City of Miami Beach – Climate Action Plan
Scope of Work
3/15/2021

Task 1 - Emissions Analysis

GHG Emission Forecasts

AECOM will prepare business-as-usual emissions forecasts for 2030 and 2050 based on the City's existing citywide greenhouse gas inventory and demographic and economic forecast indicators. AECOM will develop a data needs list of specific growth indicators that reflect the city's emissions sources for the City team to use in its data collection. Based on our recent experience in the City of Miami, we assume the forecasting will be demographic-focused (e.g., population and employment) with on-road travel forecasts provided by FDOT.

We will develop one set of emissions forecasts through the 2050 horizon year to be used in the GHG analysis later in subsequent tasks. We will review the draft forecasting results with City staff in one meeting.

Assumptions:

- Forecasts to be based on population and employment growth inputs provided by City staff and FDOT travel demand estimates
- City will request on-road travel forecasts from FDOT based on a data request email drafted by AECOM
- City will provide base year inventory files, including activity data and emissions factors, and results to AECOM; AECOM will not revise the base year inventory and will incorporate it into CAP analysis as is
- AECOM will forecast communitywide emissions only; we will not develop a separate municipal operations emissions forecast

Deliverables:

- Meeting to discuss proposed growth indicators
- Growth indicators data request list; City to collect data
- FDOT data request email specifying format of travel demand information
- Meeting to review forecasting results
- Excel file showing results of forecasting, including base year emissions for reference

Interim Target Setting

Based on the result of the emissions forecasting and action analysis, we will facilitate a discussion with City staff to identity an interim target for the CAP. We expect the interim year selected will be 2030 or 2035 and will be decided through discussion with the City team. Target selection can be an iterative process, and we propose selecting an interim target that is ambitious but achievable, and one that sets the City on a path toward its 2050 GHG goal.

We believe it will be helpful to understand what level of effort is associated with interim target achievement before selecting the final target. Therefore, following emissions forecasting and initial action analysis, we will present target achievement scenario options to City staff and use this context to frame a discussion about interim target selection. Following this initial presentation of options and discussion, we expect the City team will need to discuss the target options further internally. City staff will independently lead this follow-on discussion and provide direction to AECOM on the final target selected for use in the GHG analysis.

Assumptions:

- Target setting meetings will occur after emissions forecasting and initial GHG reduction analysis is complete
- AECOM will participate in one meeting with the City team to discuss interim target options
- City team will invite relevant department staff to target setting meeting, and will follow-up to collect internal comments and provide to AECOM
- Maximum of two GHG reduction scenarios will be presented and discussed at target setting meetings (see Task 2 for description of GHG reduction scenarios)
- Target setting will be for a communitywide GHG target, and will not include separate definition of municipal operations GHG target(s)

Deliverables:

- 1 target setting meeting and PPT presentation

Task 2 - Action Analysis

Target Achievement Analysis

To understand the GHG reductions needed to achieve an interim and long-term target, we will use the CURB tool to analyze different packages of GHG strategies. In CURB, GHG reductions are quantified at the technology level (e.g., switch from incandescent to LED lighting) as opposed to specific policy ideas (e.g., provide a density bonus to new construction that avoids natural gas equipment/appliances). This analysis will be the foundation to selecting an interim target (see Task 1) and to selecting the right CAP actions and implementation goals (e.g., participation rates needed to achieve the emissions reductions).

We will develop a draft list of data inputs needed to support this analysis, such as non-residential building area by type (e.g., office, retail), which City staff will be responsible for collecting. In instances

where city-specific data is unavailable, we will use proxy assumptions included within the CURB tool. We will then load the background data, base year GHG inventory, and forecasting assumptions into a version of CURB for use in GHG reduction scenario development.

Prior to GHG scenario modeling, AECOM will meet with City staff to show examples of this analysis and suggest two potential scenarios for review in Miami Beach. For example, we could develop one scenario that focuses on transportation and electric vehicle use to achieve the interim target and another that focuses more heavily on building energy efficiency and renewable energy. Following this meeting, City staff will confirm the two scenario types to be developed.

AECOM will develop the two scenarios to show what technological transformations will be required to achieve an interim target; this part of the analysis will not yet focus on the long-term 2050 target year. This analysis will produce the graphic wedge charts that show reductions by sector and can be used to illustrate this concept to City staff and/or decision-makers during CAP development.

AECOM will facilitate a meeting with the City team to review the scenario analysis results and discuss selecting the preferred scenario for further revision. City staff will provide comments that either select a preferred scenario from the two initial options or direct changes for AECOM to develop the final GHG reduction scenario to be described in the CAP. Once the final scenario has been selected, AECOM will complete the GHG reduction analysis for the 2050 target year as well.

Assumptions:

- AECOM will use CURB tool to outline high-level target achievement scenarios; up to 2 scenarios will be modeled for initial review with City staff; 1 final revised scenario will be developed following City staff input
- City will provide data inputs required or authorize AECOM to use proxy information/assumptions included within the CURB tool
- Initial scenario analysis will focus on interim target achievement; 2050 target analysis will be completed for final selected scenario only
- Scenarios will be developed to demonstrate what is required to achieve the City's targets

Deliverables:

- Data collection sheet with information to support CURB analysis
- Meeting with City staff to select two GHG scenarios for analysis, including final PowerPoint
- Meeting with City staff to review GHG scenario results and select preferred option or identify revisions to one scenario, including final PowerPoint (same as Target Setting meeting in Task 1)
- One version of CURB used to analyze final GHG scenario

Action Development

Once the final GHG scenario from CURB has been selected, we will align the technological changes required (i.e., the CURB strategies) with the City's identified draft CAP actions. We will need to define

high-level implementation assumptions for each CAP action to show how they can support the GHG reductions estimated in CURB, however, we will not define specific implementation mechanisms within this scope of work. For example, an implementation assumption might be that 40% of residential buildings will electrify natural gas hot water heaters, while an implementation mechanism might say "The City will implement an end of life equipment electrification mandate to convert hot water heaters over time.". This process of defining implementation assumptions will help connect the City's draft CAP actions to the GHG reductions outlined in CURB.

During this process, we will note if important actions are missing and will provide a bulleted list of high-level action that are missing from the current draft list. The City will review the list of identified action gaps and select up to 5 new actions that AECOM will develop for inclusion in the CAP; the City team would develop any additional new actions. We will host one meeting with City staff to discuss the potential new actions and will develop the action language following City approval of the new actions.

Since GHG reductions will be calculated in CURB at the technology level, we will also provide estimates for the reductions that each individual action might contribute, which will be based on the CURB analysis results. We will develop an Excel table that connects the CURB strategies to the relevant draft CAP actions, lists action implementation assumptions, and estimates the percent contribution of GHG reductions for each action. This is an imprecise science, and we will review our assumptions with the City team to confirm or make revisions. For example, the CURB analysis may show reductions for 100,000 MT CO_2e from switching gasoline passenger vehicles to electric vehicles. A potential relevant CAP action might be to require EV charging infrastructure in new construction, and we might estimate that this action is responsible for 10% of the related CURB GHG reductions; other actions would be responsible for additional shares of GHG reductions, such as variable utility rates for EV charging, financial incentives for EV purchases, etc. There is very little data or research available to support precise allocations of GHG reductions to specific actions, so the estimates developed will be based on professional judgment and project team agreement following a review of the estimates. AECOM will facilitate a meeting with City staff to review this CURB-to-CAP action table and the corresponding GHG reduction allocations. We will make one set of revisions based on consolidated City comments.

Assumptions:

- City team has already vetted list of actions in draft CAP internally with other dept. staff, and AECOM will not participate in meetings to discuss current draft actions further
- If AECOM identifies need for more than 5 new actions, City staff will select which 5 actions AECOM will develop and City team will develop remainder, if desired
- AECOM will define implementation assumptions to help support GHG reduction estimates at action level, as possible, but will not define specific implementation mechanisms describing how implementation assumptions can be achieved
- City team to liaise with other dept colleagues to review participation / implementation assumptions for the actions
- City team completes text development for actions in draft CAP with no description or precedents

Deliverables:

- Bulleted list of potential action gaps identified
- Up to 5 new actions to support GHG target achievement, as needed
- 1 meeting to review potential new actions, as needed
- Table that links CURB GHG strategies to CAP actions with estimates for contribution to GHG reduction per action, one draft and one final
- One meeting to review and finalize the participation / implementation assumptions for the actions

Action Impact Analysis and Prioritization

Once the final list of CAP actions has been defined, we will present an action prioritization process City staff can use to understand action co-benefits, feasibility, and priorities for early action. The tool can be used to evaluate action co-benefits and feasibility using the Action Prioritization and Selection (ASAP) tool that AECOM developed for C40 Cities (available free for public use [here](#)). This analysis can provide a more holistic understanding of each potential action's value to the community and support implementation prioritization efforts, understanding that the City will have limited financial and staff resources to implement the CAP making a phased approach a likelier option.

We will facilitate a two-hour ASAP introduction meeting to present the tool and supporting resources to the City team, including an overview of each step in the process. City staff will then be responsible for executing the action evaluation and prioritization process based on the available guidance resources and the ASAP tool. AECOM will provide up to 8 hours of follow-on technical support to the City team. These 8 hours can be flexible in their use; we assume it might include up to 4 hours answering questions about tool features and functions, discussing the pros/cons of different evaluation criteria, or sharing insights from our recent experience in defining action rating rules to provide consistent results in the action evaluation process, and participation in 1 meeting to review the ASAP results and discuss action priority selection. The objective of the action priority selection meeting will be to review the action analysis results in ASAP and define how the draft actions should be prioritized within the CAP into high, medium, and lower priorities The results of this action analysis will be incorporated into the action summaries in the CAP (see Task 4).

Assumptions:

- City staff will lead action prioritization process, including ASAP tool set up, criteria selection, action evaluation, and final prioritization selection
- City staff will provide final ASAP tool to AECOM in advance of 1 priority selection meeting, and AECOM will guide prioritization discussion based on tool results
- AECOM will provide up to 8 hours of technical support to City team using ASAP tool, including troubleshooting and participation in 1 priority selection meeting

- Prioritization results will be ranked into high-, medium-, and lower-priority actions, with approximately 10 actions in the high-priority category, and remaining actions distributed into medium- and lower-priorities based on City staff preference

Deliverables:

- 1 meeting to present ASAP tool and supporting resources
- Up to 8 hours of follow-on meetings to answer questions about use of ASAP, action evaluation process, and action prioritization selection

Task 3 – Engagement

Public Virtual Workshops

AECOM will participate in one virtual workshop to be designed and organized by City staff. AECOM will develop and deliver a presentation for the workshop and help facilitate a discussion during the workshop to collect input on the CAP information provided.

Assumptions:

- City staff will design workshop format and agenda, identify and invite participants, and secure virtual platform to be used (e.g., Zoom, Teams, etc.)
- AECOM will develop and deliver presentation at 1 workshop, up to 2 AECOM staff will participate in workshop
- Workshop is no more than 2 hours in duration
- City team will summarize public comments received that should be incorporated into draft CAP, and will provide to AECOM for incorporation prior to development of either Administrative Draft CAP #1 or #2

Deliverables:

- 1 draft and 1 final PowerPoint presentation
- Attendance at 1 virtual workshop; meeting notes provided following workshop

Task 4 - Plan Development

CAP Development and Graphic Layout

AECOM will prepare a draft annotated outline specifying the overall structure and content of the plan. We anticipate the CAP will include a brief Executive Summary, and the following chapters: Introduction; GHG Emissions and Targets; CAP Actions; and Implementation Framework. Following agreement on the outline, we will develop a graphic layout for the document based on plan examples to be provided by City staff. We will provide one draft graphic layout for City review and comment before finalizing the layout for use in the draft plan.

AECOM will then assist the City in completing development of the current version of the draft CAP. We will develop new technical content for CAP sections identified in the annotated outline but not yet included in the City's draft CAP, and the City team will draft non-technical sections of the plan. We assume AECOM will develop the Executive Summary and GHG Emissions and Targets chapter and Implementation Framework Chapter, and City staff will develop the Introduction chapter. The City and AECOM will jointly develop the CAP Actions chapter. AECOM will provide a template for presenting actions at a consistent level of detail in the CAP and will use the template to prepare up to 5 new actions (see Task 2); City staff will revise the current draft actions to follow this format.

We assume that draft actions listed in the CAP but not yet developed will be written by City staff, while AECOM will lead on developing any new actions not currently identified (up to 5 new actions, per Task 2). For a sub-set of CAP actions, AECOM will provide bulleted implementation steps that describe how the City can achieve the implementation assumptions defined in Task 2; this sub-set of actions will be those identified as high priority in Task 2.

We propose that CAP actions include the following information (some of which is already provided in the draft CAP):

- Action statement (in draft CAP)
- Action description, 1-2 paragraphs (in draft CAP)
- GHG reduction estimate (from Task 2)
- Action co-benefit / feasibility results (from Task 2)
- Action equity considerations, if desired (for actions that receive negative or low equity ratings from Task 2)
- High-level implementation steps (for identified high-priority actions)

The City may wish to also provide call-out box content to be presented throughout the CAP, such as local case studies/examples, what the City is already doing, etc.

We will provide a complete Administrative Review Draft plan for City review in Word format, and follow-up with a meeting to discuss recommended changes. We will incorporate one consolidated set of City comments into a second Administrative Review Draft CAP in Word format for further City review. We will incorporate one consolidated set of text revisions provided by the City into a Final Climate Action Plan that will be formatted into the previously selected graphic template. We assume the City's communications team will perform a technical edit of each draft of the plan.

Assumptions:

- CAP will be approximately 50-60 pages long
- CAP action template to be used in graphic layout will have a simple, flexible format to allow actions to flow across pages depending on depth of content to be shared (i.e., will not limit actions to strict one-page layouts)
- City will provide one consolidated set of comments on the annotated outline, graphic template, Administrative Draft CAP #1, and Administrative Draft CAP #2

- There will be no public review period for full draft CAP; should this assumption change, AECOM will have no role in public review process outside of the virtual community workshop described in Task 3; any public comments received that City wants incorporated into draft CAP will be provided to AECOM in one consolidated list prior to development of Administrative Draft CAP #1 or #2
- Action equity considerations would be brief statements (or bulleted ideas) about ways to enhance action equity
- Any pictures to be incorporated in the CAP to be provided by City
- City communications team with do technical edit for each CAP draft
- Administrative Review Draft and Public Review Draft with be laid out in simple Word format; Final CAP will be laid out using graphic template

Deliverables:

- Annotated CAP outline, one draft and final
- Graphic template, one draft and final
- Administrative Draft CAP #1 and #2, Word and PDF
- Meeting to review Administrative Draft CAP #1
- Final CAP, INDD and PDF

Budget by Task and Staff Member

		Josh Lathan	Vanessa Goh	Graphic Design	Project Controls	Subject Matter Experts	TOTAL
		Project Manager	Sustainability Planner	Graphic Design	Project Controls	Subject Matter Experts	
		$ 138	$ 116	$ 116	$ 116	$ 173	
Task 0	**Project Management**	31	9	-	22	-	$ 7,879
Task 1	**Emissions Analysis**	30	60	-	-	-	$ 11,109
	Emissions Forecasts	22	46	-	-	-	$ 8,379
	Interim Target Setting	8	14	-	-	-	$ 2,730
Task 2	**Action Analysis**	88	164	-	-	-	$ 31,193
	Target Achievement Analysis	30	94	-	-	-	$ 15,058
	Action Development	52	58	-	-	-	$ 13,913
	Action Impact Analysis and Prioritization	6	12	-	-	-	$ 2,222
Task 3	**Engagement**	10	16	-	-	-	$ 3,238
Task 4	**Plan Development**	110	100	124	-	4	$ 41,888
TOTAL		269	349	124	22	4	$ 95,306