Cornell Cooperative Extension-Tompkins County’s Environment Program strongly supports the Climate Action Council’s Draft Scoping Plan and its goals of reducing greenhouse gas emissions in response to climate disruption. We offer the following comments on Chapter 12: Buildings.

**General Comments**

* Overall, this chapter of the draft scoping plan is appropriately aggressive and clear about intentions, and we agree with the timeframes given for the goals, except as noted below.
* We support the Draft Scoping Plan’s overall vision and appreciate work towards eliminating fossil fuels from buildings, electrifying heating, and implementing energy efficiency measures, and the CLCPA’s commitment to provide significant support and benefits to disadvantaged communities.
* We also appreciate the recognition of the need to train over 100,000 workers in energy-efficient construction and installation and maintenance of clean heating and cooling technologies. However, while recognizing that some work has been done on workforce development, especially in the past few years, more thought and resources should go into specific strategies to grow this clean energy workforce necessary to implement the changes needed.
* More emphasis should also be placed on reducing energy use overall, rather than just converting to more energy-efficient heating and cooling systems. While there is some mention of making homes more energy efficient, more thought and resources should go into actually figuring out how to effect these changes, recognizing how difficult and incremental the pace has been through efforts such as the Clean Energy Engagement Program (and its many iterations before it). Further, one piece that seems missing is an emphasis on using less energy, not only by making homes more energy efficient but also through behavior: setting temperatures at reasonable settings; to turn off appliances when not in use; to be conservative (not eliminate) with luxury uses of energy (hot tubs, saunas, heated pools, etc). In a similar vein, the size of homes and space needed per family/household/individual should be part of the conversation at every level, including individual homeowners, builders, and policy. Home size has been increasing over the last many decades. The larger a home or space, the more energy will be used to heat and cool it. Policies and incentives can encourage smaller spaces. Educational campaigns around these behavioral issues and issues of energy efficiency are needed. We cannot address runaway climate change from runaway fossil fuel consumption without addressing runaway consumerism.
* A particular concern is the possibility that tenants could be in jeopardy if property owners upgrade and raise the rent to help cover the costs of air-sealing, insulation, and getting off fossil fuels. In our city of Ithaca, over 70% of homes are rental properties. Landlords will be tempted to raise rents as they improve their properties. Consider that tenants typically pay electric and water bills and landlords pay for the heat. If all heat is switched to electric heat pumps the tenant’s utility bills will increase significantly. There are few references to this problem in the chapter. All references emphasize the need for tenant protection, but there is no remedy in the plan. Landlords need to be mentioned as “key stakeholders.”
* There is some mention of “ongoing public financial support” for tenants, but there needs to be clarification of what that means and how it would be accomplished. One mention (p.144) suggests “clawback provisions” “to private landlords” but acknowledges that any such provision is not included in the plan. It hints that cash incentives might be provided for LMi, affordable housing, public housing and Disadvantaged Communities to participate in upgrades, but does not consider on-going monthly costs, and the incentives would go to the landlords, not the tenants. We agree that these “clawback provisions” and other similar measures not only “merit careful consideration” but need to ensure benefits truly go to the tenants and only to the most needy landlords.
* It sounds from the way it is written that “system benefit” money from all ratepayers will pay for the incentives which will primarily go to landlords. This does not seem to support the equity goals of the plan, particularly where it is stated that the existing Energy Affordability Policy seeks to limit energy costs for low income households to no more than 6% of their income. This may be impossible if landlords pass on electric heat costs and raise rents due to upgrades. A “utility customer bill of rights” is mentioned (p.149) but it is unclear what kind of safety net this would provide to protect tenants from having to shoulder new heating costs. A plan is needed for tenant protection, doing the “careful consideration” necessary to protect tenants at all income levels, but especially low-income tenants from ending up paying for CLCPA programs. NYSERDA has some general requirements for property owners who take advantage of their programs, but these need to be more clearly defined and mandated for all property owners.
* Recognition should be given of the need to make electrical service upgrades, in many if not most cases, to accomodate electrical loads such as heat pumps, induction ranges, and electric vehicle chargers–and programs and incentives created to help building owners make them (again, creating safeguards so that the costs aren’t simply passed onto tenants).
* There is some discussion of the justification for aggressive goals (of course already set through CLCPA), but there will be a need to make the case for the necessity for this even stronger in order to get buy-in from various stakeholders, including builders, property owners, and even tenants themselves. This is something that should be a focus of any outreach and education efforts.
* A big question is who’s going to pay for this? (It’s discussed generally but really needs to be more closely figured out, especially with regards to the need to protect vulnerable communities/DACs. A strong case can be made that aggressive climate action is necessary to stave off even worse climate disruption, for which we will all, as taxpayers, be paying. So, while the price tag is steep, it’s a matter of spending X now or X+Y later. Those cost estimates have been made: e.g., ClimAID estimated that by 2050 the total costs of climate change could be as much as $10 billion for key economic sectors in NY State unless resilience measures are put in place.)
* The draft plan talks about the need to coordinate with existing state and federal, etc. programs, which is absolutely necessary, but there needs to be some addressing of the fact that current coordination is lacking and some of those programs are not very effective now (e.g., WAP, which has a waiting list in some counties of >3yrs)
* Some of the timelines are not aggressive enough, especially for commercial properties, as detailed below.
* This scoping plan provides an opportunity to re-examine/calculate the attractiveness of renewables to avoid volatility and security issues of fossil fuels, another important point to include in education and outreach efforts (having those analyses from the state, and ideally, mentioned in the scoping plan itself, would be helpful).
* There is also an opportunity to work with equipment manufacturers who want to relocate to or open facilities in the US / NYS, further enhancing workforce efforts.
* There should be more of an emphasis on adding resilience in the form of battery storage, esp. in multifamily but also single-family homes, municipal bldgs., schools, shelters, etc., recognizing both the likely increase in environmental stressors in the coming decades, as well as the fragility and inadequacy of our existing electrical infrastructure (which, even with investments outlined elsewhere in this plan, will take quite a while to catch up).
* And there should be more emphasis on managing demand, not just consumption–while there is some discussion around weatherization, this is an area that will need quite a lot of work, including additional incentives and programs that address other common issues that need to be resolved before or alongside the energy upgrades (e.g., roof and foundation work and other health and safety issues).
* Contractors already find it difficult to keep up with necessary paperwork and are often unwilling/hesitant to participate in existing programs. Programs and contractor interactions (applications, etc.) need to be streamlined to make them easier for all parties (including applicants). The Clean Energy Hubs should be engaged more closely in this work than they were in the CEEP program (where for the most part contractors did not understand what CEEP was or the value CEAs could provide).

**Specific Comments**

Page 119:

Emissions from imported fuels = 33%. Is this electricity?

The whole box needs to be clearer

Page 120:

“… electrification of space and water heating with high efficiency heat pumps is a viable, cost-effective approach to decarbonizing…” This isn’t really true for buildings using gas. In new construction, it is much more do-able & cost-effective. At appliance replacement, it also becomes more viable. Need to be realistic about how cost-effective changeouts will be (people will be looking to actually save money, which won’t always be the case, and just need to be realistic about that and talk about other benefits, including cooling, indoor air quality, and overall comfort).

“Larger multifamily, mixed-use, or complex commercial buildings that are concentrated downstate also may use supplemental heat (likely gas) for peak cold conditions, with a plan to phase it out over time as technology develops.” I disagree–supplemental heat is not necessary if systems are designed properly and other energy improvements are undertaken; this is possible now, especially downstate, and with current tech.

“...single-family homes and other low-rise residential buildings [are] relatively straightforward to upgrade and convert to zero emissions heating and hot water systems…”. While the technologies exist, there is an enormous amount of old and substandard housing, which requires other repairs alongside energy upgrades. This is covered on page 132, but needs to be addressed more comprehensively (current and additional programs need to be better coordinated to address the many needs of each building–what’s the plan to provide better coordination and additional services/incentives/programs?).

Page 121:

The plan talks about 10% to 20% of commercial space statewide being converted to all-electric by 2030. This should be increased and made more aggressive, as the commercial sector has more tools, resources, and ability than residential.

Vision for 2030 should mention cooking. While not a huge contributor to overall carbon emissions, it is a critically important piece to get homes and businesses completely off gas, including removing the gas infrastructure, which saves money on the hookups, reduces gas through leaks, saves money on maintaining the infrastructure, etc. (It is mentioned later but should be included here.)

Page 123:

“DEC has adopted regulations that prohibit certain HFCs …” and “legislative proposals to strengthen State building codes and energy efficiency standards.” Include more on limiting certain refrigerants in all buildings. (Chart on the following page does mention “Advance a Managed and Just Transition from Reliance on HFC Use” as a strategy. It can be strengthened in the text and a plan developed for how to do this in all buildings.)

Page 124:

QUESTION: At the end of the first paragraph under “Adopt Zero Emissions Codes…”, the plan says “resilient to the impacts of climate change” … in what sense? Just off fossil fuels? Battery backup? Other construction methods? This is elaborated on some in the middle of page 125, but not how these strategies will be implemented across building types.

Page 125:

QUESTION: At the end of the page there is a statement, “Meeting the proposed 2024 date for low-rise construction code is predicated on New York State passing legislation by early 2022…” How does the fact that this document (scoping plan) won’t be finalized until the end of 2022 affect this?

Page 127:

Top of page: “... NYSERDA should encourage local governments to adopt NYStretch Energy Code.” This is currently very challenging. Through the NYSERDA Clean Energy Communities (CEC) program, some communities are taking this on as an incentivized action, but most communities don’t see the value or have the time to look into it sufficiently to adopt it. Very much agree that “The State should provide additional funding for local code enforcement…”.

First paragraph under “B2. Adopt Standards…”: says it’s “relatively straightforward to upgrade and convert to zero emissions heating and hot water systems…” While the technologies exist, this isn’t really true. There is an enormous amount of old and substandard housing that will need other non-energy work and support for that work, including better coordination with other existing programs (utility, community-level and faith-based services, etc.) and new programs through the state (while NYSERDA is focused on energy, other agencies need to step in to fill this role of non-energy-related building upgrades).

Page 128:

Under “2027: Require existing properties…” define what “energy-efficient lighting” actually is. Specify LEDs.

Page 129:

Under “2035: Adopt zero emissions standards…” (for both heating, cooling, and hot water equipment and for cooking and clothes drying), if the equipment is at the end of its useful life, this should be pushed up to 2030, or even 2025.

Page 130:

Under “Require energy consumption information and disclosures:” specify who pays for these audits/benchmarking. Second-to-last paragraph: should be two years/24 months of energy consumption data.

Page 131:

Toward the end of the page, the comparison between a home that installs heat pumps paired with an air-sealing/insulation upgrade ($21K for ASHP and $40K for GSHP) with another home that simply replaces their heating system with a fossil fuel boiler/furnace and new AC system, with no building envelope upgrades ($10K) is an unfair comparison. While it’s true that ASHPs don’t work well in very drafty homes, both scenarios either need envelope upgrades or will likely be drafty and energy-wasteful.

Page 132:

Top paragraph: “...important to recognize that some housing is unsafe and unhealthy due to years of underinvestment, such that costly repairs are needed before making energy improvements.” If gas is more expensive (not incentivized at current levels but instead actively disincentivized to more accurately reflect societal costs), economics are better and the added money savings could be used for incentivizing the needed elements of the transition (discussed slightly on following page and Ch. 17 but could be expanded / acknowledged here).

Page 133:

Toward bottom of page: “For example, the EmPower New York program and the federal Weatherization Assistance Program…” the waiting lists for WAP in some counties are greater than 3 years. Again, EmPower and other state programs (e.g., HEAP) need to be better coordinated and combined to be more effective, and work more directly with the Clean Energy Hubs going forward.

Page 134:

Toward the end of the first paragraph “...health benefits associated with building decarbonization.” There is a separate section on health benefits, but with regard to the buildings themselves there are a myriad of benefits that should be mentioned in this chapter including: improved indoor air quality from removing gas emissions, leaks, and incomplete combustion leading to CO and NOx issues; the opportunity to reduce mold issues and provide dehumidification as secondary benefit of heat pumps; reduced drafts; etc. in addition to the other necessary building upgrades necessary, some of which address safety and structural issues.

Under “Scale up incentives for building decarbonization:” This is a good point. Again, some language on better coordinated programs and communications between programs is needed.

Page 135:

Lots of good proposals, including “...State should develop appropriate regulatory and planning mechanisms to support zero-emissions district and community thermal systems…” and “explore opportunities to convert buildings to heat pumps on a street-by-street or neighborhood-by-neighborhood basis…”

“... attention to accounting holistically for the societal costs and benefits of building energy upgrades, including health impacts…”

“Support resilience centers (or resilience hubs) in public housing developments that meet community needs and gathering space in non-emergencies…”

Page 136:

Regarding “Fund non-energy improvements when necessary” Yes. What’s considered an “energy project”? If the foundation needs significant work and the roof needs to be replaced, do you insulate and air-seal and install heat pumps without addressing those?

Very end of this page and into next: “...the cycle of routine building improvements.” Lots of buildings lack any kind of routine maintenance and improvements. Simply shifting to better technologies at time of replacement will help, but building maintenance and improvements will need to be institutionalized.

Page 138:

In middle of paragraph “Expand energy savings performance contracting for public sector buildings” … “expand the allowable payback term for deep decarbonization performance contracts…”. Yes. Performance contracts very rarely go cash-positive, certainly not sufficiently to cover costs of equipment/upgrades.