



# City of Columbia

701 East Broadway, Columbia, Missouri 65201

Department Source: Sustainability

To: City Council

From: City Manager & Staff

Council Meeting Date: October 5, 2020

Re: Annual greenhouse gas emissions inventory and correspondence from the Climate and Environment Commission

## Executive Summary

The Columbia Climate Action and Adaptation Plan (CAAP) Implementation action I-3.1.3 directs City staff to complete an annual greenhouse gas (GHG) emissions inventory. Columbia has been reporting its community GHG emissions every five years, since 2000, and completed its first GHG inventory of municipal operations last year. Activities that result in the release of GHG emissions include burning fossil fuels for transportation and energy, disposing of waste in landfills and treating wastewater. Council direction with the adoption of the CAAP was to complete annual GHG emissions inventories and this report completes the inventories for 2016-2019. The inventories are to be reviewed by the Climate & Environment Commission (CEC). The CEC response is included below.

## Discussion

"Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate. (High confidence)"<sup>1</sup> To reach the first of the Climate Action and Adaptation Plan (CAAP) goals, Columbia needs to reduce our community emissions by 632,485 MTCO<sub>2</sub>e between 2020 and 2035—a 35% reduction from the 2015 inventory. Columbia has reduced our total community Greenhouse Gas (GHG) emissions by only 8.3% over five years from 2015 to 2019. Urgent progress needs to be made each year between now and 2030 and continuing through 2035 to meet both the goals set forth by the UN Intergovernmental Panel on Climate Change (IPCC) and the CAAP. Columbia must get more aggressive and drive faster implementation of the Climate Action and Adaptation Plan (CAAP) goals.

The Office of Sustainability completes a greenhouse gas emissions inventory update annually in order to provide data-based evidence of progress toward our goals and to identify the sources of the most significant emissions within our community. The greenhouse gas emissions inventories provide a historical record and provide a foundation upon which to set goals and base decisions to reduce emissions. Identifying and tracking our community's energy use may also result in discovery of inefficient energy usage and opportunities to achieve savings and improve service delivery.

The cumulative total of community greenhouse gas emissions (GHG) for 2019 across all sectors decreased from the 2018 inventory year by 3.5%; however, according to the 2019 contribution analysis, weather in the form of a warmer winter and a cooler summer was likely a key contributor to the emissions reduction. In 2018, emissions increased 2.3% from the previous inventory year, and part of this increase was due to weather changes. We cannot assume a decline of 3.5% per year will continue without intervention. Due to the



# City of Columbia

701 East Broadway, Columbia, Missouri 65201

unpredictable impact of weather as climate change continues, we must be vigilant to keep driving emissions downward.

Despite implementation of Columbia's renewable energy standard (ordinance 27-106), progress remains too slow to meet the objectives of the global community to keep global warming below 1.5°C. The UN's IPCC report on maintaining no more than a 1.5°C increase above pre-industrial levels indicates the world and every developed community needs to reduce emissions by 45% from 2010 levels by 2030.<sup>1</sup>

Columbia's percentage of renewable energy in the renewable energy portfolio was 15.70% in 2017, 15.67% in 2018, and 15.87% in 2019. In three years, our renewable energy content in the portfolio only improved by a negligible amount. The energy sector—including residential, commercial, and industrial usage—represented 71.6% of Columbia's GHG emissions in 2019; therefore, this sector must be a top priority for effective and urgent action. We encourage the City Council to direct the Columbia Water & Light utility to move more rapidly in the deployment of clean, renewable energy within the Columbia electricity portfolio. Meanwhile, as population continues to grow, we must maintain focus on energy efficiency programs and initiatives.

As the 2021 budget was being developed, an opportunity was lost to ensure that CAAP actions were a high priority in the budget. Furthermore, CAAP guidance should be used when considering other cross-cutting budget decisions. Admittedly, there are tension points with both costs and revenues due to the Covid-19 pandemic, police and social justice reform demands, but we must not forget our commitment as a community to address climate change. The CAAP action items were developed through an equity lens and the proposed actions provide solutions that address climate change and social inequities. Investments now can generate savings for the City and community in the long run. The impacts of climate change are here and will continue to worsen in the coming years without aggressive action by all developed communities and will have a disproportionate impact on frontline communities.

As city departments evaluate their priorities, it is a good time to review how to accomplish CAAP goals and actions through ongoing city operations and expenditures. Some items in the budget present unique and important opportunities (related CAAP actions, \*City staff team assigned):

- Maximizing energy efficiency, water conservation, and renewable energy through solar or possibly geo-thermal energy production in the new airport terminal (E-1.1.3, H-1.3.1\* & 5)
- Achieving community goals for climate mitigation and adaptation as part of the capital projects presented in the 2021 park sales tax ballot renewal campaign (NR-1.1.1,2\*,4,6)
- Ensuring the new buses and new para-transit vans listed in the budget use new lower emissions technologies such as electric (T-2.1.1\*)
- Including necessary expenditures to implement CAAP goals in cost of services studies (I-3.4.1)



# City of Columbia

701 East Broadway, Columbia, Missouri 65201

- Incorporate actions to achieve CAAP goals and objectives within community development's five-year comprehensive plan update (I-3.1.4, T-1.5.1,2,3,6)

The Climate and Environment Commission encourages the City Council and the City Manager to request each department to provide an assessment of the CAAP goals that apply to their operations and how the organization will address CAAP goals for FY 2021 (I-3.1.2). If CAAP goals, strategies, and actions are not incorporated into the planning and budget process, they won't be achieved.

Sincerely,

Carolyn Amparan

Chair, Columbia Climate and Environment Commission

## References:

1. IPCC, 2018: "Summary for Policymakers." *Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P. R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp.

## Fiscal Impact

Short-Term Impact: N/A

Long-Term Impact: N/A

## Strategic & Comprehensive Plan Impact

### Strategic Plan Impacts:

Primary Impact: Social Equity, Secondary Impact: Operational Excellence, Tertiary Impact: Tertiary

### Comprehensive Plan Impacts:

Primary Impact: Livable & Sustainable Communities, Secondary Impact: Environmental Management, Tertiary Impact: Environmental Management

## Legislative History

Date	Action
06/17/2019	PR 89-19 – Adopting the Climate Action & Adaptation Plan



# City of Columbia

701 East Broadway, Columbia, Missouri 65201

10/7/2019	B 294-19 – Establishment of the Climate & Environment Commission
-----------	--

## Suggested Council Action

The Climate and Environment Commission encourages the City Council and the City Manager to request each department to provide an assessment of the CAAP goals that apply to their operations and how the organization will address CAAP goals for FY 2021 (I-3.1.2).