

Date	Pathway/ Strategy	Comment:	Response to Comment:
		SEQUESTRATION AND STORAGE	
		<i>Other</i>	
11/9/21	Path A overall	Not sure of latest efforts of Northeast Sustainable Ag Working Group, NOFA-VT, and others, but would encourage Vermont to build alliance with other eastern mountain states to create strong Federal Farm Bill platform and engage with National Sustainable Ag Coalition and others for farm and forest initiatives that support these pathways and strategies.	VAAFAM is a member of The National Association of State Departments of Agriculture (NASDA) and The Northeast Association of State Departments of Agriculture (NEASDA) which works to coordinate national and regional input on federal agricultural policy.
11/9/21	Path A overall	The structure, level of detail, amount of jargon, etc. in the strategies and actions varies among the sub-committees.	Noted
11/9/21	Path A overall	Places in the draft speak to transformational change, but then actions rely largely on existing programs (with no clear proposed modifications) administered by AAFM; feels inconsistent	The decoupling of Agriculture & Ecosystems Pathways, Strategies and Actions across three separate sections makes it difficult to read the sum of the recommendations at once. Ag & Eco spent a lot of time working on crafting a sum of recommendations that attempts to provide a more holistic commentary on natural and working lands and how best to leverage and capacitate the land use sectors to provide climate change mitigation, adaptation, and resilience services. Reading the 'Ag Mitigation' section separately from the other sections will elevate those programs that are best poised to provide immediate capacitation of the agricultural sector to meet its GHG mitigation targets.
JM	Path A Strat 1	As I'd noted in Section 11.4, I think we need a "research" or "future potential actions" section in the CAP but these need to be separated from current pathways.	Noted though the SC did not have time to move specific actions to another section
		<i>Gross versus Net Emissions</i>	
11/9/21	Path A Strat 2	Section that speaks to the need to "Create a system for tracking and accounting metrics and indicators for natural and working lands." should be pulled into the monitoring and assessment write-up being developed by SDSC. Research actions pulled out into a separate section of the CAP.	The GHG Emission Inventory, tracking, and crediting gaps for agriculture is a core needed strategy that should be highlighted in Agriculture and Ecosystems section: GHG mitigation cannot be tracked or quantified accurately using the current GHG Emission Inventory. The current GHG Emission Inventory does not include an accounting for the AFOLU sector that comports with IPCC standards, this should be noted.

11/9/21	Path A Strat 2	OK with "VCC should consider," based on the findings of the RFP, recommending an inventory that includes net GHG emission accounting. However, my concern is that the GWSA was clearly written to achieve gross, not net, emissions reduction targets for 2025 and 2030. While I am all for improved tracking in terms of transparency, accuracy, and confidence both re: gross agricultural sector emissions in the Inventory and re: net agricultural sector (and other land use) emissions (sources and sinks) in the carbon budget, I think we need to be clear and consistent that the 2025 and 2030 statutory emissions reduction requirements relate to gross emissions reductions and that net sinks should not apply to meeting those targets.	See below

			<p>The current DEC Vermont Greenhouse Gas Emission Inventory and Forecast (GHG-EIF) as conducted in accordance with 10 V.S.A. § 582 – which establishes the emission reduction targets promulgated in 10 V.S.A. § 578 of the GWSA – sufficiently quantifies GHG Emissions from fossil fuel-based sectors (Electricity, RCI Fuel Use, Transportation, Fossil Fuel Industry, Industrial Processes, Waste Management) included in the inventory. The current GHG-EIF does not sufficiently quantify GHG emissions and sinks from the Agriculture, Forestry, and Other Land use (AFOLU)^[1] sector per greenhouse gas inventory standards as set by the United Nations Intergovernmental Panel on Climate Change (IPCC) in its 2006 IPCC Guidelines for National Greenhouse Gas Inventories and subsequent updates, including the 2019 amendment.^[2] Where the Vermont Climate Council (VCC) has accepted and recommended the continued use of the current GHG-EIF framework for fossil-fuel based sectors, the Council has acknowledged that the AFOLU sector emission inventory protocol is in need of further research and refinement to ensure the GHG-EIF for the AFOLU sector is conducted in conformance with IPCC standards.</p> <p>Act 168 of 2006^[3] established the first ‘State of Vermont Greenhouse Gas Reduction Goals’ and was signed into law on May 22, 2006. These initial GHG emission reduction goals have been changed to emission reduction requirements by the GWSA. On July 1, 2006^[4] the IPCC published the 2006 Guidelines for National Greenhouse Gas Inventories. This 2006 IPCC guideline integrated the previously separate agricultural emissions and land use sequestration into one chapter.^[5] The</p>
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			<p>Integration of agricultural emissions with land use management has not been update in either 10 V.S.A. § 582 or 10 V.S.A. § 578 to reflect this new sectoral accounting which should be on a net emission basis for the AFOLU sector. This 2006 IPCC amendment for the AFOLU sector does not impact other sectoral emissions or emission reduction tracking quantified within the current GHG-EIF.</p> <p>Just as Act 209 of 2008^[6] amended Act 168 of 2006 by adding an important clarifying definition for what exactly is a 'Greenhouse Gas' – which was undefined in the original legislation – there is need for the General Assembly to provide a clarifying update to the GWSA with regards to how the AFOLU sector is defined and inventoried for GHG emissions and GHG mitigation tracking. The Vermont Climate Council has recommended further research to address how best to quantify and track emissions and sequestration from the AFOLU sector and will work to make recommendations for how to operationalize this change in inventory and tracking in a future CAP. Providing clarifying legislative intent by amending 10 V.S.A. § 582 to expand and integrate the scope of emission inventory, management, and tracking for the AFOLU sector will enable the VCC and DEC to comprehensively quantify emissions and mitigation efforts from the AFOLU sector. This recommendation does not affect sectors other than the AFOLU sector currently included within the GHG-EIF.</p> <p>Where 10 V.S.A. § 582(b) includes provisions and a potential framework for quantifying the AFOLU sector in conformance with IPCC standards (e.g. “[the inventory]...shall aggregate... existing statewide data on greenhouse gas sinks”; and “[the GHG-EIF] shall including the following sources: ... ‘crop practice’) by looking at carbon sinks and management</p>
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climate change. That the protocol for quantifying the AFOLU is on both an emission and sequestration basis per the IPCC does not mean that other sectors included in the GHG-EIF need - or can - embed this quantification method in their sectoral emission inventories.

The advancement of the RFP for AFOLU emissions research is a key next step in this discussion.

			<p>[1] Allwood J.M., V. Bosetti, N.K. Dubash, L. Gómez-Echeverri, and C. von Stechow, 2014: Glossary. In: <i>Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change</i> [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_annex-i.pdf</p> <p>[2] 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Section 1.1, Page 1.4</p> <p>[3] http://www.leg.state.vt.us/database/status/summary.cfm?Bill=S%2E0259&Session=2006</p> <p>[4] https://www.osti.gov/etdeweb/biblio/20880391</p> <p>[5] The 2006 IPCC Guidelines for National Greenhouse Gas Inventories integrates previously separate Agriculture (Chapter 4) and the Land Use, Land-Use Change and Forestry (LULUCF) (Chapter 5) into a single comprehensive guidance section titled Agriculture, Forestry and other Land Use (AFOLU), noting: “This integration recognizes that the processes underlying greenhouse gas emissions and removals, as well as the different forms of terrestrial carbon stocks, can occur across all types of land and that often the same practices influence both Agriculture and Land Use, Land Use Change and Forestry” Source: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Section 1.1, Page 1.4</p> <p>[6] http://www.leg.state.vt.us/docs/legdoc.cfm?URL=/docs/2008/acts/ACT209.HTM&Session=2008</p> <p>[7] Mitigation as defined at 10 V.S.A. § 590(3) as promulgated by the GWSA.</p>
JM	Path A Strat 2	Is what is being proposed focused on better accounting for work that is already being done for WQ or modifying/building upon/adapting this work to better go after GHG emissions reductions?	Quantify existing framework
		<i>Changes to Renewable Energy Standard</i>	
11/9/21	Path A Strat 7	There are a couple recommendations on changes to the Renewable Energy Standard - one on forest products and one on planting trees - that I would need more information on to understand before considering support. (PSB is PUC too - text change).	Note changes made in the draft text to be clearer about the intent.
11/9/21	Path A Strat 7	I don't have a suggestion on language or specific possible revisions - I don't understand what those recs are or what they would do/affect in RES	Note changes made in the draft text to be clearer about the intent.

11/9/21	Path C Strat 12	<i>"Prohibiting expansion" on existing biomass plants.</i>	
11/9/21	Path C Strat 12	One plant, Ryegate, is a merchant plant that has a contract through 2024 through statute and would have to present specific beneficial upgrades to extend (through legislation - would be reviewed). The other is McNeil, jointly owned by utilities led by Burlington Electric, and it supplies a relatively substantial amount of BED's generation, baseload, with specific forestry practices.	Noted
11/9/21	Path C Strat 12	BED is looking to utilize McNeil for district heating along with electricity. I don't know at this point whether "expansion" however denominated would fall within the plans for either facility and would not expect to support a prohibition as to existing facilities without further understanding of impacts.	We have clarified our intent of the word "expansion" to address numerous issues, importantly, cultural resources as well as climate.
11/9/21	Path C Strat 12	A revision to apply the prohibition solely to new electric facilities would not concern me (strike "expansion of current"), and if the intent on current facilities is to limit future current facilities making changes that would create a higher nameplate capacity for electricity production - rather than any 'expansion' as drafted, which could in theory include improvements/upgrades including those that would extend the life of the facilities - then I may be able to support it, but do not expect to be able to do so as drafted. It would have to be more nuanced than currently drafted as to those facilities.	We have clarified our intent of the word "expansion" to address numerous issues, importantly, cultural resources as well as climate.
11/9/21	Path C Strat 12	Recommending a ban on biomass for thermal heat has significant implications that need robust discussion; unprepared to currently support	We are not proposing banning nor necessarily promoting biomass for thermal heat at various scales, but rather, if biomass is promoted in Vermont through state policy, that policy should be grounded in rigorous research, understanding, monitoring and enforcement to ensure climate neutral to climate positive results.
11/9/21	Path C Strat 12	Entire narrative around biomass for thermal heat raises concern	We are not proposing banning nor necessarily promoting biomass for thermal heat at various scales, but rather, if biomass is promoted in Vermont through state policy, that policy should be grounded in rigorous research, understanding, monitoring and enforcement to ensure climate neutral to climate positive results.

11/9/21	Path C Strat 12	Suggest "large scale" and "industrial scale" be defined by kw or other metric.	The Subcommittee did not have the expertise nor time to provide a more technical definition.
11/9/21	Path C Strat 5	Under Pathway C-5f suggest sustainable harvest be defined, preferably to include ecosystem integrity and not just forest regeneration	Noted.
11/10/21	Path C Strat 5	Concerns included jointly owned plants, the potential for district heating (at electric plants – one councilor has provided suggested language changes to Abbie), and especially the impacts on the forest products industry. Wanted a recognition that wood heating is nearly always better as a heating source than fossil fuels on a wide variety of metrics.	We are not proposing banning nor necessarily promoting biomass for thermal heat at various scales, but rather, if biomass is promoted in Vermont through state policy, that policy should be grounded in rigorous research, understanding, monitoring and enforcement to ensure climate neutral to climate positive results.
JM	Path C Strat 5	As drafted, this heading would seem to include/cover single-family homes that heat with cordwood, although this is not addressed in the specific strategies identified below. Clarity will be important.	The recommendation is not intended to cover single-family homes and cordwood for heating.
JM	Path C Strat 8	Feels incomplete... there is a lot of manufacturing/industry needed to take these types of products to scale that doesn't currently exist. This needs to be acknowledged somewhere... MA is leading an effort on MASS timber that should be reviewed and referenced.	Programs elsewhere in NE are noted and we added that this recommendation would require scaling up an industry base that does not currently exist in Vermont.
JM	Path C Strat 10	Because this is an industry/sector-specific subset, seems like this should be brought together with the heavy-duty vehicle strategies in cross-sector mitigation.	Noted but insufficient time to make this change. Can be done in the final draft of the CAP.
		AGRICULTURAL MITIGATION	
11/9/21	D.	Need clarity about whether agroforestry and silvopasture is focused on incorporating woody vegetation into existing agricultural lands or opening new areas (existing forestlands) for agriculture, and which scenario the presented benefits apply to.	<p>Directionality of integration of tree species, forage, or both is a site-specific question.</p> <p>The USDA NRCs Conservation Practice Standard for “silvopasture” includes the following definition: Silvopasture establishment involves establishing a combination of trees and compatible forages on the same acreage. Shrubs may be used along with trees and forages where desired and compatible.</p> <p>USDA outlines one of three scenarios as being eligible under their practice scenario: Silvopasture systems are specifically designed and managed to produce trees, forage, and livestock on the same acreage. Silvopasture is created when:</p>

			<ol style="list-style-type: none"> 1. forage crops are introduced or enhanced in a forested system (typically a plantation), 2. when trees are added to a forage system, or 3. when both trees and forages are established on suitable land. <p>“Silvopasture” in Vermont will be the addition of trees to an existing forage system through current NRCS-VT Practice standards.</p>
11/9/21	A.	Concerned about equity for many actions pointing to existing programs at AAAFM; could be read to say that existing programmatic framework is fully equitable because it offers funding to all farmers; I don’t believe this is like the case and suspect that smaller farms are challenged by a number of these practices that require specialized equipment that is harder for them to access/utilize	The narrative in the action table will be updated to attempt to respond to the equity consideration more directly.
11/9/21	Overall	Explore means by which to make federal ag policy and programs work better for Vermont. This could be accomplished through strengthened alliances with other Eastern Mountain states. If not being done at present, develop data and reports on conversion of farmland to other uses.	AAFM is a member of NEASDA and works to coordinate with NE states to inform federal agricultural policy.