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[ICYMI: Summaries of the CAC, Advisory Panels and Working Group Meetings for January](#)

By Anastasia Gordon and Jeff Jones

Waste Advisory Panel - Wednesday, January 27, 2021

The fifth meeting of the Waste Advisory Panel was dedicated to updates. The Panel heard report-outs from the subgroups working on developing recommendations under the categories of organics diversion and landfill, water resource recovery facilities, materials management, and local scale and climate justice. There was also a discussion on the measurement and updates from the staff working group on quantifying the greenhouse gas (GHG) emissions from the NYS waste sector.

Chair Martin Brand (DEC) opened the meeting outlining the agenda and giving a few updates. Most notably, there will be a public engagement in the second hour of the Panel's Feb 9 meeting. In addition, environmental justice (EJ) concerns will be the focus of the Panel's Feb 22 meeting. Deputy Commissioner Brand also clarified that the Panel will be finalizing its emissions reduction recommendations in March but will reporting them to the Climate Action Council (CAC) in April 2021.

This was followed by report outs from subgroup leads. Lauren Toretta (CH₄ Biogas) indicated that the organic diversion and landfills discussed the need to further organic diversion from landfills and incent infrastructure development to facilitate this diversion. There has also been a strong emphasis on EJ specifically identifying what they want in and around in their communities. Another major emphasis of the subgroup is utilizing best-in-class technologies at landfills and promoting market-based mechanisms for anaerobic digestors (AD) including permitting, incentives for co-location, and electricity applications for biogas generated from AD.

The wastewater resource recovery subgroup is also looking into strategies to incentivize AD and beneficial use of biogas as well as biosolids. Jane Gajwani (NYC Department of Environmental Protection) explained that biosolids, which is organic matter derived from sewage, have high nutrient value that can be used as fertilizers as opposed to going landfills and producing GHG emissions. She also emphasized the need for greater coordination with respect to organics proposing a market assessment to inform a statewide organics management plan.

Resa Dimino (Resource Recycling Systems) noted that the materials management had not met since last meeting. Nevertheless, Chair Martin Brand recommended that the group coordinate with the organic diversion and landfills with regard to diverting food waste from landfills in an effort for greater consolidation of recommendations around organics. He also advised the group to look at the recently released [food scraps regulations](#) as a framework moving forward. Eric Goldstein (NRDC) also suggested that the Panel should advance regulations to ban food scraps and landscaping waste from landfills, a key recommendation suggested by the Climate Justice Working Group member during engagement at its January 27 meeting. Dimino also reiterated that [extended producer responsibility legislation](#) is central to the subgroup's recommendations.

Tok Oyewole (NYC Environmental Justice Alliance) notified the Panel that the local scale and climate justice met and received a presentation from the fellow subgroup member's Brigette Vincenty organization, [Inner City Green Team](#). She noted that local scale programs face many issues including land regulations, insurance, and lack of funding. Another key focus of the group is supporting EV waste hauling (e.g., bikes and vans) to transport and process food scraps especially. Such initiatives are "currently in place in urban areas but can work in rural also," said Dr.Oyewole.

Chair Martin Brand suggested that the subgroup think about scalability of these local recycling programs. He also noted that education, access, and convenience contribute to the success of local scale programs. Panel member, Dereth Glance cited an [initiative](#) her organization, the Onondaga County Resource Recovery Agency has undertaken with [NEMOA](#), which is supported by DEC grant funding to produce education materials to reduce food waste. Dr. Oyewole also proposed that the Panel a seek out representative from [Think Zero LLC](#) to come speak about corporate waste and dig into regulation banning plastics and non-recycling materials. She also expressed the need to discuss waste avoidance as well as her concerns over biofuels and the potential risk of tailpipe emissions.

The Panel then segued into a discussion on measurement particularly of emissions from trucking and landfills. Allen Hershkowitz (Sport & Sustainability International) noted that the NYSDEC has a robust program in place regarding the measurement of waste management and transportation impacts. "We should not duplicate efforts" emphasized Mr. Hershkowitz. Chair Brand advised that the organic diversion and landfills subgroup should look into this as well. Dereth Glance further reiterated that health impacts and all its nuances with respect to waste management, also need to be accounted for.

Resa Dimino then posed the question of what recommendations should be addressed through regulatory actions noting that "standards and requirements create certainty around emission profiles we want." Tok Oyewole emphasized that mandatory regulations are needed particularly for waste separation and the importance of interfacing with the Land Use and Local Government Panel to optimize local capacity to perform waste management. Michael Cahill (Germano & Cahill, P.C.) also highlighted

the need to incentivize the private market to build infrastructure such as ADs and composters in state. “We need a climate that welcomes investment and innovation,” remarked Cahill. There was further discussion on ensuring a policy framework that is not punitive but allows for the inflow of investment especially with respect to bioenergy. Resa Dimino recognized that though this works for AD, it is not the case for composting.

There was strong support for a state organics plan. In light of EJ concerns, Steve Chargaris (National Waste and Recycling Association) reiterated that such a plan should take into consideration where ADs are permitted. For current infrastructure located near these EJ communities, Jane Gajwani emphasized that these facilities should be assets to the community providing green jobs and bioenergy for local use. Other Panel members highlight co-location of AD and wastewater/landfills and utilizing pipes to transmit food waste to reduce the GHG emissions and trucking pollution.

The Panel also discussed broader issues and strategies that have not been previously considered. One issue that was raised was Polyfluoroalkyl Substances (PFAS) contaminants. Jane Gajwani emphasized PFAS bans would help expand land application of biosolids and boost plastics recycling. PFAS is also contained in carpets making them hard to recycle. With respect to organics, Lauren Toretta emphasized that the Panel should ensure waste reduction and food recovery is prioritized first, then utilize the best-in-class technology for the residuals. Panel members also suggested other strategies such as utilizing revolving loans to fund waste recovery, phasing out non-compositable food containers, as well as collaborating with the Energy-Intensive and Trade-Exposed Industries and the Land Use and Local Government Panels with respect to workforce development.

Sally Rowland (DEC) closed with meeting updating the Panel on the work that has begun to identify models and make calculations to develop a GHG inventory for the NYS waste sector. She assured the Panel that they will follow-up with more information. There will also a dedicated meeting for the cross-cutting topic of organics management, which will be organized by state support staff. Presentation and meeting notes from this and past meetings can be found [here](#).

Climate Justice Working Group - Wednesday, January 27, 2021

On January 20, the Climate Justice Working Group (CJWG), met for the sixth time. The meeting featured preliminary engagement with the Waste Advisory Panel on equity considerations to include in its recommendations. It also encompassed an initial application of the indicator evaluation rubric that will be used to define disadvantaged communities in NYS, which is the mandate of the CJWG under New York’s climate law.

Before delving into the main agenda of the meeting, Chair Rosa Mendez (Environmental Justice Director, NYSDEC) updated the CJWG on the progress to date on its work plan. She noted that its two February meetings, the Working Group will

focus on finalizing the list of criteria for defining disadvantaged communities, discussing strategies for holding virtual public meetings as well as further engagement with advisory panels. State support staff reiterated that it has been working on compiling locations of manufacturing sites with the relevant agencies in response to a question from CJWG member Eddie Bautista's (NYC Environmental Justice Alliance). Elizabeth Yeampierre of UPROSE further emphasized the need to get this data as well as reaching out to communities to fill data gaps and mapping out a just transition.

Deputy Commissioner Martin Brand (NYSDEC) and chair of the Waste Advisory Panel then gave the CJWG an update of its draft recommendations under consideration. These included anaerobic digestion energy production, local scale waste management, diverting materials and food waste away from landfills through recycling, food donation and composting programs. He also noted that the Panel will be discussing equity considerations in the upcoming weeks. Eddie Bautista asked whether the Panel has considered the troubling disposal techniques in waste management programs noting that "this is a huge issue in relation to climate justice as they can only be implemented in manufacturing zones that impact low-income communities." Waste Panel member Lauren Toretta assured the CJWG that it will be recommending the use of best-in-class technologies to minimize this impact.

The CJWG then went through an initial application of the rubric to evaluate and identify high-priority indicators for defining disadvantaged communities. These indicators fell into three categories specifically environmental pollution and hazards, people and historical discrimination, and climate change. The initial application was guided by ILLUME – the research company assisting the CJWG with its analysis. During this process, the CJWG grappled with the issue of geography. Rahwa Ghirmatzion (PUSH Buffalo) noted the diverse range of communities in NY and that strategies should bear that in mind. WE ACT's Sonal Jessel highlighted that greater emphasis, and more research is required for indicators on housing quality and energy burden. Other working group members suggested using insurance-related measurable risks and NYPA and PSC datasets related to determine the communities most impacted by power outages.

Another indicator that members highlighted should be part of the analysis was COVID-related data, noting it may shed light on vulnerable communities. ILLUME's Alex Dwelley encouraged CJWG members to start manipulating the data, prioritize indicators, and identify what might be missing. Several members also expressed the desire to understand the real-world application of these indicators especially from California, which undertook a similar exercise, in order to make confident and coherent recommendations. The next steps are to downscale the data further into usable indicators and construct the database by census geography. More information on this and past meetings of the CJWG can be found [here](#).

Transportation Advisory Panel – Thursday, January 21, 2021

The main focus of the seventh meeting of the Transportation Panel was to hear report-outs from the subgroups on its [draft recommendations](#). There was also an update from The Cadmus Group who is developing a Clean Transportation Roadmap for NYS; an analysis that will inform the work of the Panel in refining its emissions reductions recommendations. These recommendations are due to the Climate Action Council (CAC) in March 2021.

After opening remarks and an outline of the agenda from Chair Commissioner Marie Therese Dominguez, Panel member Paul Allen (M. J. Bradley & Associates) gave a recap of the market-based measures and finance expert roundtable that the Panel held on January 13. Reflecting on insights from the meeting regarding market solutions not addressing social and economic disparities, Allen recommended that the Panel explore the relationship between its mitigation solutions and environmental justice (EJ) outcomes.

In support, Ranae Reynolds (NYC Environmental Justice Alliance) further emphasized the need to speak to EJ in advocates from California; key voices who have highlighted the disparities of California's cap-and-trade program. In addition to EJ advocates, Kendra Hems (Trucking Association of New York) suggested that the Panel hear from other end-users like small businesses and auto-dealers. Another insight from the roundtable was the need for collaboration and shared risk. Therefore, Allen proposed speaking to "persons [investors] who put their money at risk" to support electric vehicles (EVs) and charging infrastructure.

The Cadmus Group's Geoff Morrison then presented on the work to date on the NYS Clean Transportation Roadmap study, specifically on the preliminary findings for transportation electrification. He revealed that barriers to electrification exist across all vehicle types but are higher for non-road, and medium- and heavy-duty vehicles (MHDVs). One of these barriers includes the initial upfront cost of EVs. It is expected that price parity between light-duty EVs and traditional automobiles will occur within this decade while MHDVs and off-road vehicles reach total cost of ownership parity around 2030. These categories will require customized policies to transition to electrification over time.

Morrison also outlined the 2050 Reference Case the study employs: GHG emissions decline by -0.5% per annum relative to today/1990 levels. It is based on current policies, programs, and market trends and projects that. Emission reductions will be greatest in light-duty vehicles (LDVs) because of fuel economy improvements and the shift to EVs. EV sales also grow from today's 2% to 24% by 2030, well aligned with the state's goal of getting 850,000 zero emission vehicles (ZEVs) on the road by 2025. This is the share New York committed to when it signed [ZEV Memorandum of Understanding](#) with other Northeast States.

Geoff Morrison also outlined key policy insights. Among the high priority policies in terms of EV sales, fiscal, and equity/impacts included California's [Advanced Clean Trucks Rule](#) and [ZEV mandates](#). Both are estimated to reduce GHGs by ~40% relative to the 2050 reference case. A key revelation was that the annual income of EV buyers was greater than \$100,000. This means that these vehicles remain out of reach for many low-income New Yorkers, despite purchase incentives like [NY Drive Clean rebates](#). To address this equity challenge, The Cadmus Group recommends tax credits and vehicle purchase incentives/feebates. Morrison also presented recommendations to tackle other policy hurdles, particularly EV unfamiliarity and insufficient charging including outreach and education and incentives for charging stations. The research group aims to finalize results and develop a final report by the second quarter of 2021.

Referring to projections on the relatively small share of EV sales in 2050 despite price parity occurring within this decade, DEC's Jared Synder enquired about what accounts for people not buying EVs. "There's a general thinking that once [the] price is right that everyone will shift over to EVs," remarked Morrison, noting that price is just one constraint to the transition to electrification. Other factors such as awareness, vehicle preference, availability in the size class consumers want and EV charging infrastructure, also contribute.

Panel members also had questions regarding the reference case. Since the reference case is based on current policies, Julie Tighe (New York League of Conservation Voters) wondered whether the research group would be looking at the impacts of NY implementing new policies. Morrison noted that they intend to develop policy scenarios which would reflect the policy ideas being considered by the Panel. Conversely, Nancy Young challenged the reference case's assumption with regard to GHG emissions from aviation will increase. "Have you taken into account aviation GHG emissions reduction commitments when you estimate 2050?" asked Young. She advised The Cadmus Group to refer to the [Air Transport Action Group Waypoint Report](#). Tesla's Albert Gore pointed out that there is a fair amount of ground to make up with respect to meeting NY's ZEV goals and GHG reductions assumed by the reference case. He recommended Cadmus Group to account for the challenges and distribution models to get to these goals in its next iteration of the study.

The latter half of the meeting was dedicated to updates from subgroups. Kendra Hams noted that the electrification and fuels subgroup are considering many of the policies highlighted in the Cadmus Group's analysis including California's ZEV mandates and [Low Carbon Fuel Standard \(LCFS\)](#), EV outreach, charging infrastructure investments, biofuel blend requirements, among others. They also met with the Power Generation Panel to discuss electric loads and constraints on January 15 and will be scheduling a meeting with the Agriculture and Waste Panels to talk about biofuels. Clarifying a question from Elgie Holstein (EDF) regarding the intension behind fuel blending requirements, Hems emphasized it is to ensure that there are transition fuels available as we move toward transportation electrification. Julie Tighe also noted that the LCFS

will also support electrification while Nancy Young pointed out the critical role sustainable fuels for aviation.

Bob Zerrillo (New York Transit Association) reported out on the strategies the public transportation subgroup has been discussing including expanding MTA infrastructure using additional potential funding from the LCFS and [Transportation and Climate Initiative](#) (TCI). He expressed concern over declining fuel taxes which have been a major source of funding for public transit. Other strategies included expanding utilization of smart growth and transit-oriented development (TOD), utilizing standardized fare technologies to increase ridership, and increasing options for travelers (e.g., micro-transit demand services and bike share).

Julie Tighe enquired about the “magnitude of dollars” needed for these initiatives to which Bob responded that the group has not evaluated the cost but suggested the NYSDOT may have when they set a goal to double public transportation. He also noted that the subgroup has also been looking into congestion pricing and electrifying transit buses. Ranae Reynolds expressed concern that “a lot of hats are being hung on TCI” and asked if there has been discussion with respect to federal assistance for expanding public transit. Bob Zerillo indicated that they have been and are tracking the Federal Transportation Reauthorization Bill, a key source of funding that is due to be updated this year.

Lastly, MTA’s Porie Saikia-Eapen highlighted that the smart growth subgroup has been looking at smart growth in the context of transit infrastructure, climate change, and energy efficiency. The strategies under consideration include public transport integrated development (including defining the term) and supporting low carbon transportation (increasing first-mile/last mile connectivity and incentivizing EV use). In addition, the subgroup has had conversations with subgroups of the Land Use and Local Government Panel. Porie noted that transit authorities must work in tandem with community planners and land use professionals. Another strategy that the subgroup has discussed is using real-time data and technology like omni apps to make public transportation more accessible.

The meeting wrapped up with a brief discussion on the work process moving forward. Jared Synder noted that a template for putting together recommendations was available and the support staff would share with the Panel in the coming days. Next steps will involve refining recommendations to advance the CAC. The Panel will hold a public meeting to garner input on these recommendations in February and plans to engage with freight experts as well as the Climate Justice and Just Transition Working Groups. The Panel will reconvene on February 18.

Just Transition Working Group - Thursday, January 21, 2021

By Jeff Jones

The sixth meeting of the Just Transition Working Group (JTWG) focused on several job creation studies completed or underway to quantify the workforce changes expected as part of New York's transition to a decarbonized economy. Chaired by Labor Commissioner Roberta Reardon and Acting NYSERDA CEO and President Doreen Harris, the meeting featured reports from the BW Research Team. One focused on the current state of the clean energy workforce, drew also on information in NYSERDA's just-released [New York Clean Energy Industry 2020 report](#).

Highlights of the NYSERDA report showed that despite temporary COVID-related setbacks early in 2020, New York's clean energy workforce represented 1.7% of all jobs and was growing at a rate of 3.2%. The report noted that the turnaround beginning in July indicated economic resilience in all energy sectors. It was reported, however, that minority and women-owned businesses continue to lag behind state goals, a fact of particular concern to JTWG members.

Wages in the sector, especially for unionized workers, remains comparatively high, including for entry-level jobs. This led to further discussion about training and apprenticeship programs. Labor representatives on the panel stressed the existence of union-sponsored apprenticeship programs featuring hands-on experience and pathways to employment. A new job study just begun by BW Research will focus on other sectors of the economy that can be decarbonized and related workforce implications.

The meeting ended with a discussion of changes and additions to the Working Group's schedule. The next session, scheduled for February 3rd from 1-3pm, will focus on workforce training and development and will feature public input. The session will be open to the public and will include a public comment component. This will contribute to the JTWG's goal of delivering Just Transition Principles to the Climate Action Council by April.

Waste Advisory Panel – Thursday, January 14, 2021

The fourth meeting of the Waste Advisory Panel featured two presentations on recycling programs from other jurisdictions. Programs that can be considered as the Panel draft its emissions reductions recommendations. In addition, the Panel reviewed and discussed draft mitigation strategies that will be presented at the January meeting of the Climate Action Council (CAC).

John Fischer of the Massachusetts Department of Environmental Protection (MassDEP) gave an overview of Massachusetts' waste programs. The state has a long history of waste bans including commercial organics. Fischer emphasized that the waste programs in Massachusetts works. In 2019, over 300,000 tons of food waste was diverted with the highest going to anaerobic digestion (AD). The state has also achieved significant source reductions through use of business tracking systems. Massachusetts

offers [recycling business development grants](#) for food waste and [loans](#) for recycling, composting, and AD activities.

During the feedback session, Panel member Eric Goldstein asked about the prioritization of composting and AD in relation to ecology and greenhouse gas (GHG) reduction benefits. Fischer clarified that Massachusetts has no hierarchy for division noting that it's approach to is work with companies who dictate what is most appropriate for them - a function of what materials are available for the companies geographically. Following up, Allen Hershkowitz (Sport & Sustainability International) enquired about whether the state had plans to measure greenhouse gas reductions benefits associated with composting and AD. Fischer remarked that in Massachusetts, the [Global Warming Solutions Act](#) sets statewide GHG reductions but the law's inventory-based accounting approach does not include solid waste and AD facilities. Nevertheless, he emphasized that food waste prevention should be first and is the best solution, followed by other beneficial uses including energy or as animal feed.

Responding Dereth Glance's (Onondaga County Resource Recovery Agency) question regarding the composition of enforcement, Fischer indicated that 2 groups of MassDEP staff who typically carry out over 250 waste management inspections annually. Another Panel member, CH4 Biogas' Lauren Toretta enquired about other incentives that the state has to build out infrastructure like de-packaging and AD in order to support the food waste ban. Fischer listed a number of initiatives including streamlining permitting, [grants](#) for AD from the Massachusetts Clean Energy Center and driving business to facilities as part of enforcement.

NYC Department of Sanitation's Bridget Anderson presented on NYC organics program. She noted that organic waste management is guided based on beneficial use. NYC's organics programs include [donateNYC food program](#), [DSNY Waste Management Network: Organics](#), and landscaper and composting programs. Panel member, Dr. Tok Michelle Oyewole (NYC Environmental Justice Alliance) asked whether the composting program will remain a priority despite the city budget difficulties caused by COVID-19. Ms. Anderson noted that the program was discretionary and as such, could be subject to being cut. Nevertheless, she expressed hope in leveraging state grants and federal assistance to keep these programs going.

The meeting then transitioned into reports outs from subgroups. Brigette Vincenty (Inner City Green Team) outlined the local-scale diversion and climate justice subgroup's strategies, which encompassed maximizing waste diversion in low-income communities through innovative solutions to capture and divert recyclable materials from the waste stream, promoting workforce development, supporting local scale recycling and composting initiatives, and outreach and education in marginalized communities. Dr. Oyewole, a fellow subgroup member, reiterated that essential to achieving these

strategies is the impetus for source reduction first and foremost and then increasing waste diversion from landfill to reduce negative impacts on environmental justice (EJ) communities. She also uplifted community scale composters and micro-haulers utilizing zero-emission vehicles emphasizing the need for support to scale up their activities.

The materials management subgroup lead, Resa Dimino (Resource Recycling Systems) outlined its mitigation strategies. These strategies centered around expanding extended producer responsibility programs and the [Bottle Bill](#), providing financial incentives and contracts to support waste prevention, reuse and recycling, supporting the recyclables markets especially aggregates, compost, and other recycled products, and expanding food donation, reduction and scraps recycling strategies statewide. Meanwhile, the landfills and organics diversion subgroup's strategies consisted of reducing methane emissions from landfills and waste management facilities through performance standards, increasing organics waste diversion by building markets for compost and biosolids, expanding incentives for bioenergy recovery from waste, setting an energy price for in-state waste power producers, promoting best-in-class technologies like AD and composters, among others

Last up was the waste resource recovery facilities (WRRFs) subgroup led by Panel member, Jane Gajwani (NYC DEP). Jane went over the mitigation strategies under consideration by the group including minimizing fugitive methane leaks from wastewater through routine inspections, funding repair, and encouraging the transition to sewer systems in densely populated areas. Other strategies included diverting biosolids from landfills, providing local outlets for recycling organics, promoting co-digestion at WRRFs, and recovering energy from wastewater. One limitation to latter, Gajwani noted, was that biogas is currently not classified as renewable.

Allen kicked off the feedback session emphasizing that "We really need data to attach to all these recommendations." Chair Martin Brand (DEC) assured the Panel that the support staff are setting up a discussion on GHG measurements. Steve Changaris (National Waste and Recycling Association) made the case for renewable natural gas (RNG) to meet the goals of New York's climate goals and transition to a clean economy. Consensus was reached to have further discussion on the issue of RNG not qualifying as renewable energy and as such, not accessing funding. In addition, Resa Dimino recommended that the Panel utilize a regulatory approach for capturing energy from landfills while recycling and compositing should be incentives. Dereth Glance also emphasized that the hierarchy of waste is important for low emission decision-making as well as preserving current waste management programs moving forward.

Chair Brand closed the meeting with a few updates. He noted that support staff will consolidate the draft recommendations in time for the CAC report on January 19. The Panel will also hold discussions on quantifying the GHG emissions from the sector on January 20 and on bioenergy on January 26. A public comment meeting will also occur in February 2021. Stakeholders are encouraged to provide input on the Panel's draft

recommendations via [email](#). Meeting notes and presentations from this and past meetings can be found [here](#).

Energy-Intensive and Trade-Exposed Advisory Panel – Wednesday, January 13, 2021

At its sixth meeting on January 13, the Energy-Intensive and Trade-Exposed Panel recapped the progress to date on the development of its preliminary mitigation strategies and reviewed comments on these strategies from the CAC and Climate Justice Working Group's December meetings. The Panel then heard a presentation on renewable natural gas from Energy Vision's Phil Vos. There was also a public engagement session to garner feedback on the Panel's draft mitigation strategies. Stakeholders are encouraged to continue to submit comments via [email](#). The next Panel meeting is on February 10. Presentation slides and notes from this and other past meetings can be found [here](#).

Transportation Advisory Panel Roundtable - Wednesday, January 13, 2021

As it works towards developing recommendations to advance to the Climate Action Council (CAC) by March 2021, the Transportation Panel held an expert roundtable on market-based measures and financing on January 13. Among the panel were representatives from state agencies, academia, venture capital, transportation coalitions, and environmental organizations. The purpose of the roundtable was garner input on potential financing mechanisms that can be employed to fund the Panel's recommendations on electrification and low carbon fuels, smart growth, and public transportation.

After welcoming remarks from the Panel's chair, Marie Therese Dominguez (NYSDOT), Panel member and moderator the roundtable, Paul Allen (M. J. Bradley & Associates) gave an overview of the topic under discussion and introduced the roundtable panelists. Rajinder Sahota (California Air Resources Board) kicked off the session outlining the success of California's [Cap-and-Trade Program](#) and [Low Carbon Fuel Standard](#), both designed to reduce greenhouse gas emissions from the power and transportation sectors, respectively. She noted that both programs have raised \$14 billion so far with 15% of which is invested back into environmental justice (EJ) communities.

Ms. Sahota reiterated that there was no definitive evidence of disproportionate air quality impacts from specifically the cap-and-trade program, a frequently cited concern of EJ advocates. Nevertheless, she expressed the need to address this perspective highlighting that both the cap-and-trade and LCFS programs provide funding for initiatives to improve local air quality including the [AB 617 community air protection program](#) while [new regulations for trucks](#) tackle diesel emissions that unduly impact public health of EJ communities.

Professor Manuel Pastor (University of Southern California), who published an initial [article](#) assessing facilities under cap-and-trade, pointed out that the study showed a sharp disparity in the number of facilities located near EJ communities leading to increased local air pollution. This disparity was steeper by race than by income. He noted these disparities are still persist and have even gotten worse based a recent report evaluating the third compliance period of the cap-and-trade program. Nevertheless, Professor Pastor emphasized that he was not an opponent of carbon pricing, a key element of cap-and-trade, but it requires strong safeguards to protect overburdened environmental communities.

Resources for the Future's Dallas Burtraw talked about the benefits of tradeable performance standards for the transportation sector mainly the LCFS. "LCFS has design elements that make it superior," remarked Burtraw highlighting that the standard incentivizes reductions in the carbon intensity of alternative fuels such as ethanol and biodiesel. He further noted that the LCFS places an effective carbon tax of 200 per ton of CO₂ (larger than cap-and-trade) driving innovation and emissions reductions at a lower cost.

With transportation as the largest source of carbon pollution, Bruce Ho (NRDC) emphasized that NY needs significant sources of funding from regulatory standards and market-based programs such as the [Transportation and Climate Initiative](#) (TCI) to lower emissions. He highlighted that TCI, needs strong safeguards and must be implemented as equitably as possible. The program has a provision that 35% of TCI's investments in clean transportation initiatives must be directed to EJ communities. In addition to TCI, Bruce Ho also advocated for community air quality monitoring and adopting California's [Advanced Clean Truck](#) rule.

Trish Hendren of 1-95 Corridor Coalition switched attention to the problem of declining fuel tax base for maintaining transportation infrastructure as we transition to electric vehicles (EVs) and as fleets become more fuel efficient. She suggested shifting from a fuel tax fee to a distanced-based fee with an appropriate rate setting in order to generate funding for transportation systems including public transit. On the other hand, Ben Rogers (eTrans Energy) emphasized the advantages of public – private partnerships in financing transportation electrification. He pointed out that private capital can bring down the costs of batteries and that utilities can play a key role in commercializing EV charging infrastructure. Margarita Para (Clean Energy Works) made a case for leveraging utilities' access to capital to finance electric school buses utilizing a pay-as-you-save program.

Ares Asset Management's David Rinder explained the challenges investors face with respect to electric vehicle charging infrastructure, specifically low utilization rates. Rinder emphasized investors need utilization guarantees and data to stave off investors' concerns in deploying capital for EV supply equipment. Michael Linse of Levitate Capital raised the issue of "regulatory risk," calling for the need for investors to understand regulatory direction to make them feel more comfortable making investments in the

sector. He reiterated that a diversified funding and less balkanized regulatory environment are more attractive for investors and drive market scale.

Towards the close of the roundtable, the panel took questions including from DEC's Jared Synder who asked about financing tools that ensure clean transportation investments are made in disadvantaged communities. David Rinder noted that the LCFS and cap-and-trade programs ensure that proceeds are invested into these communities. He also suggested that utilization guarantees, or robust upfront incentives would encourage private investment in chargers in EJ communities. In addition, Ben Rogers pointed out that green banks are instrumental in closing the upfront cost gap of EVs especially for small fleet operators. Presentation slides and meeting notes from this roundtable on financing mechanisms can be found [here](#).

Power Generation Advisory Panel – Monday, January 11, 2021

At its sixth meeting on January 11, the Power Generation Panel received guidance on developing recommendations to reduce greenhouse gas emissions from the sector. These recommendations are due to the Climate Action Council (CAC) by the end of March 2021. The Panel also featured report outs from subgroups and discussions on fossil fuel peaker plants and energy storage.

Chair John Rhodes (PSC) advised the Panel that recommendations can incorporate anything from policies, regulations to incentives and research and development. Recommendations can fall into 3 categories – mitigation strategies, enabling initiatives, and adaptation/resilience. In response, Panel members raised several process questions. Kit Kennedy (NRDC) asked whether recommendations can be applied in multiple categories and how the Panel would handle situations where consensus is not achieved or where recommendations compete or differ on particular topics. While Lisa Dix enquired about how the Panel would evaluate specific data and criteria such as cost for recommendations. Chair Rhodes assured the Panel consensus is preferred. The staff team will work to capture minority positions and can assist the Panel with getting specific data.

Among the outstanding items of the Panel included key group and public engagement. The Panel will engage with the recently formed utility group, which is intended to provide insights and be a resource to the CAC and Advisory Panels/Working Groups. Panel member Darren Suarez (Boralex Inc.) asked the Chair about whether municipal electric utilities will be part of the utility discussion. He indicated that the group is comprised of investor-owned entities and two public utilities, specifically NYPA and LIPA.

Chair Rhodes also proposed that 1-hour public feedback sessions be held at its February meetings and staff develop a survey on topic issues that Panel members will distribute to key groups. There was general agreement with these external engagement

proposals with many noting that early feedback would be beneficial in crafting recommendations. Panel member Laurie Wheelock (Public Utility Law Project) suggested that a hotline be created for the public leave feedback while Kit Kennedy proposed holding an additional public session in the evening for members of public who cannot participate during the day. Stakeholders can also submit written input via [email](#).

The Panel then transitioned to a discussion on phasing out low- efficiency, high emitting peaking plants. These are key considerations to achieve the New York's goal to achieve 100% net-zero emissions by 2040 under New York's climate law. Several Panel members agreed on the need to retire these peaker plants by 2040 with no new fossil fuel resources being added. Emilie Nelson (NYISO) reiterated that reliability should be maintained in order to meet goals of the CLCPA. In response, Lisa Dix (Sierra Club) noted there are several solutions to local reliability including demand response, storage and transmission while overbuilding renewables was another strategy offered by New Yorkers for Clean Power's Betta Broad.

Contrastingly, Panel members such as Shayam Mehta (NYSEIA) leaned more towards keeping existing peaking plants to maintain reliability but emphasized the need to conduct an analysis of the current stock of peakers, evaluate how dirty they are, and determine the costs of reliability needs from replacement. Chair Rhodes also clarified that the CLCPA does not specify new natural gas hookups cannot be added emphasizing that the Panel should not rule out fuels used today given. While clean energy is required, he noted studies show that 10-15 MW are still needed to "keep the lights on."

This triggered the discussion on differentiating between NY's 70% clean energy by 2030 and the 2040 goal. Annel Hernandez of the NYC Environmental Justice Alliance emphasized that there are things can be done within the former time frame including shutting down of peaker plants especially given NYSDEC's nitrogen oxides regulations. She reiterated that a phase out plan should consider environmental justice communities. Kit Kennedy encouraged the Panel to be optimistic and aim towards the 2040 "north star goal" through smart planning and solving the reliability problem. William Acker (New York Battery and Energy Storage Consortium) also highlighted the need for smart load planning and for aggressive development and deployment of technologies. While Emilie Nelson recommended prioritizing regulation and investment of peakers to maintain reliability of energy delivery, in addition to potential market solutions.

The last agenda item of the meeting was a report out from the Resource Mix and Future Solutions subgroup. The subgroup has been discussing issues surrounding the deployment of energy storage technology including siting and permitting as well as establishing a new target in the Clean Energy Standard for energy storage. It is also proposing continued innovation and demonstration projects to validate and encourage development of long-duration storage at scale. The next meeting of the Panel will be held on February 12 at 1:00 p.m. Meeting notes and presentations from this meeting can be also be found [here](#).

Waste Advisory Panel – Tuesday, January 5, 2021

On January 5, the Waste Panel met for the third time since it was established in November 2020. The Waste Panel is tasked with developing greenhouse gas (GHG) emissions reduction recommendations for the sector. The meeting featured a presentation on anaerobic digestion, report outs from subgroups, and a group discussion on topics of interests for the Panel members.

George Bevington, Senior Project Manager at Barton & Loguidice presented on [the basics of anaerobic digestion \(AD\)](#) and its capacity to harvest biogas for beneficial uses such as heating, renewable natural gas (RNG), electrical generation and sludge drying. He noted that in 2016, New York had approximately 200 anaerobic digestors at farms, wastewater treatment, and industrial facilities in comparison to Germany which had over 6,000.

During feedback, Panel member Steve Chagaris (National Waste and Recycling Association) also asked about whether the Panel should be considering small- or regional- scale ADs. Bevington advised that regional ADs are a better approach. as they cover multiple communities, have an economies of scale advantage, and are more efficient. A particular issue of concern was adding organic feedstock to ADs. Chair Martin enquired about the obstacles to facilitate this. Mr. Bevington indicated the current issue was plumbing, infrastructure and engineering. With respect to engineering, he said “Most anerobic digestors in the state are under-fed. Better mixing, even speeds allow for more feedstocks. They [ADs] can handle more than the industry thought.”

Michael Cahill of Germano & Cahill, P.C. also asked about food waste as a feedstock and whether co-digestion with sewage was recommended versus waste derived from a standalone food waste facility (including the nonorganic mixings it may include). In response, Bevington noted that wastewater plants cannot handle non-organic packaging. He also showed support for co-digestion because co-digestors produce sludges with balanced nutrients. One dimensional feedstock like food waste requires additives to flourish. Mr. Casella pointed out there is requirement for high quality materials, but lack of de-packaging and contamination is a barrier to directing organic waste to ADs. Both Bevington and Casella agreed that a cultural change is needed.

Next, subgroups reported on their work to draft mitigation strategies. NYCDPS’ Jane Gajwani updated the Panel of discussions occurring at the wastewater subgroup. She noted that the goal of the group was to “support the transformation of wastewater treatment into wastewater recovery” in order to “extract the full range of resources contained in wastewater such as renewable bioproducts, displace fossil fuel-based alternatives while minimizing greenhouse gas emissions.” The strategies under consideration include mitigating fugitive emissions through monitoring biogas handling systems and encouraging the transition from septic to sewer systems and extracting RNG from wastewater with ADs. Strategies to utilize and create market demand for the

benefits of biosolids and expanding the range of feedstocks that can be recycled are still under development. With respect to equity, the subgroup has been focusing on wastewater plants becoming assets to environmental justice (EJ) communities by providing work opportunities but also reducing odor and co-pollutants. They also discussed the need lower transportation emissions and maximize hauling capacity to reduce truck traffic and improve local air quality.

Lauren Roretta (CH4 Biogas) reported out on behalf of the landfills and organics diversion subgroup. The subgroup has been looking at emissions reduction strategies to align and expand incentives for organic waste management and energy recovery, increase regulatory support and standards to enable infrastructure development and use of best-in-class technologies such as AD, as well as improve organics diversion. Roretta also indicated that the group will be examining opportunities to engage with local communities to establish the best and most suitable solutions for waste collection and reduce long-hauling of waste.

The materials management group largely discussed policy options regarding extended producer responsibility programs targeted towards materials with significant GHG footprints like carpets, paper and fiber, e-waste like batteries, and refrigerants. Other policies include a universal recycling policy like in [Vermont](#) and [Delaware](#), permitting requirements for developers to recover demolition and construction debris, expanding the [Bottle Bill](#), clean transportation solutions for trucking recyclables and waste, surcharges on transfer stations and businesses that ship waste out of state to fund recycling markets. Resa Dimino (Resource Recycling Systems) prefaced her report out for the group with the caveat that in larger context, there is a need to think of the resiliency of the recycling industry supply chain and utilizing lifecycle assessment of GHGs in decision-making with respect to recovering materials locally for a lower-value products versus trucking further for higher value application. She also noted that support is necessary for municipalities who tend to not have resources for waste collection systems.

The final subgroup to give an update was the local scale diversion and climate justice subgroup. Michelle Tok Oyewole (NYC EJA) reported on the strategies the group are considering which included sustaining green jobs and programs such as the [Inner City Green Team](#), and local scale micro-hauling and community composting especially in marginalized communities. Other recommendations under consideration include reducing waste generation to begin with, preventing leakage and externalization of waste generation, ensuring climate and environmental justice in waste collection and processing, recycling and compost outreach and education, and supporting circular processes such as compost to farm applications.

Chair Martin Brand emphasized the importance of subgroup collaboration on cross-cutting issues. Panel members also pointed need for cross-Panel engagement especially with the Transportation, Agriculture and Forestry, Power Generation, and Land Use and Local Government Panels. With respect to questions on how granular

policy recommendations should be, Chair Brand gave subgroups the freedom to decide once it addresses GHG reductions. The next meeting of the Panel is January 14 at 10 a.m. Meeting notes and presentations from this and previous Waste Panel meetings can be found [here](#).