## STAFF REPORT

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| **Agenda Item:** | 7 | **Name:** | Jenny Giambattista |
| **Proposed No**.: | 2019-0115 | **Date:** | May 21,2019 |

**SUBJECT**

A motion adopting the Implementation Plan for a Carbon Neutral King County Government.

**SUMMARY**

As required by the 2016 Comprehensive Plan, the Executive has developed an implementation plan for making King County government carbon neutral. The plan recommends an approach and targets that focus on making deep reductions in direct emissions rather than achieving carbon neutrality through the purchase of carbon offsets or through accounting methodologies. Building on the 2015 SCAP, this Plan recommends that King County adopt stronger greenhouse gas (GHG) reduction targets to reduce operational GHG emissions by 50 percent by 2025 and 80 percent by 2030.

**BACKGROUND**

***2016 Comprehensive Plan Directs Executive to Develop a Carbon-Neutral Implementation Plan***

The Implementation Plan for Carbon Neutral King County fulfills the following requirement in the 2016 Comprehensive Plan.

*Action 9: Carbon Neutral King County Plan. The 2016 Comprehensive Plan includes a new policy F-215b which directs the County to “strive to provide services and build and operate public buildings and infrastructure that are carbon neutral.” To support implementation of this policy, this work plan item directs the Executive to develop an Implementation Plan for making King County government carbon neutral. The Implementation Plan shall address existing and new County buildings, as well as all County operations and services, and shall identify the actions, costs and schedule for achieving carbon neutral status. This Implementation Plan will help inform the 2020 update of the Strategic Climate Action Plan, through which existing county targets for carbon neutrality and greenhouse gas emissions reduction will be updated consistent with the F-215b and the Implementation Plan.*

***King County Ordinance 17971 and Agency Carbon Neutrality Commitments***

Ordinance 17971 required the Department of Natural Resources and Parks (DNRP) to achieve carbon neutrality by 2017 and that the Wastewater Treatment Division (WTD) and Solid Waste Division (SWD) to each achieve carbon neutrality by 2025. It also required third party review of DNRP, SWD, and WTD GHG accounting methodologies. These targets were also adopted in the 2015 SCAP.

DNRP, WTD, and SWD currently use a net carbon neutral accounting approach. This approach includes an expanded boundary of what is counted as GHG emissions sources, for example it includes an estimate of the lifecycle GHG emissions associated with department-purchased goods and services. It also includes GHG removals from DNRP actions such as tree planting, Loop Biosolids, recycling at transfer stations and a portion of DNRP’s renewable energy production. This accounting approach is different than what is proposed in this Plan (see Analysis section of this staff report) for all of government operations. Executive staff recommend continuing to use both approaches for different purposes. For DNRP, the net carbon neutral accounting approach provides benefits by supporting efforts to better quantify and reduce purchasing related emissions and also supports investments in strategies that increase investments in actions that provide GHG removal benefits.

Ordinance 17971 also required that Metro Transit report to the Council on potential options for creation of a Transit Carbon Offset Program. Building on this direction, Metro reported to the Council through May 2015 “Feasibility Evaluation of the Sale of Metro Transit Carbon Offsets” and December 2015 “Monetizing Transit Environmental Attributes” reports. In September 2016, the Council authorized Metro to sell the environmental attributes of powering electric vehicles with renewable energy with Renewable Identification Numbers (RINs) credits, and Metro entered into a contract to purchase renewable fuel for all its electric fleet and sell RINs. Metro’s ability to sell RINs continues to await rulemaking by the U.S. Environmental Protection Agency. Following a public comment period in February, 2017, the EPA has not acted on this policy as of January, 2019.

***Report on Feasibility of Achieving a Carbon-Neutral or Zero-Emission Bus Fleet***

In April 2016, the King County Council approved Motion 14633, which requested that the Executive transmit a report addressing the feasibility of achieving a carbon-neutral or zero-emission bus fleet. The Council requested that the report provide an analysis and recommendation on whether Metro should adopt a carbon-neutral or a zero-emission fleet goal, provide a range of possible target dates for achieving that goal, identify any changes needed in Metro’s strategic plan or long-range plan to attain the goal, and engage a group of stakeholders to provide input on the plan. In April 2017, the King County Executive recommended and the King County Council adopted the *Feasibility of Achieving a Carbon-Neutral or Zero-Emission Fleet* report, which recommends that no later than 2040 Metro transition to a zero-emission bus fleet powered by renewable energy, and focus early deployment of zero-emission buses in the communities that are most vulnerable to air pollution.

**ANALYSIS**

The *Implementation Plan for a Carbon Neutral King County Government* recommends that King County achieve more ambitious targets to **reduce King County’s operational emissions by 80 percent by 2030 compared to 2007 levels**. This is a significant acceleration from the existing goal of 50 percent by 2030 and would require new commitments.

Consistent with the reporting requirements, this plan only addresses the GHG emissions from the operations of King County government. Of note, King County is a relatively small[[1]](#footnote-1) (1.7 percent) contributor the GHG emissions in King County.

The Plan recommends King County pursue an option of actual true operational reductions rather than an accounting approach or through the purchase of external carbon offsets. (Under an accounting approach that considers the GHG emission reductions benefits of the services King County provides, King County could already be considered carbon neutral.)

The plan’s approach to defining carbon neutrality is consistent with the Carbon Neutral Cities Alliance (CNCA)—a collaboration of leading global cities working to cut community scale GHG emissions by 80-100 percent by 2050 or sooner. According to Executive climate staff, the CNCA is considered the standard in setting the most aggressive GHG reduction targets.

The plan includes high level strategies with the understanding that specific strategies for implementing the target will be further refined and formally updated as part of the 2020 Strategic Climate Action Plan update which the Executive will transmit in June 2020.

The Implementation Plan largely builds on the existing 2015 Strategic Climate Action Plan strategies. To achieve the additional recommended emissions reductions, staff developed a set of technically feasible, yet uncommitted, additional strategies. The report provides a preliminary assessment of the strategies to achieve operational emission reduction of 80 percent by 2030. The strategies are listed in Table 1 in order of greatest GHG emission reduction.

The percentages in Table 1 are for a snapshot of one year (2030) and are different each year. Specific numerical conclusions of the table and graphic should be interpreted with caution, as ascribing emissions reductions to each strategy can be complicated due to their interdependencies. The GHG reduction benefit of each strategy may be interrelated to other strategies and therefore the order in which strategies are modeled greatly effects modeled emissions reductions attributed to each strategy.

**Table 1**

**Emission Reductions by Strategy[[2]](#footnote-2)**

|  |  |  |
| --- | --- | --- |
| **Strategy** | **2030 Emissions Reductions (MTCO2e)** | **2030 Percentage of the Reductions Modeled (percentage of the total wedge)** |
| **Zero Emissions Bus fleet by 2038**By 2030, Metro fleet is 65% zero-emissions  | 90,166 | 27% |
| **Fleet Electrification, Energy Efficiency and Alternative Fuels**Transition of fleet and Transit (non-fixed) route to vehicles, other alternative fuels, and improved fuel efficiency | 71,404 | 21% |
| **Landfill Strategy #1: Landfill Cover Improvements**Use deeper cover materials in order to meet EPA requirements advanced landfill cover systems | 30,379 | 9% |
| **Landfill Strategy #2: Waste disposal reductions and increased recycling** | 37,479 | 11% |
| **Net forest carbon removals**This requires no new action. This is an accounting change. | 50,000 | 15% |
| **Continue renewable energy contract (Green Direct) with PSE**  | 39,346 | 12% |
| **Building Energy Efficiency**Current and new onsite renewable energy and efficiency projects in existing building and new construction, behavior change in programs | 10,974 | 3% |
| **WTD Fugitive Emissions Capture**Upgrade of existing biogas scrubber system at South Plant | 3,774.28 | 1% |
| Subtotal of all modeled reductions | 333,339 | 100% |
| Business as usual forecast | 389,339 |  |
| Emissions remaining after modeled reductions | 55,817 |  |
| % reduction compared to 2007 baseline  | 84% |  |

Achieving these targets would require significant additional funding and policy commitments.

Council staff requested additional information on the following strategies:

Zero Emissions Bus Transition

Achieving a zero-emission bus fleet by 2038 and by 2030 65 percent zero-emission will require additional infrastructure to support zero emission buses via conversion of an existing bus base to depot charging prior to 2030 or en-route charging capabilities. Identifying opportunities to meet this is being explored as part of a Zero-Emission Bus Transition Plan being developed in 2019. This strategy also requires that technology for bus fleet, charging and energy management continues to evolve to meet Transit’s needs, as well that renewable energy to power vehicles from Seattle City Light or via Green Direct with PSE is available.

Landfill Strategies

According to Executive staff both the landfill cover improvements and waste disposal reductions are included in the 2019 Solid Waste Comprehensive Plan. The Implementation Plan notes there is some uncertainty about total reductions that would occur from the landfill cover system improvements. While the strategy is technically feasible, the report notes additional budgeting and planning would be necessary. Achieving the community waste reduction strategies will require deep collaboration with cities and others.

**INVITED**

* Matt Kuharic, Senior Climate Change Specialist, Department of Natural Resources and Parks
* Carrie Lee, Sustainability and Climate Program Manager, Metro Transit

**ATTACHMENTS**

1. Proposed Motion 2019-0115 (and its attachment)
2. Transmittal Letter
3. Executive staff presentation
1. Executive staff estimate King County operations make up about 1.7 percent of the total King County community based on 2015 data. Using the 2015 calendar year King County GHG Inventory report, community emissions total 20,318,000 MTCO2e using the Geographic Plus methodology. County emissions total 20,318,000 so 354,000/20,318,000 = ~1.75% [↑](#footnote-ref-1)
2. Calculations by King County Climate Action Team [↑](#footnote-ref-2)