Mayor's Climate Council
May 12, 2020

1) **Mayor's Introduction**
   a) Climate council was a big part of the campaign and is essential
   b) Unique pandemic situation in fact highlights the need for climate council
   c) Important to continue work on big-picture issues
   d) Goal to reduce community emissions by 80% by 2050
      i) Will take years of steady, proactive leadership, and we need to start now
      ii) Will discuss ongoing timeline for planning process
      iii) Includes building long-term initiatives into the budget
   e) Roll Call
      i) Alicia Hemmings, Sunrise Movement
      ii) Amy Hathaway, Forest Heights Neighborhood Association
      iii) Brian Hann, Dewhirst Properties
      iv) Chris Cimino, University of Tennessee
      v) Pastor Chris Battle, Tabernacle Baptist Church/Battlefield Farms
      vi) Cortney Piper, Piper Communications/Tennessee Advanced Energy Council
      vii) Gabriel Bolas, Knoxville Utilities Board
      viii) George Wallace, Coldwell Banker Wallace & Wallace
      ix) Nancy Nabors, Knoxville Chamber
      x) Rebecca Tolene, Tennessee Valley Board
      xi) Stan Johnson, Socially Equal Energy Efficient Development
      xii) Dr. Stephen Smith, Southern Alliance for Clean Energy
      xiii) Erin Gill, Chief Policy Officer City of Knoxville
      xiv) Brian Blackmon, Sustainability Director City of Knoxville
2) **Objectives of Climate Council**
   a) City Government leads by example:
      i) 50% by 2030 Municipal Operations
      ii) 80% by 2050 for Community
   b) Released initial goals in 2010, have since had mayoral leadership on Climate Mayors, national recognition
   c) These impacts affect our residents
   d) Working with Luke Gebhard and Virginia Barry at Milepost for facilitation
   e) Rules for success from out facilitation team:
      i) Be respectful; we won't always agree
      ii) We'll pause frequently—stay muted until then
      iii) We will have slides prompting a pause for open mic discussion
      iv) If you're got a burning question you want to queue up
         (1) Ask in chat; or,
         (2) Raise a hand in chat
   f) Launched a new emissions page: knoxvilletn.gov/emissions
   g) The conversation goes beyond the 15 individuals on the Climate Council, and we hope you'll stay engaged
   h) Role of the climate council is to provide high-level, cross-sector leadership to chart a path to reduce Knoxville Community emissions 80% by 2050
      i) Identify and prioritize emission reduction strategies
      ii) Discuss opportunities for challenges for proposed actions
      iii) Make final recommendations to information

i) “Homework” also will help identify speakers/presenters for future sessions to speak about priorities and ways to define ongoing action
j) Recommendations will inform the next edition of the city’s sustainability work plan

3) Climate Change Mitigation

a) Reducing and stabilizing emissions of heat-trapping greenhouse gases in the atmosphere
b) May table certain ideas more directly related to adaptation that aren’t focused on mitigation activities

4) Components of Process

a) Mayor’s Climate Council
    i) Cross-sector community leadership
    ii) Balanced for perspectives
    iii) Meet bi-monthly over next 9 months
b) Technical Working Groups
    i) Specific to 3 sectors: Transportation, Energy, and Waste
    ii) Technical experts in their field
    iii) Deep-dive discussion to move from broad to specific
c) Equity Working Group
    i) Local leaders representing front-line and historically marginalized communities
    ii) Will help center equity within climate planning
    iii) Meet at least 5 times over the next 9 months

5) Sample Flow

a) Review and prioritize (May)
b) Discuss challenges and opportunities (July)
c) Deep dives by working groups (August)
d) Working Groups report out (September)
e) Council final comment (January)
f) Visit www.knoxvilletn.gov/ClimateCouncil/ to see timeline graphic
g) Erin Gill: Can be an unwieldy conversation, kudos to Brian for this timeline. Allows us to break things up and get some deep dives while still taking a big picture stance. Council Members are also welcome on working groups, but try to break it up to make this a more manageable time commitment
h) Technical Working Group: If you’ve gotten an email you’ve already been identified for a particular group
i) Stephen Smith: Is there a feedback/iterative loop between Climate Council and working groups? At what point are issues put to bed?
    i) Brian Blackmon: If there are additional comments/concerns about need for more depth, the technical committees will be reconvened. Cycles will go on as needed. Final convening will be in January, and these priorities will be reflected in work plan. In late spring/early summer 2021, would like to invite council back to discuss the completed work plan
j) George Wallace: Will this inform a plan that’s taken to council?
    i) Mayor Kincannon: Council has already adopted updated goals, and yes the work plan will be taken to council for internal feedback as well as budget planning and to more broadly to discuss what we can do with area partners to reach our goals. Also need buy-in from business community, builders, etc. Some of it will be the city coming out to the community and bring advice from the working groups to action. Hopefully this council can help inform an action plan and ultimately help make the plan work.
k) Stan Johnson: How do we make this into policy? How do we go beyond one administration
    i) Brian Blackmon: Strategy-wise, we will be discussing many specific policies that can bridge multiple administrations
    ii) Also see above answer.

6) Inventories

a) We follow best practices outlined by the Greenhouse Gas Protocol
b) We follow the Basic+ reporting protocol
c) We publicly disclose our inventory through a global portal. We also have published emissions data on knoxvilletn.gov/emissions

7) City Operation Emissions
a) Total emissions down 31%
b) Energy intensity down 24%
c) Cost per square foot down 7%
d) Municipal renewable energy 200 kW (Hosted on city property)
e) Streetlight energy use down 43% (annual to 2019-projected reduction of 60% by 2020 with full year of retrofit)
f) All while retaining savings and having favorable returns on our investments

8) Performance vs. Projections
a) Ahead of track to reach our goals
b) Through thoughtful planning and strategic investments

9) Sector Performance
a) Small decisions over time make a big impact
b) Invested in building upgrades, lower emissions electrify, streetlights, right-sizing vehicles
c) Hard discussions; increasing route frequency can increase emissions in the short-term, but these impacts can be mitigated
d) Transit/city fleets will continue to decarbonize
e) Stephen Smith: What other things are you doing to attack the transportation component? Are there things that you've tried that weren't successful or have you just had fewer projects? They
    i) Brian Blackmon: Both down around 10% for transit and city fleet. We've tried alternative fuels (CNG, natural gas, changing mowers). Biggest savings come from fuel economy and switching to electric, but there aren't a huge number of options for the amount of light and heavy trucks the City uses. There are some retrofits, but these present warranty issues. We are still looking for ongoing opportunities to make the switch. Electric buses are coming, but the front-end costs of ensuring consistent rapid service are high.
f) Chat: How does the City account for the activities of contractors?
    i) Brian Blackmon: City contractors and their fleets are counted in community emissions

10) Community Profile
a) City population: Up 7.5%
    i) Growth of Knoxville
b) City wide-emissions up 9%
c) Can create additional graphs for future meetings
d) Upstream investments (lower-carbon electricity) have helped mitigate some of the effects of population growth

11) Performance vs. Targets
a) Curve is seen in part because of a change in the model we use
b) Transportation is the culprit
c) 2-fold increase: more people driving, and a larger contribution from Knoxville
d) Community inventories typically 1 or 2 years behind; are revised as better data becomes available to give more accurate representations, official numbers often not released for a full year

12) Sector Performance
a) AFOLU, Water &Wastewater, Process & Fugitive Emissions added in 2015
b) AFOFLU data included in rate classes
c) Slight uptick in commercial
d) Residential relatively flat, slight decrease due to lower-carbon electricity
e) Solid Waste: increases in waste generation and some changes in characteristic

f) Transportation is an ever-growing slice of the pie
g) Improving energy/buildings will also have impact on water/waste-water
h) Stephen Smith: Is the Uptick due to better modeling? Or is it a trend change?
    i) Brian Blackmon It's a large trend change. The City uses the MOVES dataset and weighted age of vehicle which determines our emission factor. We then use county-level VMT and TPO data for percentage of county. You see an adjustment of methodology from 0.6 to 0.7 (60% to 70%) contribution. This also occured while local volume of our contribution was increasing. This is a real-life trend change in that time.

13) Transportation

a) Sloping upward—huge increase in the number of vehicles in 2015 that has continued to grow
b) Makes up 56% of area emissions
c) 44% increase in emissions due to increase in volume of traffic on roads
d) Emissions per mile down due to better fuel efficiency

14) Emissions vs. Traffic

a) Emissions are up primarily because volume of traffic is up 15% in the County
b) Our share of emissions has also increase over time as the city grows

15) Fuel Economy Improvements

a) CO2e/mile is down 3% because of improvements in fuel economy
b) Locally, most cars on the road are 10+ years old, and even older for non-passenger vehicles
c) Face of transportation is changing, but we see very slow adoption
d) Can't build expectations around early-adoption, but still potential for hope
e) Alicia Hemmings: Do we have comparisons to emissions data for other similar-sized cities?
    i) Brian Blackmon: Yes, we've looked at other cities' climate action plans and we'll get into. Still, we need to tailor to Knoxville's priorities
f) Chat: Do these include trains, etc.?
    i) Brian Blackmon: Starting in 2015 we began including trains/planes/waterborne vehicles, but the majority of emissions come from on-road transportation
g) Stephen Smith: We're part of SSDN. Is there a collection of best practices to help guide us in the face of this formidable challenge? Can you give us a highlight from your bag of tricks?
    i) Brian Blackmon: Yes. We'll get into it in subsequent slides.

16) Buildings

a) 40% of emissions
b) 23% lower emissions
c) 7% increase in consumption

17) Emissions by Sector

a) Residential and commercial are down, uptick in industrial
b) Local electricity tacks slightly lower than regional, and have seen a steady decline since 2005
c) Investments in this make an impact for every single home receiving electricity

18) Energy Use Characteristics

a) Consistently makes up 60% of all energy use
b) Electricity use is up 12%
c) Natural gas use is down 1%
d) Electricity makes up 78% of building operation emissions—this is an important place to be tracking/keeping an eye on it
e) Thank you to KUB for sharing data to make sure we have good date and can be good stewards
f) Erin Gill: Data-sharing with our local utilities has been essential. TVA and KUB are both trending lower than EA reporting metrics which is great. Kudos to teams at KUB and TVA for investing in lower-carbon electricity.

19) Waste

a) 1.5% of area emissions
b) 73% higher due to projected increases in waste generation

c) Characterized by using national data—need to model what's collected through private contracts

20) MSW Characterization

a) Focus on methane-emitting parts of our waste stream
b) Non-emitting in blue on graphs; down by 4% from 2005
c) Methane emissions captured for lifetime (standard practice)
d) Changing times: corrugated cardboard (online shipping, etc.), food scraps, and dimensional lumber are up
e) Corrugated cardboard is largest contributor to solid waste
f) George Wallace: Can we reach these goals with just city rather than county residents?
    i) Brian Blackmon: An important question. We're 1/3 of the city, and we should focus on the levers we can pull and setting a good example. There are jurisdictional issues and questions of authority we will need to consider. Furthermore, many of these issues are regional, and pushing towards system-level partners we can make more solutions that address challenges that can be amplified beyond our boundaries. Leadership matters, and we can help others see the benefits and work together to achieve public support.
g) Chat: So, by the methane emissions focus the City of EPA is measuring things that could break down in a landfill… as opposed to the amount of CO2 utilized in the manufacture and consumption of a type of waste/recycling such as a plastic bottle??
    i) Brian Blackmon: We don't do a consumption-based inventory, but this is captured in manufacturing in-boundary. Many of these challenges are driven by concerns that are not exclusive to Knoxville. Waste is disposed outside of the county.

21) Identifying strategies

a) Action oriented: how do we identify places to get started?
b) Review/Suggest/Prioritize, work with technical group to create actionable goals along with additional feedback
c) Iterative process until January
d) Summary deliverable will reflect priorities and list of strategies to be incorporated into work plan

22) USDN High Impact Practices

a) A starting point: USDN High Impact Practices
b) Draws upon leading Climate Action Plans and studies
c) Effective emission reduction strategies established by national and local sustainability experts and practitioners
d) But, this is not a blueprint for our goals or a comprehensive list of all possible strategies
e) We need to go beyond to reflect our unique Knoxville-are priorities
f) We want your perspective—what have we left out? What other issues are on your mind?

23) Leveraging knowledge of the USDN network (Garrett Fitzgerald-Strategic Collaboration Director)

a) USDN is a network of city/county staff from across the US and Canada who lead the sustainability, climate, equity, and resilience work
b) A space where we learn from one another and share ideas; host working groups that give opportunity to discuss with peers
c) Value of a larger network is knowledge—exchange information from practitioners and partners across many communities
d) USDN has helped assemble knowledge to make it more accessible and useful to work towards a shared solution set for similar problems
e) Communities are trying dozens of different things, and USDN uses surveys, studies, and analyzing sustainability plans to identify what kinds of things cities can do—what are cities actually working on? And what's working well?
f) Will help answer questions for questions you'll wrestle with in this process? What items are most practical? Are there areas of synergy with other local concerns (i.e. equity, workforce development)?

g) HIPs are a living document—help us understand what matters and what's practical
h) Knoxville can reference this research and insights from other cities to help inform the unique needs of our community
i) Brian will act as conduit to USDN

24) Survey

a) Pulls from HIPs in Appendix B and focused on community-facing initiatives
b) Prioritize on a scale of 1-5 and a comment section
c) Also an opportunity to add further suggestions
d) Staff will aggregate and summarize results for July meeting
e) High Priority=>Opportunity=>Action framework

25) Centering Equity

a) Many of us have lived experiences that are difficult to translate to one other
b) Certain communities of color, low income communities, those with disabilities, are more vulnerable to climate change, and many of these front-line communities face immediate challenges and are historically marginalized
c) These factors are not historically centered when it comes to decision making
d) The Equity Working Group will focus on informing planning based on community needs and reviewing proposed actions to asses benefits and burdens
e) How can strategies be equitable and inclusive to allow participation by all
f) Will ultimately propose Equity Implementation Principles—standing considerations we can apply to many initiatives in our community
g) Alicia Hemmings: When in the timeline will the equity working group be meeting?
    i) Brian Blackmon: Will be convened between now and July so they can inform the Climate Council July meeting. They'll meet around 5 times and review what the technical working groups suggest

26) Next Steps

a) Homework:
    i) Survey, scheduling polls
b) Next meeting in July 2020
c) Past meeting information (presentations and notes) available at www.knoxvilletn.gov/climatecouncil/