

Taylor Biomass Energy, LLC

Montgomery, New York, 12549

Telephone: /Facsimile:

June 28,2022

Ms. Doreen M. Harris
President & CEO
New York State Energy Research
And Development Authority
17 Columbus Circle
Albany, New York, 12203-6399

Mr. Basil Seggos
Commissioner
New York state Department of
Environmental Conservation
625 Broadway
Albany, New York, 12233-1011

RE: NYSCAC – Draft Scoping Plan – December 31, 2021

Dear Co-Chairs Harris and Seggos:

We appreciate the opportunity to provide our comments on the Draft Scoping Plan (“Draft plan”) issued by the Climate Action Council (CAC) on December 31, 2021. We believe the DRAFT is a great starting point but there are numerous items that must be further addressed prior to a Final Scoping Plan. This plan impacts all areas in which our customers, employees and families and business must live, work, and play in New York state. Due to our strategic location in the Mid-Hudson Valley of southeastern New York we are further concerned. Our business must remain financially competitive with Pennsylvania, New Jersey, and Connecticut. These three states have not shared or bought into the leadership that New York state is taking to date. Our fear is that New York State will become a desolated island in the middle of our surrounding neighbor states who will reap the benefits from our tremendous efforts, pain, and expense. Said differently, they spend minimally on any of the NYS mandated programs and requirements and reap all our emission reduction benefits and pay minimal to nothing to have earned it. New Yorkers cannot afford to bear this entire expense on our NYS society unless we have other states replicating the same programs, timelines, and expense.

It should be noted that the 2030 & strategy to reduce statewide GHG emissions 85% from the 1990 levels by 2050 law requires the reduction of emissions. When we only analyze portions of an entire process the result is not truly accurate or complete. The Waste sector is a prime example of this incomplete and fully accurate process. If we start measuring the life cycle analyses of the manufacturing process, its distribution system, to a wholesaler, its distribution system to a retailer or direct to a

consumer and its transportation, then the consumer consumption and waste residue generation, and now we are at the phase where most people normally begin to think waste disposal starts.

NYS has originated many programs to mitigate this over many past years with some success. Most recently product stewardship, NYS green products procurement, NYS bag waste reduction act, Food donation and scraps recycling law, and tremendous efforts performing education and outreach. Despite these efforts landfill and incineration disposal continues to increase year after year.

I have followed the NYS Climate Leadership & Community Protection Act law (CLCPA) prior to its signing into law by the Governor. Taylor has worked during the very early years of innovation, research, and development over the past twenty or more years. Examples are our very early 2005 and 2007 final reports with NYSERDA (attached) regarding biomass permitting and siting and mixed-debris biomass pyrolysis. Taylor still encounters stiff government resistance to alternative and innovative technology solutions which might ultimately prove to be one of the only solutions. This is especially true when it comes to NYSDEC regulatory “definitions”. Waste technologies have developed and are forced into inaccurate classifications because NYSDEC was not working with updated relevant definitions. Taylor Biomass Energy (TBE) biomass gasification technology was classified as an “incinerator” as there were no alternative definition options for new and alternative and innovative technology. The TBE technology does not combust or burn its prepared biomass feedstock (PBF). This technology does not combust waste as an incinerator does. Twenty plus years ago we were advised this was law and our technology definition could not be modified. We were classified into the combustion incineration classification. NLSCLCPA, NYSERDA, NYSDEC and other NYS government officials are sympathetic but cannot help us with the outdated NYS laws, rules, and regulations definitions. I would like to comment further specifically related to Chapter 16. The WASTE sector of the Draft Scoping Policy. The NYS CLCPA law and its subsequent policy proposal envisions:

Vision for 2030:

For solid waste management and wastewater recovery facilities the major contributors to emissions are associated with landfill emissions. To reduce emissions to achieve the required 2030 GHG emission reductions, significant increased diversion from landfills as well as emission monitoring and leak reductions will be needed.

Vision for 2050:

The CLCPA requires a more dramatic decrease in GHG emissions by 2050, achieving at least an 85% reduction (compared to 1990 levels). For solid waste this necessitates a dramatic shift in the way waste is managed, to the point that landfills are only used sparingly for specific waste streams, and reduction and recycling are robust and ubiquitous. Also leaks and emissions are well developed and implemented, and those emissions are significantly reduced.

I am writing this letter to you today as a NY State small business owner, employer of 25-50 full time employees in the NY State regulated community. I have been in the solid waste recycling business for over 25 years, and more recently our latest recycled product currently referred to as renewable energy. NYS CLCPA has entrusted the NYSCAC with implementing policy and ensuring future regulations reduce

emissions for solid waste handling and disposal and development of Renewable Energy technologies in NY State.

Taylor's expertise includes innovative sorting, separating, and recycling waste-streams. Taylor's sorting, separating technology expertise was the primary reason Taylor was selected to supply, operate, and maintain its sorting, separating equipment technology for the human and evidence recovery efforts during the 911 World Trade Center Disaster Recovery efforts at Freshkills landfill, Staten Island, New York. Taylor's sorting, separating, and increasing recycling contents are unique and different from any others today. Incineration and landfill processes do not do what Taylor does. Currently there are not enough surplus funds in today's disposal tipping fee to pay the additional labor, labor burden, equipment, and overhead expenses to perform sorting, separating, and recycling on the front end. Taylor sorts and separates the unrecognizable fraction which is 2" or smaller, the biomass fraction, and the inorganic fractions and the household hazardous waste fraction prior to the gasification process. The primary reason we designed this sorting, separating, and recycling technology upfront process is that we are not an incinerator and must sort and separate and prepare the pure biomass fraction from the remaining mixed waste stream ingredients.

The CLCPA assumes all biomass to electric power is the same. It is not. The Taylor process:

- (1) Produces a clean "prepared biomass fuel" free of hazardous materials.
- (2) Converts that biomass fuel in a non-combustion system into synthesis gas that is, in turn
- (3) Used as renewable fuel for gas turbine combined cycle power generation.

We are significantly different from conventional waste-to-energy systems, which simply combust (incinerate) non-prepared waste (everything that gets dumped onto a waste tipping floor goes into the incinerator) that contains significant quantities of hazardous materials (heavy metals, chlorinated compounds, PVC that were not separated out. In other words, if the state wants to restrict biomass to electric energy, this policy should be restricting incineration, as Taylor's gasification process is a completely unique and one-of-a-kind technology in NYS. The CLCPA waste subpanel recommends that combustion incineration is going to increase beyond 2050.

Taylor's work on how best to consume and utilize biomass and keep biomass out of landfills as well as the remaining other mixed waste ingredients has been ongoing for many years. Taylor's environmental motto is "Waste is a resource and has value. We MUST stop wasting our waste. We can no longer continue to build the large mountains of waste above and below ground (landfills) that are never, ever going to go away in anyone's lifetime." As I am sure you are aware, biomass grows through photosynthesis. In photosynthesis, CO₂ reacts to grow the biomass and produces oxygen, which obviously good for the environment. The result is the CO₂ produced from biomass utilization is consumed. This is only true for biomass which all is "biogenic" carbon. As an aside, fossils fuels are all non-biogenic carbon so the CO₂ they produce is not used to make more fossil fuel (no photosynthesis) because there is no fossil fuel equivalent to photosynthesis.

As a result of the 2019 CLCPA, Taylor's innovative & unique solid waste recycling business model has been buffeted by conflicting regulations, definitions and permitting decisions by three different NY State agencies, NYSDEC, NYSPSC & NYSERDA. Taylor-Montgomery, LLC will produce 24 MWH of baseload renewable electricity. Its biomass gasification process has been designed and permitted to sort, separate, recycle and gasify the biomass fraction from up to 1,050 tons per day of mixed waste streams (MSW, C&D, Unadulterated Wastewood) and up to 25,000 tons per year of construction-scrap sheetrock. Taylors first in kind of recycling gypsum/wallboard recycling efforts further reduce hydrogen

sulfide, an extremely poisonous gas in landfills. Taylor's generation of 24 MWH Tier One renewable electricity into the grid is an extremely small volume of tier one renewable electricity impact to the grid, in exchange for treating 1,050 tons per day of solid waste. In exchange for what could be as high as 88% diversion of the waste stream from ever having to go to a long-distanced, five-hundred miles per day, 10–12-hour day round trip for thirty tons of MSW going to an upstate NY landfill.

NYSERDA working with Taylor was advancing Biomass as a renewable energy feedstock for the Taylor innovative gasification technology. I would note that the Taylor technology was developed in part through a scientific review process which took years to qualify under NYSERDA protocols contained in the "Renewable Energy Biomass Power Guide". On December 6, 2018, NYSERDA issued a decision in which Taylor's biomass gasification technology to produce clean electricity was provisionally certified as a Tier One Renewable Energy equal to solar and wind status. I would also include that instrumental in the review and approving the Taylor Tier One renewable designation was NYSERDA current President & CEO Doreen Harris who currently serves as Co-Chairperson of the NYS CLCPA.

During the past 20 years Taylor has been a "Party" to many ongoing regulatory processes, on occasion the sole Party, to advance Biomass for clean energy, and the Taylor Biomass Energy process in NY State. It should be noted that throughout this long process, the former, deceased, Honorable NY State Assemblyman, and Environmental Conservation Committee Chairman, Maurice Hinchey advocated for "Reduce, Reuse, Recycle, Recover the energy content" in our waste stream, and landfill or incinerate as the last resort. I and many others believe this is still the most environmentally sustainable policy solution for municipal waste treatment.

The central weakness of the CLCPA Council's Interim Draft Scoping Document on Implementation of its new CLCPA regulations, issued on December 31, 2021, is that it ignored the recommendations of its Waste sub-panel on current and future treatment of MSW and ignored the whole critical subject of how to deal with our mounting piles of MSW in fewer and more distant landfills. Municipalities and waste collection companies can no longer waste public funds to recycle source-separated recyclables such as cardboard, bottles and cans which in some situations are being directed to landfills and paying a higher tipping fee than MSW is costing to dispose.

In NY State, landfill tonnages, tipping disposal fees, transportation costs are increasing dramatically. Qualified truck drivers are under more demand and costlier than ever in history. Landfills are fewer and fewer every year and farther away and being filled up or closed at a much more rapid rate with no practical solutions. Recycling advocates in the waste management business cannot produce a clean/pure enough recyclable product for sale in USA or overseas. As a result, foreign countries are not accepting our recycled commodities and we are forced to truck more and more MSW to overflowing landfills. This situation cannot continue much longer and must be directly addressed by the Climate Leadership Council as it implements the CLCPA and not completely ignored.

The NYS CLCPA Municipal Solid Waste Sub-Panel of the Climate Leadership Council was chaired by an extremely knowledgeable professional, former NY State DEC Deputy Commissioner Martin Brand. His report comments dated April 5, 2021, question the actions recommended to achieve GHG emissions reductions goals in the new law:

1. Landfill — Emissions reductions will be delayed due to the slow rate of degradation of more waste being dumped into landfills.

2. Combustion — “... will produce no reductions projected through 2050 because existing combustors’ facilities will be needed to handle MSW remaining after Reduction, Reuse and Recycling strategies.”

Landfilling and combustion incineration needs are going to increase through 2050. Unfortunately, this clear assessment was taken down from the CLCPA website and does not appear in its Draft Scoping document of December 31, 2021.

I now ask the central question of this statement. Is allowing landfilling and combustion incineration without expiration dates fair equity and justice to allow the Taylor Biomass Energy technology to be permitted in NYS? Without equity and justice there are no new technology solutions possible, nor are there any viable bankable loan amortization periods for alternative and innovative “Zero Emissions” technologies under the current law.

It is for these reasons that the environmentally clean innovative technology of Taylor Biomass Energy be supported in NY State and not prohibited and put out of business by NY State. Particularly when it significantly contributes to the 2030 and 2050 mandates of the NYS CLCPA and the technology consumes one of the most toxic GHGs — methane from entering and escaping from landfills. Biomass should never, ever be going into a landfill. Biomass feedstock is paper, fiber, food, leather, textiles, and wood excluding pressure treated and painted wood due to possibility of lead-based paint after recycling efforts.

Further plastic recycling requires more public, private, research funding facilities located in NYS. To date there has been minimal development efforts in NYS. There are patents available to deal with even the toughest mixed plastics today – but – to date plastic producers do not want to spend the money on its commercialization as making new plastic is cheaper and more profitable. Compare this to the same results we are hearing about recycling glass. We have taken one right step in glass recycling by numbering the different types of glass onto the glass finished product. We must think the same about plastics. Insert the type of plastic into/onto the finished plastic product. We might have to think further about taking plastics back to monomers which still requires additional research and development. We also need to consider pelletizing back to pellets as a reasonable step forward but not the final solution. We need the ability to increase public private partnerships and funding if we are ever to seriously address these continued never-ending challenges to truly produce sustainable results.

The Taylor biomass gasification technology is an extremely unique case whereby NYSERDA, a research and demonstration (R&D) organization, steeped in scientific reviews and knowledge must demonstrate the leadership to the NYS CLCPA and NY State PSC in the Taylor technology case.

In closing, Taylor request that a modification of the CLCPA be recommended by the Co-Chairs of CLCPA scoping policy (NYSERDA/NYSDEC and adopted by NY State PSC) allowing the currently approved Taylor MSW sorting, separating, and recycling, biomass gasification technology project be “grandfathered beyond 2050,” particularly when it is stated in the CLCPA waste subpanel that MSW landfilling, and combustion incineration will continue beyond 2050 at its present massive scale. A NYS Tier one clean renewable energy technology such as Taylors should be preferred and permitted to continue if NYS is allowing those that are not Tier One renewal energy technology to continue operating beyond 2050.

The Taylor Biomass gasification and waste sorting, separating, and recycling technology is one of the few technologies available today that fulfil the CAC cost benefit analysis that was worked on in collaboration with its advisory panels – the Just Transition Working Group and the Climate Justice

Working Group in 2021 produced recommendations. The Taylor technology will provide the CAC a scenario with an “accelerated transition away from combustion” and landfill GHG emissions compared to the proposed “business as usual” base case as described in the CAC scenario #3.

Sincerely,

James W. Taylor Jr.
President & CEO