current pipeline~15 MMt</p> <p>-Int'l Forest Sector will not likely be prepared to</p>	

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			issue credits in quantities req'd by 2012. Possible EUETS and probable Australia competition for limited supply.	
<b>OFFSET QUANTITY: ENTITY</b>				
<p><b>ENTITY OFFSET LIMIT</b></p> <p><b>§722</b></p>	<p>Covered entities collectively may use offset credits up to a maximum of 2 billion tons/yr</p> <p>Demonstrating compliance using offset credits: Pre-2018: 1 domestic credit =1 int'l credit. Post-2018: 1 domestic credit = 1.25 int'l credit.</p> <p>-Pro rata share of 2 B tons: Percentage of allowances to be held to demonstrate compliance for given calendar year determined by “dividing 2 billion by the sum of 2 billion plus the number of emission allowances for the previous year, and multiplying by 100”</p> <p>-<i>This calculates to:</i> 30% in 2012; 30% in 2020; 35% in 2030; 45% in 2040; 66% in 2050</p> <p>- Not more than 1/2 may be domestic and 1/2 internat'l offsets, except as modified by EPA Administrator 722(d)(1)(B)</p> <p><u>Term Offset Credits:</u> Entity may use term credits instead of domestic offset credits to temporarily demonstrate compliance. - Combined quantity of term and domestic credits shall not exceed quantity of domestic credits</p>	<p><b>SP:</b> pegged to WCI limits</p> <p><u>Offset limit per entity/yr:</u> approx. = &lt;5% per entity, based on WCI market design and estimate of number of emitters and allowances</p>	<p>Lower access to offsets raises cost of compliance for CA emission sectors, but may drive more reductions in covered emissions.</p>	

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	<p>entitled for the year.</p> <p><b>-Financial Assurance req'd:</b> Entity using term offset credits must provide financial assurance that entity will have sufficient resources to obtain allowances or credits necessary to demonstrate final compliance. EPA Admin. to issue regulations.</p>			
<b>OFFSETS: DOMESTIC</b>				
<b>PRE-EXISTING OFFSET PROGRAMS: Grandfathering</b>				
<p><b>RECOGNITION OF EARLY ACTION PROGRAM</b></p> <p><b>§740, 734</b></p>	<p><i>Note: Some unclear language in ACES</i></p> <p><u>Conditions for approval of Pre-existing programs:</u></p> <ul style="list-style-type: none"> <li>-Program estab'd by law or regulation prior to Jan. 1, 2009</li> <li>-Program not established by law or regulation, but meets same criteria</li> <li>-<u>Program criteria:</u> Program has:                             <ul style="list-style-type: none"> <li>-developed offset project standards, methodologies and protocols through public consultation process or peer review process</li> <li>-made publicly available standards, methodologies and protocols requiring that credited reductions are permanent, additional, verifiable and enforceable</li> <li>-required verification by State or tribal agency or accredited 3<sup>rd</sup> party verification body</li> <li>-no conflict of interest for entities administering the program</li> </ul> </li> <li>-EPA Administrator "... <b>shall approve any such program</b> that Administrator determines has criteria and methodologies of at least equal stringency... 740 (e)(2)</li> <li>- Administrator <b>may</b> approve types of offsets from</li> </ul>	<p><b>CA Grandfathering obligations:</b></p> <p><b>AB 32:</b> "Ensure that entities that have voluntarily reduced GHGs prior to (...Jan.1,2011) receive appropriate credit for early voluntary reductions" (HSC 38562(b)(3))</p> <p><b>CCAR 2001:</b></p> <p>"... CA to offer .. best efforts to ensure that CA Registry members receive appropriate consideration for early actions in light of future state, federal or international GHG regulatory programs".</p> <p><b>Formal ARB recognition:</b></p> <p><b>AB 32:</b> "Offsets used to meet regulatory requirements must be quantified according to Board-adopted methodologies, and ARB must adopt a regulation to verify and enforce the reductions (HSC §38571).</p>	<ul style="list-style-type: none"> <li>-ARB has designated CA Forest Protocols as "Discrete Early Action for Vol. Market" under AB32</li> <li>-Per AB 32, HSC 38571: CAR offsets need ARB authorization.</li> <li>-Unclear if less-rigorous early action programs will be grandfathered on par with CAR, which may devalue more stringent CAR CRTs.</li> </ul>	

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	<p>approved programs -Administrator to give <i>due consideration</i> to existing methodologies for offset projects.</p>	<p>CAR protocols, administrative procedures and public process meet all ACES tests.</p>		
<p><b>EXCHANGE PROCESS and VALUE FOR EARLY ACTION CREDITS §782 (t), 795</b></p>	<p><i>Note: Some unclear language in ACES</i> 1 percent of emission allowances is allocated for exchange of early action credits (2012).  1 offset credit shall be exchanged for 1 ton CO<sub>2</sub>e reduced in pre-existing program (740(a))  Program credits transferred to Administrator, converted to Allowances, and program credit retired (795(B)(1); 740 (a)(3) Exchange must occur within 3 years of enactment or regulations.  Exchange value for early action offset credit is equivalent to <b>average monetary value of the credits during the period January 1, 2006, to January 1, 2009</b>, as adjusted for inflation ...  Person receiving compensation to receive <i>emission allowances</i> in amount <b>approximately equivalent in value to the carbon dioxide equivalent per ton value received by entities in exchange for credits</b> adjusted for inflation... as determined by the Administrator...795 (a)(1)</p>		<p>Unclear interpretation if value of exchanged credits is averaged across all early action credits, credits within a program type, or across disparate programs.  Possible interpretation: CAR CRTs sell at highest prices on Voluntary Market e.g. CAR ~\$10/ton vs. CCX ≤\$1-2/ton =avg. ~\$5 if req'd to mix together in a basket of "early action offsets"</p>	

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<b>OFFSET ADMINISTRATION and ADVICE</b>				
<b>AGENCY JURISDICTION</b>	<p>Two offset programs established:</p> <p><b>EPA: Title VII: GHG Emission Reductions</b> (Domestic Non-forestry and Agricultural offsets; International offsets including forestry)</p> <p><b>USDA: Title V: Domestic Agriculture and Forestry Offsets</b></p>	<p><b>CAR</b> is single agency</p> <p>Ensures common approach and rigor for all offset protocols and procedures.</p> <p>CAR = "Nat'l non-profit entity to ensure integrity, transparency and financial value of offsets in U.S. carbon market".</p> <p>Has established reputation for regulatory-quality standards.</p>	<p>Conflicting protocols bet. CAR and 2 federal agencies can destabilize offset integrity and marketability</p> <p>Uncertain offset quality from non-parallel standards and procedures for EPA and USDA</p>	
<b>EPA: OFFSET REGISTRY §732</b>	EPA Administrator shall establish an Offset Registry	<p><b>CAR</b> operates established offset Reserve (i.e. registry) with North American scope</p> <ul style="list-style-type: none"> <li>- Tracks and retires credit transactions by serial number and vintage in publicly-accessible system</li> <li>-Ensures reductions are real, permanent, additional, verifiable, enforceable, address leakage etc.</li> </ul>	<p>Uncertainty: Unclear relationship between existing Registries/ Reserve and new federal registry</p> <p>Duplication in function and expertise</p>	
<b>EPA ADMINISTERED OFFSETS (Non-domestic forestry and agriculture)</b>				
<b>EPA: AUTHORITY EPA ADMINISTRATOR §731, 732</b>	<p><i>Within 30 days:</i></p> <ul style="list-style-type: none"> <li>- Establish <b>Offsets Integrity Advisory Board</b></li> </ul> <p><i>Within 2 years:</i></p> <ul style="list-style-type: none"> <li>- Establish program for issuing offset credits</li> <li>-Consult with appropriate Federal agencies; consider recommendations of advisory Board</li> <li>-Periodically revise regs. as necessary.</li> </ul>		<p>General duplication and uncertainty w/ existing Registries /Reserve</p>	

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<p><i>EPA: "Offsets Integrity Advisory Board" §731</i></p>	<ul style="list-style-type: none"> <li>- Board advises on project types, methodologies, scientific uncertainty for all offset types <i>except</i> agriculture and forestry</li> <li>- 9 Members appointed by EPA Administrator</li> <li>- "...qualified by education, training, and experience to evaluate scientific and technical information..."</li> <li>- <i>Report:</i> By 2017 and every 5 yrs., scientific review of offset and int'l deforestation reduction programs.</li> </ul>	<p>Similar function provided by CAR, stakeholders, consultants and public process.</p> <p>CAR review process addresses project types, methodologies and scientific analysis</p> <p>CAR is non-profit entity with Board of Directors, currently chaired by Sect'y CalEPA.</p>		
<p><i>EPA: LIST OF ELIGIBLE OFFSET PROJECT TYPES (non-Agriculture and Forestry) 733</i></p>	<p><i>Within 1 yr.</i> EPA to:</p> <ul style="list-style-type: none"> <li>- Establish list of eligible project types including international offsets</li> <li>- Give priority to Adv. Bd. recommendations and justify discrepancies</li> </ul> <p>Modification of eligible projects:                      -Administrator <b>may add or remove</b> project types from the initial list through rule after consultation with Fed. Agencies and Advisory Bd.</p> <p>-Modifications may be proposed by Advisory Bd., Administrator and any person per a petition process</p>	<p><b>Eligible Project Types CAR:</b>                      Open nomination process for project types.                      Protocols adopted through stakeholder participation, technical and scientific review.</p> <p><b>Adopted Protocols:</b>                      Forestry; Urban Forestry;                      Landfill methane: US; Mexico;                      Livestock methane: US; Mexico.</p> <p><b>Protocols in Process</b>                      -Organic Waste Digestion; (consider adding composting)                      -Coal Mine Methane                      -Ozone Depleting Substances                      -N2O from Nitric Acid Plants</p> <p><b>Promising:</b>                      -Boiler Efficiency Improvements</p> <p><b>Protocols not suitable or better met w/ regulatn or incentives:</b>                      Short term agriculture</p>	<p>Uncertainty for CA:                      Duplication with existing CAR protocols and process</p> <p>Non-parallel federal standards and process for identifying offset project types:  <b>EPA:</b>                      -- Eligible project types to be identified based on scientific and technical advice                      -Administrator may add or remove from list</p> <p><b>USDA:</b>                      -Project list specified in legislation                      Sect'y may revise but not remove from list</p>	

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		Bus Fleet Upgrades Bus Rapid Transit <u>Limited US Application:</u> Blended Cement Production <u>Further data needed:</u> Soil sequestration; wetland restoration; <u>Under Study:</u> Truck Stop Electrification		
EPA: <b>METHODOLOGY and CRITERIA FOR OFFSET CREDITS</b>  <b>733; 734</b>	Administrator to establish methodologies for each project type <ul style="list-style-type: none"> <li>- Additionality: not begun before Jan.1,2009 <i>except earlier</i> if activity readily reversible;</li> <li>- Required: Activity Baseline, Quantification Methods, Leakage, Permanent</li> </ul> Offset credits issued to projects that <ul style="list-style-type: none"> <li>-result in reductions or avoidance of emissions, or sequestration of GHGs;</li> <li>- Credits to be verifiable and additional</li> <li>-Offset credits for sequestration to be permanent.</li> </ul> Includes destruction of methane, chlorofluorocarbons or other ozone depleting substances, if permitted by Administrator	SP: "... offsets will be subject to stringent criteria and verification procedures to ensure their enforceability and consistency with AB 32 requirements." (p.30)  SP: Criteria for offsets: Real, additional, quantifiable, permanent, verifiable, enforceable  CAR: Protocol standards are explicit for each project type: Real, additional, permanent, verifiable, enforceable, address leakage etc.	CAR Protocols provide explicit criteria and methodologies  <b>CAR CRTs</b> have highest market value on Vol. Market due to high standards	
EPA: <b>PERMANENCE</b> <b>734</b>	<b>Permanence:</b> "Sequestration must result in permanent net increase in sequestration"	<b>CAR:</b> Explicit requirement for 100 yr. duration of forest projects in order to offset an emitted ton , per International convention	ACES : No requirement for 100 yr duration to offset an emitted ton by a reversible offset type	

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<b>EPA: OFFSET RESERVE 734 (3)</b>	Administrator to subtract and reserve quantity of offset credits based on risk of reversal. Reserved credits held by Administrator and registered in Offset Registry	<b>CAR:</b> Comparable Buffer Pool of CRTs required from project developer. Quantity based on risk of reversal.	<b>Comparable concept:</b> Offset Reserve/buffers based on risk of reversal	
<b>EPA: ACCOUNTING FOR REVERSALS 734 (b)</b>	Reversals must be reported <b>Intentional reversal:</b> 1:1 Restore to reserve, credits or allowances equal to number cancelled. <b>Unintentional reversal:</b> ½: 1 Restore to reserve, credits or allowances equal to one-half number of credits reserved or cancelled, whichever is less.	<b>CAR:</b> <b>Voluntary Reversal:</b> Compensation based on age of project e.g. Forest Mgmt Version 3.0: 0-5 yrs =1.40 >50yrs =1.00 <b>Unavoidable Reversal:</b> Covered by req'd Buffer Pool credits	<b>CAR reversal standard more stringent</b> Additional measures req'd beyond 1:1 replacement for reversals (e.g. PIA= Permanence Implementation Agreement)	
<b>EPA: CREDITING PERIOD 734 c(2)</b>	<b>Crediting period:</b> No less than 5 yrs No greater than 10 years for any project type other than those involving sequestration.  See: 20 yr for forestry projects(USDA 504)  <b>Project Renewal:</b> Can petition for new crediting period subject to new methodologies and project type. Administrator: - may limit number of new crediting periods -to apply conservative assumptions to maximize certainty that environmental integrity of cap is not compromised.	<b>CAR:</b> <b>Methane</b> Crediting Period = 10 yr. since offset for the emitted ton is immediate  Renewal: Review req'd at end of project to determine if project still has Regulatory additionality  <b>Forestry</b> = 100 yr crediting period to restrict re-emission of C to atmosphere	<b>CAR:</b> Concepts comparable for non-forest offsets  CAR Forest protocols more explicit and stringent	

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<b>EPA: VERIFICATION OF OFFSET PROJECTS</b>  <b>736</b>	Project developer to submit report by accredited third-party  Include: quantity of GHGs reduced; methodologies; certification that project meets requirements; compliance with conflict of interest requirements	CAR Verification standards exceed ANSI ISO 14065 by requiring: -CA specific training -Compliance with CA Verification Protocols -Annual site visit -Right for CAR to request independent observation visits	CA exceeds ANSI stds. for Verification	
<b>EPA: VERIFIER ACCREDITATION</b> <b>736</b>	Administrator to accredit third-party verifiers as professionally qualified; no conflicts of interest.  Administrator may accredit: -ANSI (American Nat'l Stds. Institute) -Separate EPA Accreditation process	CAR has requirements additional to ISO 14065 re: - CAR-specified training and accreditation	CA above ANSI stds. for Verification Bodies	
<b>USDA ADMINISTERED OFFSETS: Domestic Agriculture and Forestry</b>				
<b>USDA: SECRETARY DUTIES</b> <b>502, 503</b>	<i>Within 30 days :</i> Establish Advisory Committee  <i>Within 1 yr:</i> --Establish offset credit program for domestic agriculture and forestry sources. -Establish methodologies for each practice type in 503	<b>CAR:</b> All offset types held to same rigor. Domestic agriculture and forestry offsets not under separate jurisdiction.		
<b>USDA: OFFSET CREDIT PROGRAM</b>	Sect'y USDA to establish by rule: -Methodologies for quantifying GHG benefits; activity baselines and additionality; leakage; reversals; third-party verification; technical assistance to offset project developers using Conservation Operations account; approval of offset project plans; -Certificat'n; reporting and record keeping; audits.	<b>SP:</b> References Offset standards of WCI  <b>WCI:</b> Member states to adopt standards equal to or more stringent than WCI	Uncertainty: Process and standards for agriculture and forestry offsets delegated to future rulemaking by USDA <i>except for</i> required list of offset project types.	

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<i>USDA: UNCAPPED SECTORS 501</i>	Forestry and Agriculture explicitly excepted from definition of "capped sector"	<b>SP, WRI, CAR:</b> Comparable exception	Suggestions to place agriculture and forestry under a cap not currently accepted by any domestic or int'l body	
<i>USDA: ADVISORY COMMITTEE "Greenhouse Gas Emission Reduction and Sequestration Advisory Committee"</i>  <b>§531</b>	Comparable to EPA " <b>Offsets Integrity Advisory Board</b> " -Provides sci. and tech. advice to Sect'y on domestic agriculture and forestry offsets -9 members "...qualified by education, training, and experience to evaluate scientific and technical information..." - 3 year terms except for initial 5 yr. stagger. May reappoint once for 3-yrs; directly after first term.  <i>Report: Scientific review of offset program by 2017 and at 5-year intervals</i>	CAR: single agency provides function (see EPA 731 above)		
<i>USDA: LIST OF SPECIFIED OFFSET PRACTICE TYPES: 503 (b)</i>  <b>1) Domestic Agriculture</b>	<i>Unclear:</i> if USDA list of project types is eligible "per se", or if list is illustrative, per "such as"  <i>"At a minimum, the list ... shall include those practices that avoid or reduce greenhouse gas emissions or sequester greenhouse gases, such as":</i>  <b>AGRICULTURE:</b> Agricultural, grassland, and rangeland sequestration and management practices: -Altered tillage practices; winter cover cropping, continuous cropping, other means to increase biomass returned to soil in lieu of planting followed by fallowing; reduction of nitrogen fertilizer use or increase in nitrogen use efficiency; reduction in frequency and duration of flooding of rice paddies; reduction in C emissions from	<b>CAR</b> recognizes limited agricultural offset projects due to short-term C gains and quick reversals (See adopted CA Protocols in EPA 733)  <b>Agricultural activities considered by CAR but not adopted:</b> <i>Soil Sequestration for Range and Cropland:</i> issues of permanence; awaiting further research. <i>Tidal Wetland Restoration:</i> awaiting further science for quantification	Concern for quality and permanence : Most Agricultural offset activities are - short-term C storage - easily reversible - difficult to quantify and verify  <i>A priori</i> designation of ag offsets in legislation assumes they have scientific and technical validity  Difficult to remove USDA project types even if do	

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	organic soils; reduction in GHG emissions from manure and effluent; reduction in GHGs due to changes in animal management practices, including dietary modifications		not meet credible offset standards.	
<i>USDA:</i> <b>2) Domestic Forestry</b>  <b>503</b>	<b>FORESTRY AND LAND USE CHANGE:</b> Afforestation; reforestation; forest management resulting in an increase in forest carbon stores including but not limited to harvested wood products; management of peatland or wetland; conservation of grassland and forested land; improved forest management, including accounting for carbon stored in wood products; reduced deforestation or avoided forest conversion; urban tree-planting and maintenance; agroforestry; adaptation of plant traits or new technologies that increase sequestration by forests;	<b>CAR Forestry Protocols</b> project types include: -Reforestation -Forest Management -Avoided Conversion -Urban Forestry  <b>Forest activities considered but not adopted:</b> -Afforestation -Agroforestry -Conservation of grassland -Adaptation of plant traits or genetic modifications to increase rate of sequestration -CAR specifically excludes projects that employ broadcast fertilizers	Concern for quality: Federal list includes practices not accepted by California due to environmental impacts or lack of durable C storage	
<i>USDA:</i> <b>3) Manure Management and Disposal</b>	Eligible activities include: -waste aeration; -biogas capture and combustion; and - application to fields as a substitute for commercial fertilizer.	<b>CAR:</b> comparable protocols for Methane only; not NOx -Livestock: US -Livestock: Mexico	Comparable	
<i>USDA:</i> <b>MODIFICATION of ELIGIBLE PROJECT LIST 503 (c)</b>	List of eligible offset project types is specified in ACES  Sect'y may "add to or revise", but not remove projects types from list (unlike EPA)	CAR: Eligible project types identified through public process, w/ scientific and tech review and stakeholder participation	Uncertain quality equivalence with CAR CRTs:	

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<p><i>USDA &amp; EPA:</i> <b>PERMANENCE 734</b></p>	<p><b>Permanence=</b> "....any sequestration of greenhouse gases, with respect to which an offset credit is issued .. <i>results in a permanent net increase in sequestration of GHGs...</i>".</p>	<p><i>See: EPA 734</i> CAR establishes permanence by project type <i>Methane</i> =10 yr project since offset is immediate  <i>Forestry</i> =100 yr. project to avoid re-emission of C stock</p>	<p>CA complies with International conventions for reversible offset types (i.e. ag, forestry): Explicit 100 yr. Permanence standard for reversible offsets</p>	
<p><i>USDA: CREDITING, and TERM OFFSET CREDITS</i></p> <p><b>504 (d), 507, 722</b></p> <p>(see also EPA 734 (c) (2))</p>	<p>Crediting period to have a term up to =5 years for agricultural sequestration practices; =20 years for forestry sequestration practices; and =10 years for other practice</p> <p>Implication from ACES: 1 ton from 20 year Forest project/yr = 1 offset credit/yr = full compliance with offset obligation/yr. equivalent to an allowance.</p> <p>Unclear: For how many years must an emitted ton be offset?</p> <p><u>Term Credits:</u> USDA Secretary to issue term offset credits, in lieu of an offset credit, for each ton CO2e that has been sequestered. <i>Pending confirmation:</i> Term Credits apply only to projects of 5 years (per 504(d))</p> <p><b>Financial assurance:</b> Covered entity cannot use Term Credit for compliances purposes unless it "...<i>simultaneously provides to the Administrator financial assurance that, at the end of the term offset credit's crediting term, the covered entity will have sufficient resources to obtain the quantity of allowances or credits necessary to demonstrate</i></p>	<p><b>CAR</b> does not recognize Term Offset Credits</p> <p><b>CRTs</b> are full credits</p> <p>Unlike Term Credit approach of CDM (tCERs), governance for US forest projects is not an issue given enforceability of reversal and penalty provisions</p> <p>C can be re-emitted at end of term.</p>	<p>Issue of quality and low market acceptance of Term Credits: -Short-term forest projects are lowest bar for offset quality, price and forest management opportunities</p> <p>-No definition for "...<i>quantity of allowances of credits necessary to demonstrate final compliance</i>" i.e. no indication that five, 20 yr. serial projects (or equivalent) wd be req'd. to attain a 100-yr offset standard for an emitted ton.</p> <p>Administrative complexity for buyer leads to low acceptance. Term Credits under CDM (5 yr tCERs) have attracted few buyers</p>	

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	<i>final compliance</i> "722(d)(2)(E)		on int'l market.	
<b>USDA: OFFSETS RESERVE and ACCOUNTING FOR REVERSALS</b>	Silent for USDA: Delegated to rulemaking  Explicit for EPA	<b>CAR Forest Protocols (3.0)</b> -Lower risk rating assigned if Conservation Easement is placed on property. -Permanence Implementation Agreement (PIA) req'd. -Reversals must be reported and quantified. -If reversal, restitution required of equivalent tons from Buffer Reserve	Uncertainty  Different standards bet. USDA, EPA and CAR	
<b>USDA: ADDITIONALITY: e.g. Tillage</b>  504(a)(2)(B)	Practices in use (e.g. tillage) <b>before Jan.1, 2001 not eligible</b> as early action offset.  Practices in use between <b>2001-2009 eligible</b> , even without clear accounting.	CAR does not credit Business-As-Usual activities	Concern for short duration and unclear BAU of agricultural practices	
<b>INTERNATIONAL OFFSET CREDITS – Non-Forestry</b>				
<b>Int'l: AUTHORITY 743</b>	EPA Administrator in consultation with Sect'y State and USAID may issue international offset credits.  Regulations to be developed within 2 yrs of enactment.  Int'l offset credits shall not be issued for destruction of hydrofluorocarbons (743(h))	<b>SP:</b> For purpose of encouraging early action toward binding commitments, and reducing concerns about competitiveness and C leakage: ARB to consider limiting offsets from developing world to those that demonstrate performance in: - <b>C intensive sectors</b> ( e.g., cement) - <b>Forestry:</b> eligible forest C activities in accordance with national or sub-national accounting frameworks.	Benefits CA market to have access to international offsets that meet strong performance standards: -CA participation contributes to quality of int'l offset and builds confidence of CA buyers and public	

**OFFSETS****American Clean Energy and Security Act of 2009 (HR 2454) & California Global Warming Solutions Act of 2006 (AB 32)**

Category	HR 2454 (as passed in House 6-26-09)	AB 32 CARB Scoping Plan & CAR Forest Protocols	California Impacts	ETAAC Issues
		<b>Governors' MOU:</b> Agreement to work jointly to develop minimum performance standards or sectoral benchmarks, backed by monitoring and accounting.		
<i>Int'l</i> : <b>ELIGIBLE COUNTRIES</b>	Int'l offset credits recognized only if - US has bilateral or multilateral agreement with the country -Country is a developing country	<b>SP and Governor's MOU:</b> CA to preferentially accept credits from signators of sub-national MOU	<b>MOU</b> adds "confidence building" tier of additional offset review	
<i>Int'l</i> : <b>SECTOR-BASED CREDITS (e.g. concrete, steel; non-forestry)</b>  <b>743</b>	<b>Sector crediting</b> to minimize leakage and encourage national mitigation actions.  <b>Applies to Countries:</b> - with comparatively high GHG emissions or greater levels of economic development -that, if located in US, would be within a sector subject to compliance (722) (e.g. cement, steel, ) - products sold in internationally competitive markets  <b>Sectoral Offset Credits</b> issued for GHG reductions relative to domestically enforceable baseline of absolute emissions, established in a bilateral or multilateral agreement for the sector	<b>MOU:</b> Implementation under development	CA benefits: International Sector crediting will capture leakage	
<b>INTERNATIONAL OFFSET CREDITS - FORESTRY</b>				
<b>OFFSETS FROM REDUCED DEFORESTATION</b> <b>743 (e)</b>	<i>Largely patterned after international REDD discussions (Reduced Emissions from Deforestation and Degradation)</i>	ACES International program is relevant to further development of <b>Governors' MOU</b>		

## OFFSETS

### American Clean Energy and Security Act of 2009 (HR 2454) & California Global Warming Solutions Act of 2006 (AB 32)

Category	HR 2454 (as passed in House 6-26-09)	AB 32 CARB Scoping Plan & CAR Forest Protocols	California Impacts	ETAAC Issues
	<p><b>National Baseline:</b> Considers:</p> <ul style="list-style-type: none"> <li>- average annual historical deforestation rates during at least 5 years;</li> <li>-drivers of deforestation and other factors to ensure additionality</li> <li>-Establishes trajectory to zero net deforestation by not later than 20 yrs. after nat'l baseline estab'd</li> </ul> <p><b>Offset quantity</b> determined by comparing nat'l emissions from deforestation relative to national deforestation baseline established by agreement</p> <p><b>Offset Activity must be designed and managed to provide:</b></p> <ul style="list-style-type: none"> <li>-sustainable forest mgmt.</li> <li>-native forest species and ecosystems</li> <li>-give due regard to rights and interests of local communities, indigenous peoples</li> <li>-in consultation with stakeholders</li> <li>-equitable distribution of profits</li> </ul> <p><b>Degradation</b> and soil carbon from <b>peatlands and wetlands</b> may be included within meaning of deforestation 743 (e)(7)</p>	<p><b>SP:</b> California <i>tracks Forest Sector</i> as a whole to monitor compliance with 5 MMt no-net-loss 2020 target in Scoping Plan.</p> <p>-Advisory Committee <b>IFWG:</b> "Interagency Forest Working Group"</p> <p><b>CAR</b> operates <i>Project</i> offset crediting, not sector crediting. Applies discount for leakage based on scale of risk.</p>		
<b>743 (e) (2) ELIGIBLE COUNTRIES</b>	<p><b>Forest Sector Offset provisions</b> limited to Developing countries with:</p> <ul style="list-style-type: none"> <li>-Bi- or multilateral agreement with US and</li> <li>-Capacity to <i>monitor, measure, verify</i> forest C fluxes</li> <li>-<i>Institutional capacity</i> to reduce deforestation including forest governance and mechanism to</li> </ul>	<p><b>MOU:</b> Limits participation to MOU signators</p>		

### OFFSETS

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Category	HR 2454 (as passed in House 6-26-09)	AB 32 CARB Scoping Plan & CAR Forest Protocols	California Impacts	ETAAC Issues
	distribute resources -Land use or forest sector plan that assesses drivers of deforestation; identifies improvements necessary to implement national program; establishes timeline for implementation			
<b>Int'l: STATE- or PROVINCE- LEVEL ACTIVITIES 743 (5)</b>	<p><b>Forest Sector Offset crediting</b> for sub-national entities comparable to national reqmts:  <i>Within 2 yrs:</i>                      EPA Administrator/ Sect'y State/ USAID to establish list of states or provinces which are major emitters from tropical deforestation                      -meets criteria of 743(e)(2)and(3)</p> <p><b>State or Province Deforestation Baseline:</b>                      -consistent with nat'l baseline                      -considers historical deforestation rates during at least 5 year period                      -considers drivers of deforestation and other factors to ensure additionality                      -established trajectory that would result in zero net deforestation within 20 yrs                      -designed to account for leakage outside the state or province.</p> <p>Offset Credits determined by comparing deforestation emissions from state or province relative to state baseline established through bi/multilateral agreement</p>	<p><b>GOVERNORS' MOU:</b> Addresses sub-national entities</p> <p>-Requires state or province performance above a sub-national baseline</p>	EPA criteria can assist CA in implementation decisions for Governor's MOU with partner states	
<b>LOW-EMITTING FORESTED COUNTRIES: Project Offsets</b>	<p><b>Forest Project Offset crediting from eligible countries: (i.e. not sector crediting)</b>                      -Eligible Countries account for &lt;1% of global GHG emissions and &lt;3% global forest sector and land use change GHG emissions</p>	<p>No separate consideration for low vs. high emitting countries</p> <p>MOU partners to date are high emitting for relevant sectors:</p>		

### OFFSETS

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743 (e) (6)	<p>-Make good faith effort to develop forest sector strategic plan</p> <p>Authorizes offset credits from <b>Project-level activities</b> that are adjusted for leakage</p> <p><b>Phase-Out:</b> No further offset credits for projects after 5 years; but may extend addtn'l 8 yrs. per reqm'ts</p>	<p><i>Forestry:</i> Indonesian provinces; Brazilian states; <i>Cement:</i> China provinces</p> <p>No Phase-out</p>		
<b>ALLOWANCE ALLOCATION for INTERNATIONAL REDUCED DEFORESTATION Title VII Part E: 754, 753,781; Part A 704</b>				
<b>SUPPLEMENTAL EMISSIONS REDUCTIONS THROUGH REDUCED DEFORESTATION §753, 704</b>	<p><b>Allocation (not offset) program</b> to achieve supplemental emissions reductions of at least = 720 MMt CO2e in 2020 = 6 BMT CO2e by 2025, plus subseq't yrs. In 2020, to provide 10% additional GHG reductions from 2005.</p> <p>-Build capacity to reduce deforestation in developing countries</p> <p>-Preserve existing forest carbon stocks esp. in countries with largely intact native forests</p>	<p>Program relevant to further development of <b>Governors' MOU</b></p> <p>-potential cooperation bet. CA and partner signators on supplemental USAID programs</p>	All relevant to CA implementation of Governors' MOU	
<b>ALLOWANCE ALLOCATION §754, 781</b>	<p><u>% Emission Allowances for Distribution</u> 2012-2025 = 5%; 2026-2030 = 3%; 2031-2050 = 2%</p> <p>Administrator may adjust annually; carryover permitted</p> <p>-Not authorized as Offsets (781)</p> <p>EPA Administrator to distribute emission allowances to eligible countries <i>or to International Funds</i> with concurrence of Sect'y of State 754 (a)</p>		"	

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	Allowances provided for 5 years, with discretionary 5 year extension if country making progress and leakage discounted 754(g)			
<b>AUTHORITY 754 (b) (2)(b)</b>	USAID has primary responsibility to select activities in consultation with EPA Administrator		“	
<b>AUTHORIZED ACTIVITIES</b>	<b>Capacity building</b> to reduce deforestation, incld'g: -sub-national pilot programs -develop national baselines -develop measurement, monitoring; leakage prevention; governance; enforcement; policy reform incentives; evaluation		“	
<b>REGISTRY OF SUPPLEMENTAL EMISSIONS REDUCTIONS §754(f)</b>	Administrator shall establish publicly accessible <b>Registry</b> of emissions reductions achieved through program, including discounting for uncertainty		Duplicative Registry?	
<b>ADDITIONAL ELEMENTS</b>				
<b>STRATEGIC ALLOWANCE RESERVE §726(g),(h)</b>	- initially stocked with allowances withheld from cap and made available at auction if allowance price exceeds 160% of three-year average. -Auction proceeds used to <b>buy international offset credits from reduced deforestation</b> to help refill reserve -Intn'l offset credits retired and exchanged for emission allowances at 80% .			