

30 June 2022

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Climate Action Council 625 Broadway Albany, NY 12233-0001

Dear Climate Action Council:

CRT is a community-based transit advocacy nonprofit that has worked to promote better public transit in the Buffalo-Niagara region for over 50 years.

We thank the Climate Action Council (CAC) for its thorough Draft Scoping Plan covering the breadth of issues that will need to be addressed to meet the important goals of the Climate Leadership and Community Protection Act (CLCPA).

We were pleased at the respectful way the most recent public hearing in Buffalo was conducted – no shouting and ranting with all speakers held to 5 minutes – but were disappointed that there wasn't time for all the comments. We didn't make the cutoff.

Below are our comments following an introduction and summary of key points, we have organized our comments according to the structure of the Draft Scoping Plan. We have included an appendix with some figures expanding and amplifying the points made in the main sections.

Introduction and Key Points:

To say climate change is a generational problem is an understatement. It is an epochal problem. According to NASA (climate.nasa.gov) CO_2 levels are 30% higher than at any time over the last 800,000 years and rising at an alarming rate. If we don't stop this rise, temperatures will rise well beyond the 2 degrees Celsius agreed to at Paris with potentially devastating impacts on the climate and planet.

CRT agrees with many of the themes that run throughout the Draft Scoping Plan.

- Changes must be implemented in a way that benefits the disadvantaged.
- New, significant revenue sources will need to be found to implement the many changes.
- Solutions must be multidimensional cutting across all areas of society (e.g., housing, buildings, waste, agriculture, transportation, industry).



• The long-term benefits of the proposed changes, especially Scenario 4, will outweigh the costs.

Since transportation is the second largest source of GHG, this must have significant priority in the initiative. Since almost half of transportation GHG generation is from light duty vehicles, the CAC Draft Action Plan's focus on reducing VMT is important. We are disappointed that the plan does not achieve this objective. VMT still increases under all proposed scenarios, although less than by doing nothing. CRT believes we can do better by prioritizing high-capacity rapid and conventional urban public transit, as well as customized suburban and rural public transit.

Achieving VMT reductions requires public transit be made attractive enough that people will prefer it to cars. This means high-capacity urban and suburban transit systems need to be deployed (e.g., light rail rapid transit (LRRT), heavy rail, bus rapid transit). In Buffalo, this means extending Buffalo's light rail rapid transit (Metro Rail) system integrated with clean, high frequency bus service. Rural areas need expanded electric microbus and paratransit service.

Improvements in public transit, especially high-capacity transit, offer the best opportunity for meeting the goals of the CLCPA.

- Public transit is cheaper than cars for individuals, unlike housing electrification that will increase personal costs (initial and recurring).
- The energy per passenger mile for public transit, especially high-capacity transit, is less than for light duty vehicles (LDVs). This avoids energy and pollution that would have been experienced on light duty vehicles (LDVs) (opportunity costs).
- Public transit can remove thousands of cars from roads and highways. For example, each light rail rapid transit (LRRT) train has a capacity of 700 people every 10 minutes in each direction of service. (See Figures 1 and 2 in Appendix A.)
- Public transit reduces GHG and tailpipe emissions and reduces load on the electrical grid (for electric cars). This makes a green grid more feasible when LDVs are switched to electric.
- Even electric cars wear out tires that have disposal problems, are 50% plastic, and demand high-polluting, expensive lane miles, rights-of-way and parking lots (See Figure 3 in Appendix A.) (Reference: Bill Gates. How to Avoid a Climate Disaster, 2021.)
- Public transit directly addresses social equity goals by providing transportation for those who can't afford cars, as well as for those who prefer taking public transit. This is obvious by looking at who is riding transit in Buffalo-Niagara (See Figures 4 and 5 in Appendix A.)
- Public transit brings people from all races and backgrounds together.
- Public transit has been shown to provide health benefits by including an active pedestrian component.

Below are chapter-by-chapter comments to the New York State Climate Action Council Draft Scoping Plan.



Chapter 1.

N/A

Chapter 2. Scientific Evidence of Our Changing Climate.

CRT agrees that the scientific evidence is overwhelming. We must act now, and act boldly in concert with other states and nations. NYS' leadership will be important. And the consequences of not acting boldly are potentially catastrophic.

CRT agrees with the NY State definition of "disadvantaged communities" and that the Climate Action Plan must target disadvantaged communities to overcome historic shortcomings, especially in transportation.

CRT agrees that the benefits of climate action will be worth the investments, especially investments in public transportation. We believe public transportation will produce the highest return on investment for reducing target emissions of any climate investment initiatives.

A large proportion of renewable energy sources are intermittent. This highlights the importance of investments that change behaviors toward using less energy. Most prominent among these are investments in public transportation that will allow people to leave their cars at home. <u>The choice to use a bus or train adds negligible energy use to the bus or train already in service and avoids the pollution that would have been generated by the car.</u>

Chapter 3. NY's Climate Leadership.

CRT agrees that NYS needs to provide leadership in acting against climate change, building on actions already taken. But much more is needed. NYS actions should be designed to incentivize switching to green energy.

Chapter 4. Current Emissions

CRT agrees it is important to monitor progress and adjust climate strategies and actions as needed.

Chapter 5. Overarching Purpose and Objectives of the Scoping Plan.

CRT agrees with the strategies and objectives of the plan. CRT believes it is important to engage agencies and citizens on the importance of and plans for meeting the goals of the CLCPA law. We agree reliability and resiliency will be important.

Chapter 6. Achieving Climate Justice.



CRT is pleased that the Draft Scoping Plan calls for addressing "the disproportionate burden that some communities have borne from past and current emissions." For example, in Buffalo, the Kensington Expressway forms an ugly scar through Buffalo's East Side, a disadvantaged community, where suburban commuters drive spewing pollution every day.

The best way to reverse this injustice is to provide an attractive alternative to driving into the city. The expressway is the most expensive option offering the highest pollution possible. Extending Buffalo Metro through the East Side to the airport as well as to Amherst would do the opposite. Concentrating people and moving them without cars dramatically reduces emissions and pollution. Other Metro Rail extensions need to be studied and implemented, in turn. High capacity, high speed light rail has the capacity and speed needed to attract suburban riders who now drive, while providing better mobility to disadvantaged communities. This is summarized in Figure 1 in Appendix A.

CRT is pleased that Table 1 on Page 37 calls for reducing VMT equitably and that "expanding high-speed rail and long-range bus service" is called for. As Figure 1 in Appendix A shows, Buffalo's 6-mile light rail carries 18% of NFTA transit riders compared to over 1,000-miles of bus service. Extending Buffalo's light rail is critical for reducing VMT. All NYS urban centers need high-capacity transit.

CRT agrees we should incentivize electrification of transit (buses and trains). Electrification and expansion of high-speed, high-capacity transit is best. Buffalo's light rail uses hydro power from the Niagara Power Authority (NYPA). Buffalo's transit ridership numbers are very strong.



Buffalo has more boardings per mile than metro systems in these cities

San Diego Portland Los Angeles Tacoma Portland Phoenix Denver Seattle Charlotte Salt Lake City Washington, D.C. Detroit Dallas Philadelphia Sacramento St. Louis Tucson Pittsburgh Baltimore San Jose New Orleans Norfolk Memphis Cincinnati Oceanside El Paso Atlanta Cleveland Trenton Camden Escondido

Based on 4th quarter 2019 ridership. Source: Wikipedia

Chapter 7. Just Transition.

CRT agrees that economic and employment issues need to be addressed – training, community engagement, career pathway opportunities. Note that every \$1 of transit investment generates



\$4 in economic activity and every \$1 billion invested in public transit supports and creates 50,000 jobs (American Public Transit Association, https://www.apta.com/wp-content/uploads/APTA-2021-Fact-Book.pdf).

CRT agrees that consideration of multi-state issues such as emissions leakage (sending pollution to other states or countries) and job leakage (competitive impacts), is important.

Chapter 8. Public Health.

Climate-driven public health issues are wide-ranging (e.g., heat stress, respiratory problems, insect borne diseases, etc.). We agree that "a reduction in the reliance on personal automobiles by incorporating smart growth and Complete Streets policies into transportation planning has the benefit of increasing opportunities for physical activities (P 62.)." Better public transit is a key part of achieving this.

Chapter 9. Analysis of the Plan.

Scenario design is where the rubber meets the road. CRT agrees that the reference case – do nothing -- is a non-starter. Scenarios 1 through 4 move us in the right direction.

CRT believes that Scenario 4 is the best approach. It makes the necessary changes to smart growth and transit. It is the only scenario that does not rely on negative emissions technologies (e.g., carbon capture). We agree that reliance on negative emissions technologies is uncertain.

All scenarios, even Scenario 4, has increased VMT. This seems like a failure. We should be able to <u>reduce</u> VMT. CRT believes this is possible by deploying clean, high-speed, high-capacity transit. Figures 1 and 3 in Appendix A highlight how transit can reduce the number of cars needed. It's worth the investment!

Figures 33 and 34 (p. 48 and 49 of Appendix G) recognize the difficulty of balancing seasonal and daily energy demand fluctuations with intermittent green generation and storage strategies. The problem is acute in the winter as shown in Figure 34. Nuclear, hydro, and bioenergy sources are lumped together in the figure. This needs to be broken out. It may be that we need more nuclear to make it all work. If so, we need to make nuclear acceptable, which means improving nuclear technology and safety, and dealing with the nuclear waste storage problem.

Figure 46 of Appendix G (p. 64) shows that the best approach (net present value) in terms of health benefits and avoided GHG costs is Scenario 4. CRT agrees. Further, as Appendix G points out, the costs of Scenarios 2, 3, and 4 are moderate (ranging from 11% to 12% of the reference case) because the infrastructure will have to be maintained in either case. We agree that the investments make sense.



Figure 50 of Appendix G (p. 68) indicates that the annual system expenditure for transportation is less for Scenarios 2, 3, and 4 than for the reference (do nothing) case in 2050, while building investments is more. It is not clear what is included in the transportation investments. To the extent that these involve high-capacity transit, it makes the argument for such investments stronger.

We agree with this statement on p. 84 of Appendix G: "NY will need to substantially reduce vehicle miles traveled while increasing transportation access. This should include expansion of transit service structured around community needs, smart growth inclusive of e-TOD, and transportation demand management." CRT agrees.

Scenarios 1-3 (low VMT) definition on page 95 of Appendix G is "expansion in bus transit service statewide," while very low VMT (Scenario 4) has incremental reductions from enhanced instate rail aligning with 125 MPH HSR. <u>We feel that very low VMT is critical, especially in Buffalo</u> <u>and NYC where baseline high-capacity is available (e.g., Buffalo's LRRT).</u> This highlights the importance of high-capacity transit for reducing VMT statewide. Reducing VMT is critical to the success of the plan. Therefore, high-capacity transit needs to be a key part of the plan.

Comparing Table 9 (p. 96, Appendix G) to Table 10 (p. 97, Appendix G) both show 3,700 reduced VMT. But Scenario 4 (Table 10) will use very low VMT – enhanced rail solutions. The VMT reductions should be much greater. These tables need to be revisited. Just look at the Buffalo LRRT example – 700 capacity, 50MPH, every 10 minutes vs. 50-person buses, 30MPH, potentially every 10 minutes. See Figure 1 in Appendix A.

Also, Table 11 (p. 98, Appendix G) has incremental costs of rail improvements at \$6 per mile, citing the Empire Corridor Draft Tier 1 EIS as a source. Is the incremental cost compared to Scenario 3? But Scenario 3 doesn't include rail, if we understand it correctly. The Empire Corridor Draft 1 Tier EIS as a source, which has an estimated cost \$6.5B for 463 miles under the 110MPH option. This yields a cost of \$13.5M per mile. Can you help us understand these numbers? We estimate the cost of light rail when rights-of-way (ROWs) are available is about \$100M per mile. Even the Buffalo Amherst extension is estimated at \$1.2B for 6 miles (\$200M per mile) and this includes some tunnelling and roadway reconfiguring.

High-capacity transit, preferably rail where possible, needs to be prioritized in the plan. This lack of prioritization may be why the report predicts so little VMT reductions.

Table 16. p. 118, Appendix G CRT comments:

- The Transit and Smart Growth section ignores rail-based transit systems and only discusses buses. This section of the table needs to add a rail category to include light rail and/or trolleys. These have much more capacity and will be needed to achieve the "very high" performance levels indicated.
- The non-road transportation section includes a rail category, but little distinguishes categories across the scenarios. More specifics are needed. Is Scenario 4 assuming HSR? This is not clear.



Chapter 10. Benefits of the Plan.

Figure 10 (p. 76) shows population growth of 5% (visually estimated from chart). VMT is reduced by 3% (p. 97, Appendix G) even with scenario 4 enhanced transit and mobility. We should be able to do better than this. Also, since Figure 9 (p. 96, Appendix G) also shows only 3% VMT reductions for Scenarios 1-3 makes us believe the 3% figure in Figure 10 is an error. If so, and Scenario 4 offers better VMT reduction, this offers stronger argument for Scenario 4.

CRT agrees that the cost of inaction exceeds the cost of action. (Table 12, p. 81.) It's time to act.

Figure 13 (p. 82) indicates that transportation investments are small compared to building investments. What is the relative return on investment (ROI) of the two categories? What is included in those costs? We believe that high-capacity transit like LRRT and trolley has a high ROI. CRT would like to see this analysis. See Figure 1 in Appendix A on ridership for Buffalo LRRT vs. bus for comparison.

Chapter 11. Transportation.

States that there are 9 million LDVs in NY, 0.5% are ZEVs and we need 3 million ZEVs by 2030 and 10 million by 2050. Sounds like the assumption is that we will continue to have the same reliance on LDVs moving forward. We believe there is too strong an emphasis on ZEVs for meeting GHG reductions and that transit should play a bigger role. ZEVs are still Vs with high polluting tires and 50% plastic. (See Figure 2 in figures at the end).

CRT agrees that "a substantial portion of personal transportation in urbanized areas would be required to shift to public transportation and other low-carbon modes." But the plan then says "NY can achieve these goals through ZEV sales requirements and accompanying incentives and investments to help achieve these mandates, historic investments in public transportation and micro-mobility..."

If "a substantial portion of transportation in urbanized areas would be required to shift to public transportation" then why do we still need more LDVs? With "historic investments in public transportation we should be able to reduce the number of LDVs and VMT.

CRT believes that if too much emphasis is put on ZEVs, this will put stress on the electric grid and make it difficult to meet the goals of a green grid. Since buildings are also moving to electric heat, to avoid fossil-based heating, the transportation sector offers the best opportunity for meeting the CLCPA goals. In urban areas moving people to transit is the best way to meet the CLCPA goals. Transit offers the least energy expenditure per passenger mile (PPM). Transit should be the <u>first</u> priority. Those who still need cars after transit improvements and incentives should use ZEVs. <u>As noted earlier, those who choose to take transit add a</u> <u>negligible amount of energy demand to a bus or train already in service and avoid the energy</u> (electricity or gas) they would use if they drove.



By putting ZEVs first in the discussion of the report reveals a bias toward LDVs. To meet the CLCPA goals will require a change in behavior. This should start with a move away from LDVs toward transit.

The strategies under the "Enhancing Public Transportation and Mobility Alternatives" section (p.107) defines public transportation as "including but not limited to transit, micro-transit, shared mobility, and longer distance passenger rail services. These are quite different things and need to be expanded separately. These have differing capacities and capabilities and need to work together. The strategy needs to recognize and expand on how these widely varying alternatives will work together.

T6. Mobility-Oriented Development. (P. 110)

Examples of TOD and MOD (P.111) are mentioned and specifically notes the NFTA and proposed extension of the LRRT to Amherst. T6 should also note the need to study other possible extensions and enhanced BRT and transit improvements. The original NFTA Buffalo Metro plan was for a 43-mile LRRT network. Most of the ROWs are still in place and publicly owned. They should be included in the discussion and plan.

T7. Smart Growth Public Education and Awareness (P. 112)

CRT agrees that it will be important to conduct an "expansive, multi-dimensional, grass roots public education campaign on the links between smart growth, transportation, transit, and housing; their roles in reversing climate change; best practices..." (p. 113)

Comment: some things take longer than others. For example, zoning can change quickly, but infrastructure development takes more time. Infrastructure like rail transit takes longer but studies can start right away. CRT recommends that expansions and development of light rail, trolleys, BRT, etc. should start right away beginning with studies, planning, and community outreach, and actual expansions when feasible. Studies and planning efforts can be a supporting part of the education campaign.

CRT agrees that "MOD and priority development areas are highly dependent upon the availability of low- and zero- emission transportation alternatives to complete first-mile/last mile of trips. This includes prioritizing the availability of safe and accessible pedestrian and bicycle amenities, high quality and frequent transit, and mobility-on-demand services. As part of future investments, agencies should be required to prioritize low- and zero—emission transportation infrastructure in all activities, where feasible." (p. 113.)

CRT agrees that "technology surrounding low-and zero-emission first-mile/last-mile mobility will help guide individual choice." (p. 113)



CRT agrees with the components of the strategy noted: "Update the Smart Growth Infrastructure Policy Act... Fund low-emission zones and car-free streets... fund mobility options... (bike, pedestrian, transit, complete streets)... expand partnerships with businesses." (P. 114)

Comment: these should be given high priority and started immediately, since results will take time to develop.

T9. New Technology Integration.

CRT supports "Components of the Strategy", especially user-friendly data sharing aps for sharing data with transit operators. We also support ITS and AVs, and making data accessible and secure, enabling user-friendly apps." (P. 115)

Comment: CRT especially agrees that empty AV miles should be discouraged, recognizing that shared mobility systems like Uber have been shown to increase VMT. (Source: Ride-Hailing's Climate Risks. Steering a Growing Industry toward a Clean Transportation Future. Union of Concerned Scientists. https://www.ucsusa.org/sites/default/files/2020-02/Ride-Hailing%27s-Climate-Risks.pdf)

CRT agrees that a user-friendly app that shares data across modes including transit for trip planning and payment are important and should be part of the plan.

CRT agrees that market-based solutions and financing will be important (P115). Industry will benefit from the changes being planned; they should be encouraged to provide cost share. Further the Federal government will need to be a partner since the Feds will be providing much of the money for transit investments. The state should work with the Feds in developing plans.

Further, Federal tax laws that discourage use of transit need to change. For example, the requirement to count corporate-provided transit passes as taxable employee income should be changed. Employer-provided transit passes should be treated as an ordinary deductible business expense for employers with no tax consequence to the employee. IRS rules subsidizing parking should be eliminated.

Market-Based Solutions and Financing (P. 115.)

Even more important is the unfair Federal transportation funding formula that provides a disproportionate level of funding for highways compared to transit. The local (mostly State) share for most highway programs is usually 20% while the local share for capital transit projects is usually 50%. This makes it difficult for local agencies to choose transit projects, even when they may be less expensive overall. This inherited policy made sense when we were building the Interstate Highway System, but it no longer makes sense today and has led to the underfunding of transit compounded over many years. This needs to be fixed. No wonder we have over-built our highways while underfunding our transit networks. The State should use its



clout with the Federal government to recommend that this foundational problem be fixed, now.

T10. Transportation Sector Market-Based Policies (P 115)

CRT strongly agrees policies that discourage carbon-based transportation and encourage noncarbon transportation like the Manhattan congestion pricing being developed are important. This will discourage carbon-based travel while encouraging less polluting travel and while providing a revenue source. Similar programs such as highway tolling and cap-and-invest approaches should be developed state-wide.

Components of Strategy (P. 116).

- Variable Pricing/Parking Policies. CRT agrees this is important and the State should play a supportive role.
- Vehicle registration fees. "The State should enact legislation to establish registration fees that discourage more carbon-intensive vehicles..." CRT agrees. CRT is uncertain about the "feebate program" discussed under the ZEV section. This strategy should be described or references where information is available about them should be noted.
- Mileage-based fees. "The State should enact legislation to establish a per mile fee system to fund investment in transportation infrastructure..." CRT agrees, and even agrees that the discouragement of ZEVs is a good thing. ZEVs still have tires, plastic parts, demand lane miles, etc. (See Figure 3 in Appendix A)
- Tax Increment Financing/Special Assessment Districts. CRT agrees TIF/SADs are important tools for making the shift to less polluting transportation and providing funding approaches for transit and other infrastructure investments. They are important tools and should be supported by the State with whatever legislation is needed.

T11. Unlock Private Financing.

Components of Strategy (P 117)

- Establish a First Loss Protection Product. This will establish a State residual value guarantee on ZEVs to encourage bank loans. Maybe if we back off on ZEV incentives we can get people out of Vs and into transit. CRT is neither in favor or against this idea.
- Offer fleet feasibility studies... NYSERDA will help organizations assess the cost / benefits of EVs. This sounds like a reasonable idea.
- Expand NYGreen Bank's mission. Expansion will help assess electrification financing. This sounds like a reasonable idea.

T12. Lower Carbon Renewable Fuels. (These are for hard to electrify equipment (e.g., airplanes...) CRT believes this is a reasonable idea.



Components of Strategy (P118)

- Clean Fuel Standard. CRT agrees with incentivizing transit operators and others to use low-carbon fuels as a source of their electricity. They will not do this on their own.
- Clean Fuel Infrastructure. CRT agrees the State should provide incentives for clean fuel infrastructure, like Hydrogen.

Chapter 12. Buildings.

N/A

Chapter 13. Electricity.

This is a huge and critical undertaking with many uncertainties and risks. The green electricity generation technologies include some intermittent sources (solar, wind). Today, electricity generation relies heavily on natural gas, which is to be reduced or eliminated resulting in even more reliance on solar and wind. Storage capabilities are still uncertain. This begs the question of reliability and resilience of the grid, especially under extreme conditions (e.g., heat waves).

For this reason, efforts to reduce electricity demand in the first place will be important. Moving people from LDVs to transit offers one of the best opportunities for reducing electricity demand. For example, it will not be possible to choose not to heat our homes. However, using highly efficient transit instead of individual cars is an obvious way to reduce the amount of electricity needed in the first place.

Chapter 14. Industry.

<u>N/A</u>

Chapter 15. Agriculture and Forestry.

N/A

Chapter 16. Waste.

N/A

Chapter 17. Economy-Wide Strategies

While CRT supported the TCI multi-jurisdictional approach, we are open to the economy-wide carbon price approach. If there is a way to price carbon and use the revenue to support carbon-reduced or carbon-free solutions, CRT is supportive. We are not economists or tax experts, so



CRT is unqualified to judge the best way. All we know is that financial disincentives for carbon transportation and incentives for carbon-free approaches is needed.

In reading the descriptions (P. 253), the carbon pricing approach seems straightforward and less complicated than the cap-and-invest approach. While CRT does not provide a recommendation, our impression is that carbon pricing is worthy of selection as long as the needed CO₂ impact is equivalent to the other approaches and can be achieved.

Chapter 18. Gas System Transition.

CRT agrees it will be important to plan and manage the transition from the existing natural gasbased energy system. It may be necessary to stage the transition to enable successful transition and continued economic and societal viability and welfare.

Chapter 19. Land Use

CRT agrees that sustainable land use planning and zoning will be important for meeting reductions in VMT. The principles of smart growth, increasing urban density, and avoiding further sprawl need to be applied to minimize the amount of LDV traveling needed for daily lives. This is a long-term strategy that will require new zoning laws to be enacted in coordination with transportation planning integrating smart growth with well-designed and capable transit systems. EVs can be deployed in sprawl areas where needed. This is noted in Section LU11 under "Refine State smart growth infrastructure at criteria" and LU12" accelerate Transit-Oriented Development." CRT agrees with both sections.

CRT especially supports and endorses smart growth and eTOD principles and the goals of reduced VMT outlines. CRT also supports county-led and MPO planning that coordinates across all the area municipalities. NIMBYism promoted through the many municipalities in the Buffalo-Niagara region has been a problem. For example, we should have one IDA for each county. Also, cooperation across counties will be important. State funding priorities should be aligned to promote this goal as outlined in Section LU11.

LU12. Accelerate Transit-Oriented Development

CRT agrees with the emphasis on E-TOD in this section. A key driver to the success of E-TOD is (1) investment in transit, especially urban high-capacity transit, and (2) a focus on mobility access and equity for urban, suburban and rural businesses and residents. We agree with the components listed under the "Components of the Strategy" starting on Page 299. But don't forget the transit investment part. For example, extend Buffalo's light rail through the disadvantaged East Side to the airport as well as other extensions. Extending Buffalo's light rail, thus leveraging the existing \$2B investment, offers a great opportunity for achieving the goals of the CLCPA.



Chapter 20. Local Government.

CRT agrees that it will be important to support local governments in planning, coordinating, and implementing the Scoping Plan actions.

Components of the Strategy

LG1 - clean energy dashboard

Form a community GHG working group (WG). CRT agrees. CRT is already a member of the Erie County Climate Change Working Group. The WG has pulled together organizations and municipalities from across the region. This has been a key to initial planning and will be critical to our ultimate success. We recommend that other regions take a similar approach.

Chapter 21. Adaptation and Resilience

CRT agrees that resilience needs to be planned and build in using the approaches described including supporting equitable adaptation of changes planned.

Chapter 22. Essential Elements.

CRT agrees that the essential elements (partnerships. Federal action, regional collaborations, supporting local governments, other partnerships, outreach and education, and workforce development as described will be needed.

Chapter 23. Reporting.

CRT agrees that these measures will be needed.

Chapter 24. Future Work.

CRT agrees with the outline of next steps outlined in this section. CRT agrees with the importance of public hearing moving forward. They should be scheduled to allow all who want to make a statement to speak, even if speaking time limits need to be imposed like last time.

We also agree that the plan will have to be updated every 5-years or so. However, the foundational content should not be subject to change. It will be necessary for businesses and individuals to plan investments and future undertakings without worry that major changes to the plan might negate or work against investments or decisions made.

Concluding Comment



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CRT again thanks the CAC for the development of this thorough and comprehensive plan and for leading the work moving forward. Feel free to contact CRT if you would like clarification on any of our comments or recommendations.

Sincerely,

Dougle fland,

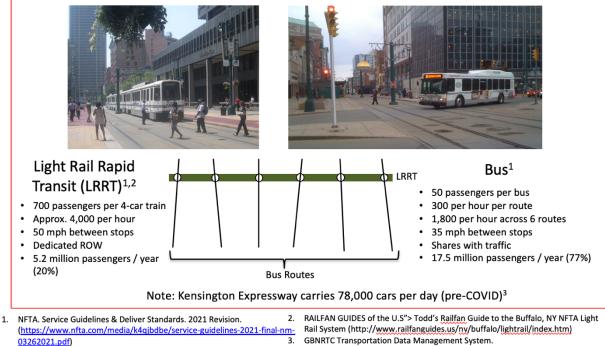
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APPENDIX A SUPPORTING FIGURES

See the below figures that expand and clarify many of our ideas listed in this document.

Robust Bus & Bike Networks Interconnected with <u>Fast</u> Metro Rail Spine



(https://gbnrtc.public.ms2soft.com/tcds/tsearch.asp?amp%3Bmod&loc=Gbnrtc)

Figure 1. Frequent, clean, accessible, high-capacity transit integrated with bus and bike networks will be critical for reducing VMT and electricity demand. Both LRRT and bus working together with other transportation modes are needed to achieve equitable transit and attract those driving to use transit.



The Math Is Simple

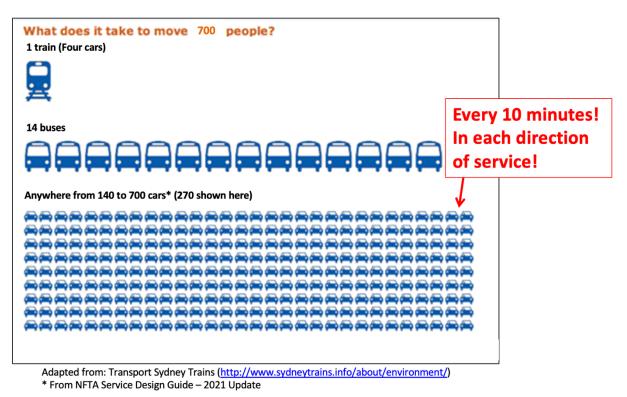


Figure 2. High-capacity transit like light rail has a significant impact on reducing VMT.



Switching to Electric Cars Alone Won't Solve the Problem!



National Archives at College Park, Public Domain, via Wikimedia Commons

- Every ton of cement generates 1 ton of CO₂¹
- Every ton of steel generates 1.8 ton of CO₂¹
- 50% of cars (by volume) are plastic¹
- An estimated 4 billion tires are currently in landfills and stockpiles²
- Cobalt mining for batteries uses child labor without protective equipment³
- Lithium extraction uses 500,000 gallons of water per ton⁴

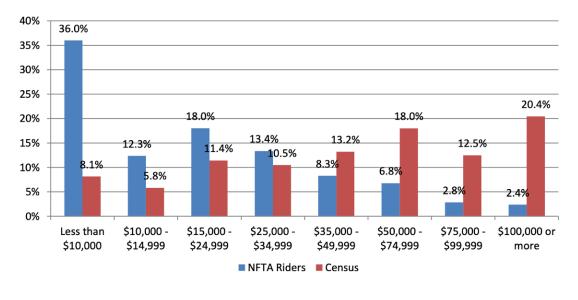
1 Gates, Bill. How to Avoid a Climate Disaster. 2021

- 2 World Business Council for Sustainable Development, 200.8
- 3 Institute for Energy Research, 2020
- 4 Amnesty International, The Dark Side of Electric Car, Exploitive Labor Practices, 2017

Figure 3. Switching to electric cars alone won't solve the problem.



Who Is Riding Transit by Income?



Source: 2017 NFTA / Greater Buffalo-Niagara Regional Transportation Council Onboard Survey Onboard+Survey+FINAL+Report.pdf

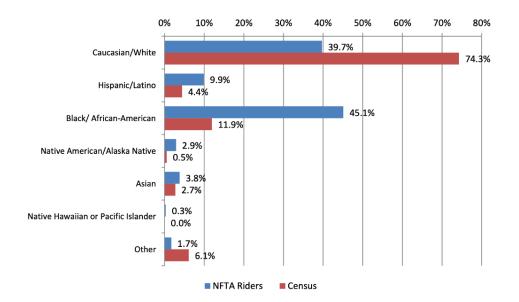


CITIZENS for REGIONAL TRANSIT

Figure 4. Only those who can't afford a car take the mobility hit and suffer longer commutes.



Who Is Riding Transit by Ethnicity?



Source: 2017 NFTA / Greater Buffalo-Niagara Regional Transportation Council Onboard Survey (https://static1.squarespace.com/static/56ccbbfd3c44d8670dbd1d84/t/594c18bb15d5dbb061b1eb9f/1498159346755/NFTA+2017 Onboard+Survey+FINAL+Report.pdf

Figure 5. Those suffering from underinvested transit services are disproportionately from black and Hispanic communities.