Empire State Forest Products Association

The people behind New York's healthy forests and quality wood products

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Comments on

Draft Scoping Plan

6/29/22

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Overall Comments

The Empire State Forest Products Association (ESFPA) represents forest landowner loggers, haulers and other along the harvested wood products supply chain, and wood product manufacturers from paper to saw logs and biomass heating to furniture. Our 350+ members are the single voice for wood product manufacturing and the multitude of renewable wood resources sustainably managed and produced in New York. New York's forests and wood products are the single largest natural solution to climate change, and we are proud to be leaders in forest management and making products from carbon sequestering trees.

Our comments follow the chapters of the draft Scoping Plan dated 12/30/21. However, we have some overall comments that frame our position on the plan as presently drafted. They fall into six broad categories – (1) the forest; (2) wood products as additional carbon storage and substitution benefits for other fossil fuel derived products; (3) the role of markets in keeping the forest as forest; (4) the sensitivity of wood products to leakage; (5) forests as a low carbon energy resource; and, (6) the overall costs of this draft Scoping Plan.

First, New York's forests are the most widespread landscape feature of the state. Nineteen million acres, or 64% of the terrestrial area on New York is forested. Our forests are literally the "lungs" of New York, sequestering over twenty-five million tons of carbon on an annual basis. More importantly, fourteen million acres, or 75%, of our forests, are owned by hundreds of thousands of New Yorkers. These family woodlot owners have and continue to steward these forests in a way that benefits all New Yorkers through a healthy and diverse set of ecological and economic benefits that no other natural resource brings to the climate table. About 14% of our forests are owned in what can be categorized as "industrial forests" in large parcels managed in large measure for timber and fiber production. The draft climate Scoping Plan must address both the vastness and diverse private ownerships of our forests in a much more forceful way. We need to focus on strategies that capitalize on sustainable forests that, through active management, bring additionality to the contributions our forests.

Second, sustainably managed forests yield more than carbon sinks and carbon sequestration. Harvested wood products sequester carbon for long periods of time and offer substitution benefits to products otherwise derived from fossil fuels. Durable wood products used in our buildings and infrastructure

contribute upwards of 1.51 MMt of carbon for long periods of time. Wood, or biomass, can deliver substitution benefits for products made to consume large quantities of fossil fuels in their production (plastics, metal, and concrete). In addition, there are emerging classes of products that cellulosic biomass can produce that otherwise are produced from fossil fuels – plastics to bioplastics, petrochemicals to biochemicals, diesel to biodiesel. These advanced bioprocessing products have much less carbon emissions than their fossil fuel counterparts and hold the prospect of both new markets for harvested wood and economic benefits of production within New York.

Third, one of the strongest recommendations of the draft Scoping Plan for forests is to keep our forests as forest and even recommendations for planting more forests on suitable lands throughout the state. However, keeping our forests means that private forest landowners need to be able to afford their forests, and active forest management requires forest landowners to invest in their forests. Afforestation and reforestation also require forest landowners to see a return on the investment of planting trees. While the draft Scoping Plan includes both regulatory and government incentives that will help keep the forest as forest, it is remiss in not addressing the significance of private market forces that are and will be the largest inducement for private forest landowners. If we lose markets for wood products, we will lose our forests.

Fourth, New York's wood product manufacturers compete on a global stage. Our wood product manufacturers are among the most energy intensive and trade exposed (EITE) manufacturers in New York, and yet the draft Scoping Plan does not mention them as exposed to these sensitivities. These wood product manufacturers are the largest market driver in incentivizing forest landowners to keep their forest as forest. If we are not careful these markets will "leak" out of New York to other states or other countries. In almost every case this "leakage" will result in larger carbon footprints and greater environmental impacts than if these manufacturers remained in New York.

Fifth, low grade biomass and manufacturing residuals provide an excellent stock for low carbon energy resources. From firewood to high density wood pellets to refined liquid biofuels to residuals from wood product manufacturing used for energy in the production process. The derivation of energy is an optimized end-of-life use for this material that would otherwise be left to decay and release its carbon in the forest or in landfills. Low grade wood and fiber markets are also essential to support sustainable forest management. To take the best and leave the rest results in management known as high grading that is neither sustainable nor healthy for forest regeneration.

Finally, the overall costs and financing of the draft Scoping Plan is not fully disclosed or sufficiently discussed. We all know that implementing the many recommendations in this report will lead to significant GhG emission reductions, transition to a low carbon economy and an overall healthier environment, but at what expense to taxpayers and New York's economy? People and businesses in New York need to understand the real costs associated with implementing the breadth and depth of recommendations in this plan. It needs to be presented in simpler terms and expressions that relate to their circumstances.

When it comes to the role of forests and wood product manufacturing, The IPCC 2022 Special Report says this best:

> "In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of *timber, fibre,* or *energy* from the forest, will generate the largest sustained mitigation benefit."

The following includes our comments on a chapter-by-chapter basis.

Chapter 2: The Time is Now for Decarbonization

2.1 Scientific Evidence of Our Changing Climate

The evidence is clear that our climate is changing, and New York (NY) is clearly leading on many fronts of implementing policies, programs and regulations that will result in Greenhouse Gas (GhG) reductions and reaching net zero across NY's economy. It is equally evident that if NY is successful in implementing the Scoping Plan it will still only have a minimal (if not infinitesimal) impact on global climate change. We should be honest with New Yorkers about what all these changes will produce and that there is a lot more that must happen nationally and internationally if we expect to see global changes to the climate.

2.3 Benefits of Climate Action

On page 7 you are correct in that NY's actions "will encourage other jurisdictions to implement complimentary GHG reduction strategies", but it is also clear that NY could put itself in a competitive disadvantage if other jurisdictions do not respond or if they respond differently. There could be many unintended consequences in NY should other jurisdictions respond differently or do not respond. While the Climate Leadership and Community Protection Act (CLCPA or Climate Act) calls for a review of the Scoping Plan every 5 years it does not have built in "relief" to course correct if we are hurting New York's economy. We would recommend that there be continuous monitoring and reporting so that changes can be made as soon as unintended consequences beginning to occur. We also recommend that monitoring and reporting be reflective of the monitoring and reporting used in other states, at the federal level and by the Intergovernmental Panel on Climate Changes so we can compare "apples to apples." (See our comments on Chapter 4, Current Emissions.)

Chapter 4: Current Emissions

The CLCPA sets forth emissions accounting protocol that are unique to our state. For example, we are valuing Global Warming Potential (GWP) on a 20-year basis where the national and international benchmark is on a 100-year GWP. In addition, we are treating all emissions the same. So anthropogenic biomass emissions are treated the same as fossil fuel emissions where globally, biogenic emissions are treated as carbon neutral.

The Draft Scoping Plan should also include New York emissions reports parallel with the regional, national, and global level so we can truly see where New York stands relative to other jurisdictions.

Also noted is that total biogenic emissions are exceedingly small as a portion of statewide emissions (less than 4%). This seems small but on health benefits, the draft Scoping Plan documents that burning wood accounts for 40% of all health benefits. See our comments on Chapter 10 – Benefits of the Plan and supporting documentation on health benefits.

Net total emissions reported on page 23 removes biogenic CO2. Does this mean biogenic CO2 will be treated as carbon neutral due to sequestration?

4.1 Summary of Sectoral Emissions

Under Buildings it would be useful to have % breakouts for fuels used in buildings – natural gas, distillate fuels (heating fuel oil #2), wood, propane, kerosene, and residual fuel oil.

Page 26 – “The only current method for removing emissions from the atmosphere is through the process of natural carbon sequestration, which is a service provided by our forests, croplands, and wetlands.” It would be useful to show % removals for forests, croplands, and wetlands. Forest sequestration accounts for 82%. New Yorkers need to know that the significance of our forests in achieving sequestration goals.. It would be useful to report removals by natural resources, including the percentage sequestered by forests, agriculture, and wetlands.

Chapter 5: Overarching Purpose and Objectives of the Scoping Plan

5.3 Summary of Strategies:

Just want to note that “Maximizing carbon sequestration in New York’s lands and forests” depends mostly on private forest lands. One hundred percent of farmland and 75% of forest lands are privately owned and managed. This has significant implications for select strategies and presents significant sensitivity to future land use decisions by the landowners.

For the solutions for industry, we want to note the use of biogenic sources of fuels (e.g., bark, chips, saw dust and black liquor) which are unique low-carbon fuels essential to harvested wood product manufacturing.

Chapter 7: Just Transition

Overall, the advice on potential impacts of carbon leakage to New York industries and communities is woefully weak. There were limited recommendations identifying sector specific impacts and we know that paper and wood product manufacturing are energy intensive & trade exposed, this sector was never mentioned. There was no effort to understand the integrated nature of the forest products sector (from forest to mill to consumer) and the role that markets play throughout this supply chain. This when the Plan emphasizes - “the principles have been developed to support a fair and equitable movement from fossil fuel-based economies toward achievement of the carbon neutral future envisioned by the Climate Act.” The forest products sector should be a poster child of achieving these “principles.”

7.1 Just Transition Principles

Table 2. Just Transition Principles

Principle on “Protection and Restoration of Natural and Working Lands Systems & Resources” does not recognize the significance and contribution of forests. It fails to note that both agriculture and forests are largely privately owned farms and woodlots.

7.2 Workforce Impacts and Opportunities

Direct Displaced Worker Support

There is a lot more potential for displaced workers than in the power generation sector. This should include an analysis of the potential for displaced workers due to manufacturing “leakage.”

Evaluation of Labor Standards

Within the wood products sector there exist “family sustaining wages” without extensive labor provisions for apprenticeships, prevailing wage, and project labor agreements. Implementation of many of these labor standards could have deleterious impacts on the wood products sector which already is sensitive to global competition. There should be a cost impact analysis of the labor

standards across manufacturing sectors and a sensitivity analysis of what impacts this would have on existing manufacturing.

7.3 Measures to Minimize the Carbon Leakage Risk and Minimize Anti-Competitiveness

This entire section is extremely weak. Leakage has real potential in New York under the recommendations within this Scoping Plan and limiting the discussion, consideration, and potential actions, providing less than a page to this issue is inadequate. Punting consideration of leakage to the time when the state implements this draft Scoping Plan and careful monitoring is nothing short of offensive to manufacturing and other businesses within New York. We would recommend some detailed analysis of the potential for leakage within sectors of manufacturing.

Set Industry-Specific Benchmarks:

We will be looking for harvested wood product manufacturing targets both within the sector and at the plant level reflecting the biogenic emissions of these facilities, use of process residuals to produce heat and energy which otherwise would become wastes, and the risks of leakage on a global scale.

Chapter 8: Public Health

8.2 Considering Health in Climate Policy

"Although the state currently complies with the requirements of, or is "designated attainment for," the National Ambient Air Quality Standards for the criteria pollutants carbon monoxide, lead, nitrogen dioxide (NO_2), and PM, substantial additional health benefits will be achieved through continued emission reductions." Are we suggesting that National Ambient Air Quality Standards are not sufficient?

8.3 Sector Specific Health Co-benefits of Climate Policies

Transportation:

Page 63 - 'When compared with petroleum-based fuels, biodiesel and alcohol-based fuels have higher levels of combustion emissions of respiratory irritants and some ozone-precursors such as acrolein, carcinogens, formaldehyde, and acetaldehyde.[115] The citation 115 has nothing to do with biodiesel. Citation 116 appears to focus on methyl and ethyl emissions relative to biodiesel.

Buildings and the Built Environment

This section should include a mention of the physical and mental health benefits of the use of wood in the built environment. Wood has been used as a building material for millennia, but the "biophilic" benefits of wood are only recently being studied and understood. Research is showing that incorporating wood and other natural materials into our buildings can reduce stress and contribute to good mental health.

According to many authoritative studies, exposure to wood products both indoors and outdoors creates similar health benefits to those created by spending time in nature. Incorporating natural materials such as real wood cladding and flooring into a built environment helps reduce blood pressure, heart rates, and stress levels, whilst improving well-being, creativity, cognitive abilities, and the air we breathe.

A convergence of five major trends enhances the case of wood buildings and wood interiors for economic, organizational, and human benefits:

- Changes in construction codes allow for bigger and larger wooden buildings.
- The public and big investors are urging the government to take action to combat climate change, while the spreading of green building certifications promotes sustainable development and building upgrades.
- Employers who are concerned with enhancing the well-being of their employees are incorporating strategies to enhance indoor environmental quality.
- A growing body of research documents the benefits of green buildings to health and productivity, particularly those using wood construction or finishing.
- Corporate sustainability approaches tie environmental and human resource priorities more closely together.

Outdoor built Environment

A stronger emphasis on non-urban forests should be included here. The aesthetic and physical benefits of forests, both publicly owned and privately owned are substantial. In addition, some mention of the environmental and economic co-benefits of managed forests should be discussed.

Housing and Residential Built Environment

Again the "biophilic" benefits of wood should be included in this section. In addition, the use of cellulosic materials in such items as insulation can provide significant substitution benefits for otherwise fossil fuel derived products. ESFPA has concerns in regards to the health benefits of reduced use of biomass and biofuels and we have addressed these in a separate set of comments within chapter 10 and our attached addendum.

Commercial/Industrial Built Environment

We would suggest adding something regarding the use of biofuels for Carbon Capture and Storage (BECCS) which can achieve deep negative emissions. In fact, they are the only carbon capture technology that can achieve net negative emissions.

Chapter 9: Analysis of the Plan

9.2 Scenario Design

We are pleased to see the Carbon Sequestration in Lands and Forests and the emphasis on all three scenarios that "Forest sequestration returns to 1990 levels (35MMT)". It should be emphasized that this increase in sequestration will occur, if it occurs, on private forest lands where active forest management can bring additionality. We also want to note the role of wood product markets in helping to achieve this. Scenario 2: Strategic Use of Low-Carbon Fuels adds new markets for harvested wood products which addresses the lack of low-grade markets in NY as well as fostering long-term forest management by private forest landowners.

The discussion of Carbon Capture and Storage/Utilization (CCS) in the tables as well as text on page 74 should acknowledge the role of Bioenergy Carbon Capture and Storage/Utilizations (BECCS).

ESFPA supports Scenario 2: Strategic Use of Low-Carbon Fuels, not only for the emission reduction benefits that are achieved but for the additional benefits that are achieved in the environment (clean water, clean air and biodiversity), in the economy (expanded production of wood products and advanced bio fuels and bio-products, but also the role that strong and diversified wood markets bring to forest landowners and helping to keep the forest as forest. Sustainable forest management yields healthier and more productive forests while delivering stronger sequestration and long-term storage of carbon in wood products.

9.3. Key Findings

Under the "**Low Carbon Fuels such as bioenergy**" bullet we suggest adding that bioenergy can deliver alternative fuels for aviation and marine applications. In addition, that bioenergy is the only energy resource that yields substantial environmental co-benefits in clean air, clean water, and biodiversity.

Under "**Large-scale carbon sequestration opportunities include lands and forests and negative emission technologies**" we suggest mentioning that additionality in sequestration forests will be accomplished on private forest lands and necessitates increased active forest management to increase yields. Business as usual (i.e., leaving the forest as it is) does not yield additionality. This built should also mention that Bioenergy Carbon Capture and Storage/Utilization is the only means of achieving net negative emissions.

Chapter 10: Benefits of the Plan

10.4 Health Effects

Page – 87 - "Approximately 40% of the projected benefits are associated with reduced wood combustion in industrial, commercial, and residential uses."

ESFPA has several concerns with the characterization and quantification of these impacts. While wood emissions only account for about 9% of all emissions, this seems very disproportionate in woods role on health effects.

ESFPA commissioned the SUNY College of Environmental Science & Forestry (ESF) to conduct a sensitivity analysis of the health benefits resulting from wood combustion and PM2.5 emissions in New York State. Using publicly available data used in the draft Scoping Plan and some additional EPA data sources ESF was able to produce statewide as well as county level benefits of reduced wood burning in the residential, commercials and industrial sectors. We have included and addendum to these comments which provides a PowerPoint summary of this work.

Using county level analysis there are eight downstate counties with three upstate urban counties (Erie, Monroe and Onondaga) that account for 73% of the cumulative health benefits of reduced wood burining emissions. Rural and most suburban upstate counties show a small, neglible, portion of the health benefits yet these account for the vast majority of residential, commercial, institutional and industrial wood burining emissions within the state. We would also note that a more targeted effort of reducing PM2.5 wood buriniing emissions would yield even greater noet

benefits when the potential economic impacts of reducing wood buring in rural and suburban counties is eliminated.

Further, we would suggest that recalibrating the analysis used by the state to focus on census tracts or postal codes could further targets areas that would most benefit from reduced wood burning emissions and not adversely impact areas dependent on wood burning for building heat or commercial/industrial manufacturing processes. In addition, even greater net benefits could be achieved.

Chapter 11: Transportation

11.1 State of the Sector

Key Stakeholders

There should be a bullet recognizing the private sector in these strategies. From individual passenger cars to corporate fleets in this sector are dominated by private investors, buyers, and owners who ultimately must make please purchase decisions in transitioning to electric or lower carbon fuel vehicles and fleets. In addition, the private sector has a huge role to play in deployment of EV charging stations and alternative low-carbon fuel distribution. This section relies too much on government investment and regulation and not enough on how private sector decisions, investment, and markets will drive transition.

11.2 Key Sector Strategies

T2. Adoption of Zero Emissions Trucks, Buses, and Non- Road Equipment

The role of medium and heavy-duty vehicles in our sector is critical and one that without efficiency as well as controlled costs could disrupt the supply chains that exist in New York. Medium and heavy duty on-road vehicles are critical to the supply lines from forest to mills and include everything from transporting foresters and loggers to and from the woods as well as heavy duty hauling tractors and trailers equipped with log loaders. These vehicles travel from their point of origin upwards to one hundred miles where they meet loggers in the woods, spend hours loading logs or chips and then run to mills which receive the timber and fiber to concentration yards and manufacturing facilities scattered around rural New York. In any given day, a hauler may make 1-2 runs to mills per day that in some instances operate 24/7. While we are aware that medium and heavy-duty EV technology is finally getting close to production after several years of delays, there is currently no EV log truck that can operate in the conditions in which they work throughout rural New York State.

The nature of log hauling in New York is largely handled by independent haulers who live in rural areas of the state. Presently, there is insufficient infrastructure deployed to meet the demands of both medium and heavy duty EV's in the forest sector. Build out of charging infrastructure is vital should any mandate for increasing the number of EVs sold in the state. However, some hurdles would remain even if the infrastructure were in place particularly around the area transport and loading of logs from the wood lots to the mills. The demand for energy is more than just driving to

and from wood lots. It also includes the trucks ability to load logs and unload in the wood yards of the mills and concentration yards.

On the other end of the supply chain, we have logs, lumber and paper products from mills and concentration yards throughout upstate New York that need to transport harvested wood products throughout the state, inter-state across the country and to ports where products are shipped overseas. This distribution network is not universally supported by EV infrastructure to ensure timely delivery of our products. It is also unclear how demands for charging would impact e-logs of haulers and ensure that products can efficiently be distributed within what are already tight time and cost margins.

Electrification is reaching the commercial vehicle market. But with limited initial ranges of electric medium and heavy-duty trucks, it is clear that manufacturers are targeting last-mile and urban short distance deliveries for first deployments. Towing reveals how extreme weight and aerodynamics impact EV range. Based on a literature review of heavy-duty EV trucks, a broad rule of thumb is that towing, and payload will effectively cut the vehicles rated range in half and in some circumstances (such as heavy awkward loads of logs and some farm products) the towing can cut EV range as much as 80%.

One thing is certain, over the next two decades internal combustion engines are not going away. Even if the EV market reaches the projected 42% of the class 2b through 8 vehicles, that still means that more than half of the marketplace is going to be internal combustion powered. We believe this will require the rural (e.g., farm and forest transports) and long-haul transports to have viable low carbon fuel alternatives that are not being considered in this rulemaking. We strongly urge DEC to consider supporting the establishment of a clean fuel standard for New York, such as proposed in A. 862/S. 2962 (Woerner/Parker). The clean fuel standard is designed to foster investment, facilitate transition, and provide a range of technology alternatives in the clean fuel economy, including renewable liquid fuels for difficult to decarbonize transportation sectors.

Another concern with the proposed recommendations is cost and inadequate incentives to help meet the stated yearly goals. Although, New York State currently has some financial incentives for cleaner vehicle technology through the New York Truck Voucher Incentive Program (NYTVIP), the program is often oversubscribed. Further, the program requires that voucher project result in verifiable emissions reductions and air quality improvements by decommissioning current diesel vehicles through a scrappage process, making it difficult for logging and wood product fleets to transition their equipment appropriately. New York's incentive programs to date cannot bring to scale the conversions as well as transitions that will be necessary to meet the reality of our transportation sector in achieving zero and near zero vehicle emissions.

T10. Transportation Sector Market-Based Policies

Mileage-Based User Fees – Page 116 "The state should enact legislation to establish a per mile fee system to fund investment in transportation infrastructure." This would penalize rural areas of New York where businesses as well as employees must travel many miles to and from work, shopping, and other essential services. This would also impact long hauls from manufacturers to retail outlets and customers national and globally.

T 11. Unlock Private Financing

Components of the Strategy – In the forest sector there is a lot of leasing of vehicles in our fleets. How does this "private financing" operate in a lease environment? Including recommendations for leased vehicles will be important as a market mechanism.

T 12. Low Carbon Renewable Fuels

For harder to electrify vehicles and equipment, the scenarios identified for meeting the Climate Act GHG emission reduction requirements rely, in part, on the increased use of lower carbon renewable fuels, including renewable diesel, renewable jet fuel, and/or green hydrogen. We support the Clean Fuel Standard as a means of achieving this. We also note that advanced biofuels derived from cellulosic feed stocks will generate expanded low-grade markets which are essential to sustainable forest management.

Chapter 12. Buildings

Overview

Regarding embodied carbon overall the Scoping Plan has missed a tremendous opportunity to emphasize the use of wood in buildings and infrastructure. There is a tremendous opportunity to expand the use of wood in both public and private building projects and we should be amending bid requirements, contracts and building codes calling for the use of wood wherever possible as a means of storing carbon in long lived, durable wood products in buildings.

It is important to recognize that Air Source Heat Pumps (ASHPs) in regions of NY where temperatures are below zero degree many days, the use of wood as a secondary heat system is mentioned. We need to be consistent in the way we use wood systems for thermal heating in both residential and commercial structures.

We would also suggest that in some parts of New York wood based district heating should be considered. There are a number of commercial or institutional, or collection of buildings where wood heat systems make perfect sense. Use of highly efficient, emission compliant chip and pellets wood systems (a.k.a Modern Wood Heat) could provide heat and generate electricity which could be used for charging batteries or storage.

At a certain scale and with technological innovation, use of Bioenergy Carbon Capture and Storage (BECCS) can be a net negative emission. Large wood fired facilities could, at some point, adapt tis technology.

Finally, this whole Buildings chapter tends to have a stronger focus on residential and commercial buildings. We need to recognize the heterogeneous natural of commercial; and industrial manufacturing processes and that there should be sector specific and possibly plant specific actions and recommendations.

12.2 Key Sector Strategies

B1. Adopt Advanced Codes for Highly Efficient, All-Electric, and Resilient New Construction

B2. Adopt Standards for Zero Emissions Equipment and the Energy Performance of Existing Buildings

Wording in these recommendations is unclear as to the use of wood burning devices in residential, commercial, and industrial buildings. We need to be clear and consistent on how New York's Building Code and Energy Code will treat wood burning appliances. As noted above, installation of ASHP's may require secondary backup systems which could include wood. Wood is a renewable, sustainable, and locally sourced energy resource. Wood energy is also the only renewable energy resource that provides a net environmental benefit in clean air, clean water and wildlife habitat and carbon sequestration.

The latest New Source Ambient Air Quality Standards adopted by New York ensures that new wood burning appliance meet the nation's most stringent air quality standards and protect human health. High density pellet heating systems deliver tremendous thermal benefits with extremely low emissions. There should be a greater emphasis placed on replacing existing wood heat systems with modern wood heat systems. NYSERDA does have a Renewable Heat NY program however it has been inadequately funded and marketed.

Harvested wood product manufacturers also use their wood residuals (bark, chips, black liquor) in their manufacturing processes to generate heat and electricity. Our paper manufacturers can generate nearly 100% of their heating needs for making paper and our wood mills use chips and bark to generate heat for kiln drying. Wood mills also generate saw dust which is used is manufacturing high-density wood pellets.

It is unclear how far into industrial buildings and appliances zero emission equipment will enter into standards for manufacturing equipment. These broad code changes do not take into consideration the heterogenous nature of manufacturing and the complex building and equipment typologies that exist.

Agree with the recognition of larger, complex building typologies and we should specifically reference this as it relates to industrial and manufacturing buildings.

Several legislative proposals recently have suggested that financial considerations are not a sufficient basis to determine infeasibility. We are concerned that such approach underestimates the cost impacts of this electric building mandate. We expect that the capital and/or operating cost impact of this mandate will discourage industrial and commercial investments in the state – impacts that could be avoided providing an expanded consideration of infeasibility to include economic infeasibility.

"Zero emission standards to phase out fossil fuel combustion equipment." The **i**mportant thing here is "fossil fuel" equipment. We need to ensure the continued utilization of bio-based fuel sources, including wood and wood manufacturing residuals (e.g., black liquor) for thermal heating and behind the meter electric generation.

Reference to zero emission standards and replacement of gas/oil equipment should be limited to fossil gas and fossil oil. Need to be careful on the reach to industrial equipment. We also need to retain the definition of "appliances" in the Energy Code that excludes commercial and industrial process equipment and appliances.

B3. Energy Benchmarking and Disclosure

Components of the Strategy

It is unclear whether industrial buildings would be included in benchmarking. Often building code language for "commercial" means everything non-residential. While we can generally support

energy benchmarking, particularly as it relates to building heating. If the state is to adopt benchmarking with public disclosure there needs to be some means to avoid publicly reporting any detailed production and energy consumption that could constitute business confidential data.

B4. Scale Up Public Financial Incentives

The incentives discussed in this section appear to be limited to the residential sector. The costs of meeting advanced building and energy codes on commercial and industrial buildings and appliances will be phenomenal. We must look at the suite of financial incentives and assistance that may be required to bring these changes into commercial and industrial buildings and processes.

B5. Expand Access to Public and Private Low-Cost Financing

NYSERDA should amp up and expand the Renewable Heat NY to accelerate replacement of existing and installation of new high-efficiency, low-emission wood heating systems for homeowners and businesses. As of August 1, 2021, all the funding for RHNY was fully allocated and no new incentive applications are being accepted.

Expand New York's Commitment to Market Development, Innovation, and Lead-by-Example in State Projects

The State should demonstrate the use of wood in managing embodied carbon in building construction and heating. Demonstrating the benefits of using wood and the efficiencies it has in addressing decarbonization of buildings.

B7. Invest in Workforce Development

Training for architects, engineers, and designers on the use of wood for reducing embodied carbon should be included.

B10 Reduce Embodied Carbon from Building Construction

There is currently a broad lack of awareness in the industry of embodied carbon impacts from products in use in buildings, including among designers, contractors, and manufacturers. Conversely, there is a tremendous opportunity to increase and expand in state manufacturing of low-carbon alternative products. There are some strong recommendations included in this section that we need to bring to scale ASAP.

We really need to bring to scale the amount of funding to the Wood Products Development Council if we meaningfully want to expand and enhance the production of harvested wood products. We also need significant investment in market development for advanced bio-products as being developed at SUNY ESF and Cornell CALS.

Chapter 13: Electricity

13.2 Key Sector Strategies

E3. Facilitate Distributed Generation/Distributed Energy Resources

We need to find ways to take pressure off the location of ground mounted solar that involves the conversion of forest land. Placing emphasis on rooftops and parking lots is important.

Consider the use of wood in solar mounting structures to reduce embodied carbon.

E4. Support Clean Energy Siting and Community Acceptance – With the Scoping Plan also contemplating a No-Net-Loss of Forest policy, we need to factor in minimizing the impacts on forest lands. We fully support efforts to implement effective ways to build solar generation structures on "grey fields" like parking lots. Add forests to "minimize the impacts on lands identified by community\ties with other competing uses such as farming and agricultural soils."

Concur with the need for the "State to conduct further analysis to identify and implement ways to build economic or incentive structures to increase development of commercial rooftop and parking lot solar installations paired with storage." This could also be paired with district and larger scale institutional wood heating systems.

E5. Promote Community Choice Aggregation – We would encourage NYSERDA to investigate working with campuses and institutions to enable the development of wood fired micro-grids and district clean energy systems.

E8. Improve Reliability Planning and Markets – We are genuinely concerned about the measures for ensuring system reliability without sufficient dispatchable generation. There appears to be a heavy reliance on battery storage which is just not up to speed in meeting demand in critical peak periods. There could be too much emphasis on Demand-Side Opportunities and meeting demands in the manufacturing sectors.

E 10. Explore Technology Solutions – ESFPA strongly supports the need to explore technology solutions that involve biomass and Renewable Natural Gas (RNG) and the role these renewable energy resources can contribute to meeting the CLCPA GhG emission reduction goals. Achieving the ambitious goals established by the CLCPA will require a diverse set of solutiuons, flexibility and an all technology options approach.

Biomass (in both liquid distillates and solid forms) and RNG can reduce GhG emissions, create jobs, and enhance energy supply diversity today through available technologies that are improving quickly. Achieving the goals of the CLCPA will require mobilizing all levels of industry, deploying new technologies, utilizing existing assets in new ways that balance among competing goals. Biomass and RNG, unlike intermittent resources, is available 24/7 for reliable production and delivery. These resources can also be distributed around the grid to meet dispatchable needs on a local or regional basis. When not in demand they can also be used to generate power for battery storage.

Biomass and RNG projects can benefit local economies, make use of agricultural and forect residuals and products that otherwise need to be disposed of and make for healthier more resilient agriculture and forests.

Chapter 14. Industry

14.1 State of the Sector

ESFPA believes there should be Industrial Sector considerations relating to the role that paper and wood product markets have in encouraging and supporting forest management, forest carbon sequestration and adding sequestration in durable hardwood products. Paper and wood product manufacturing is the only industry that has a net positive environmental and carbon benefit in clean air, clean water, wildlife habitat and biodiversity as a result of the forest management and forest health benefits that sustainable harvest of wood and pulp can produce.

The IPCC Fourth Assessment Report says this best:

> "In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of *timber, fibre,* or *energy* from the forest, will generate the largest sustained mitigation benefit."

We strongly supported the notion that "In some limited instances, industrial sources might be able to qualify for the use of and alternative compliance mechanism…" (page 183).

There should also be a paper and wood products industry consideration of the use of manufacturing process residuals both in the thermal and electric generation processes of manufacturing (paper and kiln drying of wood) and in the production of densified wood pellets. These should be recognized as beneficial end-of-life uses.

I2. Low-Carbon Procurement – There is an egregious omission of wood products in this section. There is no better low-carbon product than wood and it should be added here. We should be pushing the use of wood and bio-based products throughout the public and private sector procurement processes for buildings and infrastructure. Public procurement programs such as GreenNY should direct bidders on projects in using selected wood building materials to meet minimum GWP standards in all projects. Advanced Codes should specify for the increased use of wood and bio-based projects in all buildings to meet minimum embedded carbon in new and substantially restored buildings. There should also be some preference and bonus for sourcing NY wood and bio-based products.

I3. Workforce Development – Should include a workforce development enabling initiative on training workers on the use of advanced wood technologies such as mass timber. In addition, training to building architects, engineers, and designers on the benefits of using wood in buildings and infrastructure.

I4. Research, Development and Demonstration – On page 189 we would suggest adding to the third bullet "wood product residuals." These are currently used in limber (kiln drying) and paper manufacturing.

I5. Greenhouse Gas Reporting – We have reservations about expanding the registry and reporting system beyond the existing threshold and its regulatory impact on EITEs. We also believe that the greenhouse gas reporting should include distinguishing GHGs from biogenic versus fossil fuel sources.

I6. Economic Incentives – The State should recognize and develop the existing wood based in-State supply chain of its first and longest lasting "green economy businesses" in the wood and paper manufacturing sectors. There is an opportunity here to recognize and encourage Bio Opportunity Zones, particularly as it relates to the advanced bioeconomy identified in the Agriculture and Forest Chapter.

Chapter 15. Agriculture and Forestry

15.1. State of the Sector

Overview

This overview should spend some time on the landscape significance of farms and forests. Forests encumber 64% of the terrestrial landscape of New York and farms encumber 21% - in total 85% of the state's landscape. In addition, 75% of our forests and all our farmland is privately owned and

these private landowners will be the ones that deliver carbon storage and carbon sequestration benefits, as well as the co-benefits of clean air, clean water, biodiversity, and recreational co-benefits. These same landowners have private property rights and expectations on a return of investment on the lands and resources they steward. If we expect our forests and farms to deliver the climate benefits as well as feed and provide valuable wood products to our residents and the world, we owe them some recognition and appreciation for what they bring to natural (and affordable) solutions to climate change.

The Overview must stimulate conceptualization of the landscape scale of these resources and the extent to which we need to bring to scale the assistance, market forces, and incentives to have our farms and forests achieve the sequestration outcomes that it will take to offset 60 MMT by 2050. Also, the consequence of even greater emission reductions beyond 85% should we not achieve these sequestration targets.

Existing Sectoral Mitigation Strategies

In the bullets on page 195 we suggest adding the nearly 900,000 of working forest conservation easements throughout New York and that the easements are SFI and FSC certified. In the 5th bullet is a reference to the "Forest Stewardship Program". It is not clear what that is. If it is the Private Forest technical assistance within DEC It should be characterized as such and acknowledge the precipitous decline this has had over the past four decades.

As in the last paragraph regarding "expanded initiatives for farmers", we should acknowledge the need to scale up programs, technical assistance, and incentives for forest landowners as well.

Key Stakeholders

There is a glaring omission of not listing NYS DEC as a forest landowner. DEC has nearly three million acres of Constitutionally protected forever wild Forest Preserve, more than 800,000 acres of State Reforestation Areas, and 124,000 acres of forests in Fish and Wildlife Management Areas.

There should be a note that municipalities own just under one million acres of forests.

Again, while there are nearly five million acres of publicly owned forests (three million which cannot be managed), these pale in comparison to the 14 million acres of privately owned forest lands. There should be much more emphasis on private forest landowners of all sizes in the stakeholder's section.

We would note that the New York Forest Landowners Association does not own any forest lands. While they represent a lot of smaller wood lot owners, it is the owners who are the stakeholders.

With respect to outreach, education, and other forms of landowners' assistance we would suggest adding New York Forest Owners Association, New York Tree Farm and Empire State Forest Foundation.

15.2 Key Sector Strategies

Table 12 – Soil Health, Nutrient Management and Agroforestry we would suggest adding RDD for forest soils. We have extremely limited knowledge or data on below ground carbon storage and forest soil health conditions.

AF1. Identify where Forest Management would provide the Greatest Benefit – Markets for harvested wood products are a significant driver in inducing and affecting forest management and should be reflected in this section. There are direct correlations between forest management and

markets, both good and bad. In the first instance, strong wood markets provide payments to forest landowners who in turn can invest in improved management. On the other hand, limited markets, such as low or no low-grade markets can drive "high grading" which can lead to poor harvest stands and lower carbon benefits. We need to identify where there are weak or overly strong markets to help stimulate sustainable forest management while producing renewable wood products.

AF2. Prevent Forest Pests, Diseases, and Invasive Species and Restore Degraded Forests – Under "**Increase prevention of invasive species"** we should be cautious about increasing the State's regulatory role on international and interstate trade. There should be a thorough understanding of the role of USDA Animal and Plant Health Inspection Services (APHIS) and the role of DEC and Ag. And Markets in complimenting rather than supplanting the APHIS role. SMART Trade should be implemented at the national or regional level not at the state level. New York acting alone raises the risk of over regulation and potential for leakage.

Under **"Expand statutory authority"**: the language should be "more rapid listing and delisting of invasive species." The goals should really be elimination and delisting.

Under **Combat invasive species"**: **c**ombating invasive species is a lot more than adding DEC staff. There should be something here about the need for continued use of pesticides. While we would all like to know there are effective non-pesticide management measures, we know that for some invasive pests, pesticides are the only available response particularly for new species and early detection and rapid response measures. Yet we increasingly see the Legislature is looking to ban pesticides despite their beneficial use.

AF3. Maintain and Improve Sustainable Forest Management Practices and Mitigation Strategies – In the first paragraph regarding current efforts by DEC the following should be added: Easements for Land Trusts and Working Forest Conservation Easements including third party dual certification under AFF, FSC and SFI.

Under **"Develop best practices"**: American Forest Foundation and The Nature Conservancy should be added as they have developed the best practices that document additionality.

Under **"Implement forest carbon certification program"**: add a sentence or two about accessibility and affordability for all forest landowners, in particular small family woodlot owners since they own the majority of forest lands.

Under **"Restore degraded forests"**: **t**here should be a specific reference to "Regenerate New York" and the need for substantial funding.

Under **"Invest in financing options for upgrades and best practices"**: ESD, Green Bank and NYSERDA should be added here.

AF4. Assist Landowners in Implementation of Sustainable Forest Management and Mitigation Strategies – Should identify the pressures for conversion of forest land. #1 is conversion of forest for farmland.

Under **"Expand funding"**: SWCD are not limited to working with farmers and farm associated forests. Many SWCD provide direct technical assistance to forest landowners who are not farmers, and this should be expanded and more funding for boots on the ground assistance. We believe there is an opportunity for a substantial role for SWCD in landowner outreach and technical assistance. This would require significant increased funding for SWCD's, but the benefits could far outweigh the costs.

AF6. Create a New York Carbon Bank – Should add more here about both the "compliance and voluntary" carbon markets that exist and are available to New York forest landowners and how challenging a carbon market is under the CLCPA within New York. Should also discuss how offsets will be critical to an effective program to address leakage.

AF7. Monitor Progress and Advance Forestry Science and Technology – Add a bullet on research on forest soils and below ground forest carbon. Our knowledge of forest soils is significantly behind our understanding of agricultural soils. We also need a lot of work on the dynamics of below ground carbon in forests.

AF8 Conduct Education and Outreach on Forest Management – There are a number of partners that have not been included here including: American Forest Foundation, Tree Farm, Empire State Forestry Foundation, Cornell Cooperative Extension, and New York Forest Owners Association. In addition, there are a number of consulting and procurement foresters who interact with forest landowners every day.

Under **Components of the Strategy:** add a new bullet on Third Party Certification of sustainable forest management and the need for public and landowner understanding.

Under **"Provide education and outreach": i**n addition to the "construction industry" there needs to outreach to architects, engineers and designers regarding embodied carbon and the use of wood in buildings and infrastructure. Within the construction trades there also needs to be workforce training on the actual installation of wood in buildings.

AF13. Increase Adoption of Agroforestry – In addition to adding trees to existing farmland to increase agroforestry, there is tremendous potential to introduce agroforestry to existing forested lands.

AF14. Develop Agricultural Environmental Management Planning for Climate Mitigation and Adaptation - An AEM type framework should be established for all forestlands, not just forest lands on farms. Forest environmental management planning and implementation of regenerative forest practices will be critical in addressing overall forest regeneration and achieving additionality in forest carbon storage and sequestration. SWCD have the existing structure, tools, and indemnification to work with private landowners and have extensive boots on the ground networks that could readily be applied with private forest landowners.

AF16. Establish a Payment for Ecosystem Services Program - Should be established and applied to forest lands as well. Seventy-five percent of all forests in New York are privately owned and their ecosystem services are unparalleled.

Climate-Focused Bioeconomy

On page 225 under **"Bolster Logger Training"**: state funding support through NYS Department of Labor and the Workforce Development Institute should be added. Trained Logger Certification additional training modules should be added relating to log trucking, mechanized logging equipment and managing for ecosystem benefits.

Under **"Provide education and outreach"**: In addition to the "construction industry" there needs to outreach to architects, engineers and designers regarding embodied carbon and the use of wood in buildings and infrastructure. Within the construction trades there also needs to be workforce training on the actual installation of wood in buildings.

AF19. Expand Markets for Sustainably Harvested Durable Wood Products – We should have this focus on all wood products. While it is true that "durable wood products" store carbon for longer periods of time than low grade wood products, no one harvests for durable wood products alone. In a typical New York harvest a significant percentage of the wood removal is lower grade wood and a much lower percentage is higher grade wood used in more durable wood products. Harvesting just for durable wood products is poor silviculture and will result in high grading of the forest, poorer forest health and diversity and poorer regeneration. In addition, those low-grade products will provide carbon benefits in being used as substitution products for products otherwise made from fossil fuels.

Under **Promote carbon sequestering materialist**: should be cellulosic fiber insulation and residues from wood product creation, hemp is not the only fiber used in these materials.

Under **"Advanced building code changes"**: This statement is not clear. Relative to wood products this should look at the role of wood in thermal heating of buildings as well as the role of wood in addressing embodied carbon in buildings and infrastructure.

Under "**Remove barriers"**: add NYSERDA and solar energy structures.

AF20. Develop a Sustainable Biomass Feedstock Action Plan and Expand the Use of Bioenergy Products – In the list of wood-based bioenergy products add renewable biogas, biodiesel, bio-jet fuel, and high-density wood pellets.

Under "**Components of the Strategy"**: add "Significantly enhance Renewable Heat NY" to aggressively replace and recycle older wood stove technology with new advanced pellet wood furnaces.

AF22. Provide Financial and Technical Assistance for Low-Carbon Product Development - Add to "**Components of the Strategy"** the implementation of Bioeconomy Development Opportunity Zones (BDO Zones). A BDO Zone initiative could enables economically distressed communities to powerfully leverage biomass assets to serve as anchors for revitalization. It could be a force-multiplier for the job creation ability of the federal tax incentives, driving billions into biobased economic development and renewable energy jobs. BDO Zone ratings could help local economic development agencies and communities more effectively and credibly disclose feedstock-risks and promote existing and advanced biomass product opportunities. BDO Zones could also prioritize locations in disadvantaged communities where appropriate.

Chapter 16. Waste

16.2 Key Stakeholder Strategies

While the focus of many of the waste reduction, reuse and recycling strategies have focused on shifting the responsibility of paying for waste collection, recovery, reuse recycling and end-of-life on producers of products, we would suggest that there needs to also be consideration of greater responsibility on consumers and ultimate disposers of products. Several states and municipalities have adopted other programs, such as pay-as-you-throw programs which should be considered as choices among proposed strategies.

New. Pay As You Throw - In communities with pay-as-you-throw programs (also known as unit pricing or variable-rate pricing), residents are charged for the collection of municipal solid waste—

ordinary household trash—based on the amount they throw away. This creates a direct economic incentive to recycle more and to generate less waste.

Traditionally, residents pay for waste collection through property taxes or a fixed fee, regardless of how much—or how little—trash they generate. Pay-As-You-throw (PAYT) breaks with tradition by treating trash services just like electricity, gas, and other utilities. Households pay a variable rate depending on the amount of service they use.

Most communities with PAYT charge residents a fee for each bag or can of waste they generate. In a small number of communities, residents are billed based on the weight of their trash. Either way, these programs are simple and fair. The less individuals throw away, the less they pay.

EPA supports this innovative approach to solid waste management because it encompasses three interrelated components that are key to successful community programs:

- **Environmental Sustainability** - Communities with programs in place have reported significant increases in recycling and reductions in waste, due primarily to the waste reduction incentive created by PAYT. Less waste and more recycling mean that fewer natural resources need to be extracted. In addition, greenhouse gas emissions associated with the manufacturing, distribution, use, and subsequent disposal of products are reduced because of the increased recycling and waste reduction PAYT encourages. In this way, PAYT helps slow the buildup of greenhouse gases in the Earth's atmosphere which leads to global climate change.
- **Economic Sustainability** - PAYT is an effective tool for communities struggling to cope with soaring municipal solid waste management expenses. Well-designed programs generate the revenues communities need to cover their solid waste costs, including the costs of such complementary programs as recycling and composting. Residents benefit, too, because they can take control of their trash bills.
- **Equity** - One of the most important advantages of a variable-rate program may be its inherent fairness. When the cost of managing trash is hidden in taxes or charged at a flat rate, residents who recycle and prevent waste subsidize their neighbors' wastefulness. Under PAYT, residents pay only for what they throw away.

W3. Extended Producer Responsibility - Extended Producer Responsibility (EPR) programs are a fundamental transfer of the responsibility and cost of collection, recovery, recycling, and end-of-life management of covered products from municipalities and taxpayers to producers of covered products. New York has EPR programs for batteries, tires, mercury, etc. but these are point-of-sale EPR programs. This proposal would create an EPR program for packaging and paper products and: define the products and entities covered, provide for establishing producer responsibility organizations, allow for the establishment of minimum recycling rates and post-consumer recycled content rates, and create minimum convenience standards.

EPR programs can be an effective policy tool for products that are difficult to process, have low recycling rates, or where healthy end markets do not exist; but none of these issues apply to paper-based packaging. ESFPA opposes the inclusion of paper and paper-based packaging in a broad EPR program for the following reasons:

- Paper and paper-based packaging are highly recovered and recycled with a recovery and recycling rate over 63% since 2009
- Including paper and paper packaging in a broad EPR could result in cross-subsidization of materials that do not share these high recycling characteristics.
- Recycled content mandates are not a one-size-fits-all solution. Content requirements should focus on materials with low utilization rates.
- Legislation should take all fiber sources into consideration. New York has both virgin and recovered fiber available. Our virgin fiber mills support unionized family wage jobs within state borders. Virgin pulp supply is needed to sustain or grow recovered fiber.
- In funding mechanisms, the current language considers contributions to greenhouse gases. We suggest that it also consider contributions to sequestration of carbon. Paper and Paper packaging is the only covered product that can contribute to carbon sequestration, let alone net co-benefits of water and air quality, wildlife habitat and biodiversity.
- Robust state or regional Needs Assessment prior to the implementation of any EPR program. There must be a baseline to establish pre-existing collection methods and identify current processing infrastructure, waste management practices, and costs.
- China National Sword (*mentioned in Governor's state of the state*) which impacted recovery and recycling rates in 2018 is significantly diminishing in US markets. Recovered paper consumption and pricing in the US is increasing.
- Robust investment in end market use for recovered paper is an essential pillar of the industry's success. Private paper investors have brought more than $5 billion in capital investment to expand or build new recycling capacity for the 2019-2023 period.

Chapter 17. Economy-wide Strategies

A major shortcoming of the draft Scoping Plan is an inadequate discussion of implementation costs, especially regarding the distribution of those costs across and with sectors. Nor does it provide detailed recommendations on mechanisms to offset costs and/or generate necessary resources from non-energy-related sources.

The recommendation for economy-wide strategies is to broad and high level to provide sufficient guidance to the Administration and Legislature on what the costs across the economy will be and how resources can be generated in an equitable, timely and meaningful way without causing major economic disruptions and possible leakage of emissions and jobs.

We would recommend that the CAC go back and complete a more detailed assessment of costs, available resources and needed resources over a period of time. This may include:

- Prepare a detailed ten year implementation plan and capital budget that identifies specific statutory, regulatory and capital needs to be implemented each year toward achieving the 2030, 2040 and 2050 CLCPA goals. Such plan should be updated on a five year interval through 2045.
- The CAC should prepare a detailed assessment of existing funding mechanisms and programs across the economy that support the renewable energy goals, mitigation strategies and adaptation strategies included in the Scopiong Plan. It should then identify funding and program shortfalls and start to articulate the possible fund raising mechanisms to meet those shortfalls.

- The final Scoping Plan should address the extent to which e]xisting funding mechanisms and programs can meet implementation needs, identify gaps in funding to achieve critical goals to meet 2030, 2040 and 2050 targets, and propose funding and program mechanism's to provide necessary resources to meet these goals.

Chapter 18. Gas System Transition

As noted above, ESFPA has significant concerns with recommendations that would decommission the natural gas system in New York. New technologies such as green hydrogen and the lack of system reliability based principally on immature battery storage will not meet the electric or manufacturing needs for New York to make this transition. There needs to be a much more strategic and mixed blend of technologies and energy resources for New York to transition to a significantly lower carbon-based economy while remaining a competitive and attractive state to do business.

We have suggested and other Council members and advisors have made recommendations on ho we can significantly decarbonize our economy while still retaining and attracting jobs. We believe this involves the continued use of bioenergy from biomass and agricultural and food wastes in electric generation, building thermal heating and transportation. Green hydrogen will also have an important potential role. But these resources will still require a robust gas system both in the transition as well as long-term.

Chapter 19. Land Use

19.1 Overview

The "balance" is much more than "to balance the protection and restoration of natural and working lands, development, and clean energy siting." Land use planning for "Smart growth" covers a range of development and conservation strategies that help protect our health and natural environment and make our communities more attractive, economically stronger, and more socially diverse. Clean energy is but one of many considerations for smart growth.

Existing Strategies

Of the twenty-eight million acres of natural and working lands, nineteen million acres are forest, worth mentioning along with wetlands (2.4 million acres), and agricultural lands (nearly seven million acres). It would be helpful to define "high valued conservation areas" as used in this section.

As done with farmland we should note that for forests there are three million acres of Forest Preserve, over 900,00 acres of working forest conservation easements, over 800,00 acres of State Reforestation Areas, and 124,000 acres of forests in Fish and Wildlife Management Areas. In addition, there are nearly a million acres of forests in local government and federal ownership.

The amount of land in easements (donated and purchased) is in the hundreds of thousands not tens of thousands. Note that NY has had three Bond Acts in addition to the EPF and fourth potentially on its way.

Of the programs referenced add Community Forests and Easements for Land Trusts within the EPF. Also, the Climate Smart and Smart Growth programs run by NYSERDA and DEC.

Key Stakeholders

New York Forest Owners Association does not own any forestland. This section should give a lot more attention to the key stakeholder, private forest and farmland owners and should spend some time on the landscape significance of farms and forests. Forests incumber 64% of the terrestrial landscape of New York and farms encumber 21% - in total 85% of the state's landscape. In addition, 75% of our forests and all our farmland is privately owned and these private landowners will be the ones that deliver carbon storage and carbon sequestration benefits, as well as the co-benefits of clean air, clean water, biodiversity, open space, and recreation. These same landowners have private property rights and expectations on a return of investment on the lands and resources they steward. If we expect our forests and farms to deliver the climate benefits as well as feed and provide valuable wood products to our residents and the world, we owe them some recognition and appreciation for what they bring to natural (and affordable) solutions to climate change.

LU1. Mitigate Carbon Emissions by Protection of Forests

While state and municipal land acquisition may provide the most reliable log-term protection of forested acres from land conversion, this does not necessarily result in the greatest inducement for carbon storage and sequestration and gives short rift to the stewardship of forests that does and will need to occur from private forest landowners. The State and municipalities will never own, nor should not own the majority or all the forests.

Public ownership also often results in less sustainable forest management and aging and diseased forests. Sustainable forest management is important for mitigating effects of climate change. Forests remove CO_2 from the atmosphere and store it in live trees, dead wood, and harvested wood. Sustainable management will yield the greatest sequestration and storage rates while also delivering important ecosystem co-benefits

Regulatory approaches (rather than market approaches) may also result in outcomes detrimental to climate change mitigation–loss of forest land. Numerous studies (Lubowski et al. 2008; Abt et al. 2010, 2014; Costanza et al. 2016; Dale et al. 2017; Birdsey et al. 2018; Kim et al. 2018) have concluded that when landowners have access to markets for wood products, they keep more land in forests and increase productivity of those forests. Therefore, removing financial returns to landowners by limiting access to such markets would lead to lower productivity and less forest area, with negative consequences for C stocks and attendant ecosystem services from forests.

The "**Components of the Strategy"**: should have components that encourage sustainable forest management on private lands as they are and are likely to remain the largest landscape element of our forests.

LU2. Afforestation and Reforestation – under **"Components of the Strategy**" we suggest the following:

- **"Reforest rights-of-way"** – include plantings of biomass feedstocks such as willow which can be harvested and is much more compatible with transmission and highway rights-of-ways.
- **"Increased grant program funding" – s**hould include scale up of Regenerate NY as well as other funds that can be spent on private lands.

- Add a bullet on **"Urban Forestry"** – which also recognizes that on average only 5% of urban forests are on public lands and right-of-way. This will need to be investments in plantings and maintenance on private lands.

LU3. Avoided Agricultural and Forested Land Conversion – Under **"Components of the Strategy"** we suggest the following:

- **Increase funding and capacity of existing programs –** should apply to forests as well.
- **Enhanced local capacity to conserve lands –** there needs to be much stronger push on conservation as opposed to preservation. As noted elsewhere more often than not regulatory and acquisition by local governments results in over regulation of forest lands and induces private landowner conversion. In addition, over regulation and public ownership more often result in less active forest management and in turn less C sequestration and storage in the long run.
- **Increased support for succession and farmland access –** should include forest succession and access.
- **Increased farmland protection and environmental management programs – t**his should be farmland and forest conservation.
- **Mitigate impact from renewable energy projects on forests –** should include farmlands as well. Yet we must realize that we will not avoid all renewable energy or transmission impacts on forests and farms.

LU4 Protect and Restore Wetlands - Regarding wetlands in forests we note that 75% of all freshwater wetlands are in forests. In amending the New York Freshwater Wetlands Act be sure to sustain the existing agricultural and silvicultural exemptions that have existed since 1972. There is no scientific evidence that these practices significantly threaten wetlands and in fact there is compelling science that maintaining forests and farms is the best way to protect wetlands.

LU5. Mapping, Research, Planning and Assistance – As noted above we take exception to the statement that "Regulatory programs and land acquisition are two important strategies for maintaining and restoring carbon sequestration potential." Regulatory programs and land acquisition may well result in outcomes detrimental to maintaining and restoring carbon sequestration potential. More importantly, to achieve net zero as required by the CLCPA we need to increase sequestration on our forests and farms significantly. When evaluating regulatory and land acquisition for net C sequestration, or any other strategy for enhancing sequestration (including markets), there is compelling scientific support for including these factors in a comparison of scenarios involving forest management for C benefits:

1. Focus should be on net C sequestration, not simply C stocks.
2. Younger forests sequester C at a faster rate than older ones, which have higher cumulative stocks.
3. C is stored for years to decades in wood harvested from forests, and scenarios involving forest harvest must account for this storage.
4. C stored in forests is susceptible to a variety of natural and anthropogenic risks. Such risks of C loss should be reflected in analyses that evaluate long-term C storage in forests, as they are in estimates for storage in harvested wood products.
5. Emissions from both harvesting and not harvesting must be considered; the latter includes emissions from leakage and/or substitution.

6. Cost differences among scenarios (expressed per ton of CO_2e) are necessary to place results in context with other options for climate mitigation.

This section also introduces the concept of establishing statewide "priority conservation areas and priority growth areas." This in many ways is going to create a "winners and losers" scenario for a lot of privately owned lands. There are no definitions of priority conservation or development areas. There is no context of how big they would be. This should be more flushed out in the draft Scoping Plan, so landowners have a better understand if what these are, who is determining them and what it means to be in one or the other or outside of either of them.

LU6. Provide Guidance and Support for Afforestation and Reforestation to Local Communities - It is unclear what the role of "local communities" is under afforestation and reforestation. Outside of publicly owned rights-of-way, this is going to be a direct relationship with private landowners. Why would local governments or communities be engaged in this? The component for a NY Tree Corps or Climate Corps seems redundant to the functioning role of SWCDs. Why create more bureaucracies when we have a mechanism in place?

LU7. Increase Forest and Farmland Protection in Municipal Comprehensive Plans – As noted above often municipal regulation of forests and farms results in detrimental impacts on working lands. This effort needs to be preceded by an enhanced Right-to-Practice -Forestry Law in New York.

Chapter 21. Adaptation and Resilience

As noted earlier, the strategies and recommendations do not adequately grasp the landscape scale of adaptation and resiliency, particularly in recognizing and conveying that 64% of New York's landscape is forested and already providing a high degree of adaptation, resiliency, and biodiversity. More importantly, that 75% of this forested landscape is privately owned by family wood lot owners. New Yorkers are deriving significant climate as we as ecosystem benefits from these privately owned forests at the landowner's expense. We should be recognizing and applauding the contribution that these private landowners are bringing to the table and then look for ways to further incite them to actively manage their forests and bringing additionality to the cause.

21.2 Key Strategies

Living Systems – We would suggest that AR12 in Table 16 read more like AR 11 for agriculture. Specifically, "Enhance Climate Resilience and Adaptive Capacity of the Forestry Sector, While Preparing to Take Advantage of Emerging Opportunities." It is known science that actively managed forest lands sequester more carbon over time than "preserved" and protected forest lands.

AR3. Strengthen Meaningful Community Engagement and Public Education and Build Adaptive Capacity Across All Sectors – Given the scale of our natural solutions to climate change, and the naivety of New Yorkers to the agricultural and forest sectors, we would suggest and explicit addition of natural solutions to climate change be included in **"Raise student and public awareness:"** Also there needs to be something added for public awareness which would be beyond the State Education Department.

AR6. Evaluate Opportunities to Ensure Consideration of Future Climate Conditions in Land-Use Planning and Environmental Reviews - We suggest inclusion of state policy regarding the Right-to-Farm and the Right-to-Practice Forestry and strengthening the Right-to Practice Forestry to be equal to the Right-to-Farm. Too often local planning and regulation of forests discourage active forest management and burdensome regulations often force forest landowners to do something else (i.e., conversion) rather than keep their forest as forests.

AR10. Develop Policies and Programs to Reduce Risks Threatening Ecosystems and Biodiversity - We would suggest that sustainable active forest management on public and private lands is yielding the strongest conservation measures for climate change and biodiversity. Also, biodiversity is already a consideration and priority for State Forests and carbon sequestration will be enhanced on State forest lands, outside of the Forest Preserve, where active forest management is pursued.

Under "**Expand implementation of ISCMP"**: everyone would support advancement of bio controls for forest pests. However, the reality is that a number of forest pests do not have bio controls and for many the only choice is pesticides, including neonicotinoids. The use of neonicotinoids in addressing Hemlock Wholly Adelgid, Asian Longhorn Beetle and several other forest pests is essential in the State's tool kit for early detection and rapid response.

Under "**Ensure protection of stream buffers"**: New York already has an extensive Protection of Waters regulatory program covering streams. In addition, for over 20 years New York has supported a voluntary Best Management Practices program for water quality, including stream protections, in undertaking forest practices. We should encourage advancement of those efforts before increasing regulatory authority.

AR12. Preserve and Protect the Ability of Forest Ecosystems to Sequester Carbon – A noted above we believe this strategy should read more like AR11. It should also note that most efforts to "preserve or protect forests" do not result in increased sequestration. It is settled science that active forest management will yield much greater sequestration rates than preserving forests.

Under "C**onsider resilience in land acquisition"**: There should be a mention of the role that State Working Forest Conservation Easements have had over the past 25+ years in the State's acquisition programs. Today there are over 900,000 acres of Working Forest Conservation Easements throughout the State enabling sustainable forest management and providing climate, water, and biodiversity benefits. In addition, should be mention of the role of land trusts in conserving forests through both easements and fee acquisition. There should be a mention of the need to significantly amp up funding for the EPF and Bond Act efforts to finance State easements, Easements for Land Trusts, and Community Forest programs.

Chapter 22. Essential Elements

22.1 Partnerships

One "partner' that was omitted are the hundreds of thousands of private forest and farm landowners who steward the overwhelming majority of land in New York State. Forests encumber 64% of the terrestrial landscape of New York and farms encumber 21% - in total 85% of the state's

landscape. In addition, 75% of our forests and all our farmland is privately owned and 100% of our farms are privately owned. These private landowners will be the ones that deliver carbon storage and carbon sequestration benefits, as well as the co-benefits of clean air, clean water, biodiversity, and recreation. These same landowners have private property rights and expectations on a return of investment on the lands and resources they steward. If we expect our forests and farms to deliver the climate benefits as well as feed and provide valuable wood products to our residents and the world. We owe them some recognition and appreciation for what they bring to natural (and affordable) solutions to climate change.

The Overview must stimulate conceptualization of the landscape scale of these resources and the extent to which we need to bring to scale the assistance, market forces and incentives to have our farms and forests achieve the sequestration outcomes that it will take to offset 60 MMT by 2050. Also, the consequence of even greater emission reductions beyond 85% should we not achieve these sequestration targets.

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