October 2020 Climate Change Advisory Committee Feedback Outcomes for the 2021 Impacts Assessment and 2021 Climate Action Plan

Materials Provided for Review	Committee Members Who Provided Feedback	# of Written Comments and Questions
October 2020 ICF CCAC Meeting Slides	Written Feedback – 1 *Verbal Feedback (During the October 27th meeting) - 10	17
2021 Impacts Assessment Initial Draft	Written Feedback - 1	4
BAU Scope and Methodology Memo	Written Feedback - 2	3
Working List of GHG Reduction Strategies - 2021 PA CAP	Written Feedback (PDF) – 1 Written Feedback (Google Form) - 9	PDF – 9 Google Form – 14 (across all responses)

*Outcomes from verbal comments received during the presentation may be represented under other materials listed below given the presentation replicated some other materials content.

Outcomes

2021 Impacts Assessment Initial Draft

- *The IA will include projections for climate changes in Pennsylvania through 2100, and include a qualitative discussion of changes beyond 2100. To inform near-term adaptation planning decisions, the risk ratings will focus on changes by 2050, but the adaptation portion of the CAP will consider impacts beyond 2050 as appropriate.*
- *The IA will include a discussion of projected changes in precipitation patterns, including extreme events such as cloudbursts.*
- *The IA will include a section in the next draft that provides a comparison between the National Climate Assessment, IPCC, and state criteria for likelihood/probability ratings to educate people on the differences and similarities in terms of methods and terminology.*
- *A glossary of terms will be included (e.g., defining terms such as critical threshold).*
- *The dynamic nature of climate changes will be reflected in section headings (e.g., Increasing temperature as opposed to Increased Temperature).*
- *The IA will identify possible opportunities that may come from climate change, such as increasing yields from certain crops and less energy consumption for heating.*
    - *The IA will conclude with priority risks identified for adaptation planning, to inform the CAP. The adaptation portions of the CAP will explain a range of adaptation strategies for addressing these priority risks over time. For example, this may include integrating climate projection data into infrastructure and building design practices or standards, and coordinating with national design standards.*

BAU Scope and Methodology Memo_10.13.20

- ***DEP will be using marginal emission factors to represent reductions related to distributed and renewable resources and energy efficiency. The analysis will not focus on peak and off-peak variations.***
- ***The GHG inventory and BAU emissions projections will be shown in a more information manner, such as adjustments to show:***
    - Providing tables with data along with graphics
    - Breaking out/attributing electricity generation emissions to associated sectors (e.g., buildings, transportation, industry) and exports if feasible
    - Disaggregating natural gas and oil systems emissions to show totals for gas and totals for oils separately
- ***Two sources of electricity emission factors will be used.*** Historical electricity emission factors will rely on the most recent set of published eGrid data and those used to develop GHG inventories back through 2005. Future or projected electricity emission factors will come from ICF's IPM model, which will provide emission factors specific to Pennsylvania

Working List of GHG Reduction Strategies - 2021 PA CAP

- ***Notes on presentation of GHG data and emission factors reflected in the BAU section above will also be applicable for the GHG reduction analysis.*** Additionally, DEP and ICF will ensure that strategies, such as electrification, are reflected both in total GHG emissions related to power generation (broken out by sector and exports) and informationally reported as emissions related to the residential and commercial or transportation sectors. The CAP will also communicate the electricity accounting approach clearly where generation emissions are reported as part of the sector totals, but consumption emissions are also included for information purposes.
- ***Additional detail and adjustments will be made to the strategies, such as (meant to be illustrative, not exhaustive):***
    - Act 129 strategy will be expanded to considerations beyond the existing framework of Act 129 and it will be broken into an electric strategy and a gas strategy
    - Building codes strategy will focus more on enforcement of codes as well as code advancement
    - More specificity will be added to the building electrification strategy, such as discussion around heat pumps and technology availability and what applications this applies to (heating, hot water, cooking, for example)
    - The alternative vehicles strategy will be more clearly specific in the title and description the role of EVs for light duty vehicles (medium and heavy duty are addressed through a separate strategy regarding the MHDV MOU)
    - The VMT reduction strategy will include a discussion of land use and will be significantly limited in terms of assumptions around impacts or changes in VMT to account for the high uncertainty
    - The bio/renewable gas strategy will be specified in terms of feedstocks and availability and clarified the focus is on biogas supply to the existing natural gas infrastructure system
- ***For the enabling technologies, adjustments will be made to:***
    - Expand the discussion of energy storage to be beyond batteries
    - Include a discussion on carbon offsets and how they could be used to meet or exceed Pennsylvania's goals

    - Provide more specifics as to whom resources will be targeted for (e.g., on DAC) and what the role of technologies may be (e.g., disruptive digital)
- ***Include or expand discussions of equity where feasible***, such as considering how we phrase the discussion around environmental justice. If we are going to state that low-income communities are not benefitting from certain programs, we need specific citations to back this up.
- ***The GHG analysis will focus on emissions from within the boundaries of Pennsylvania.*** Consistent with the Pennsylvania GHG Inventory, similar state climate planning and analysis efforts, and with the Pennsylvania GHG goals, this analysis will draw a boundary geographically within the Commonwealth