Resolution Number: 2026-04
Introduced: 05/18/26
Adopted: 05/18/26
Effective: 05/18/26

RESOLUTION
RENEWING AND AMENDING THE RENEWABLE ENERGY CONVERSION INCENTIVES PROGRAM

WHEREAS, the Town of Washington Grove recognizes the urgency of the climate crisis and has affirmed its intention to abide by the climate goals of the Paris Accords and modifications thereof;

WHEREAS, the Sustainability Committee has estimated that the carbon footprint of Washington Grove is on the order of 25 times or more the sequestration potential of the town forests and verified that home heating and automobiles represent 2/3 of the community emission inventory;

WHEREAS, the Inflation Reduction Act of 2022 signed into law on August 16, 2022 recognized the urgency of reducing the emissions of housing and transportation and established federal incentives to promote the purchase of electric vehicles and the installation of heat pumps and other energy efficient heating systems;

WHEREAS, the Maryland Energy Administration also recognizes the same and has established rebate and loan programs to promote the purchase of electric vehicles and the installation of energy-efficient heating systems and renewable electricity systems;

WHEREAS, the Federal and State incentives alone may be insufficient to incentivize the Town residents to convert from fossil fuel heating and automobiles;

WHEREAS, the *Renewable Energy Conversion Incentives Program* since 2023 has been successful in incentivizing residents to convert to heat pumps and EVs;

NOW THEREFORE BE IT RESOLVED that the Mayor and Town Council renew and amend the *Renewable Energy Conversion Incentives Program* in order to continue to incentivize the conversion to sustainable heating and cooling systems, renewable electricity, and electric vehicles in an effort to reduce the Town's carbon footprint.

AND BE IT FURTHER RESOLVED that the *Renewable Energy Conversion Incentives Program* will be executed for a period through June 30, 2030 according to the Program Description and Program Operation found in Appendix A of this Resolution. Award amounts may be adjusted as appropriate.

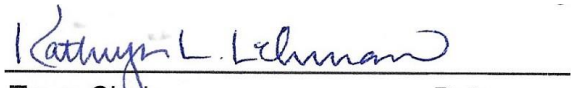
AND BE IT FURTHER RESOLVED that the *Renewable Energy Conversion Incentives Program* will be funded in an amount of $10,000 for FY 2027, and for succeeding years per the amount designated for the program in the approved Annual Town Budget.

Adopted and effective this 18th day of May, 2026.

Approved by Mayor and Town Council:

John G. Compton, Mayor — May 18, 2026 Date

Attest:



Town Clerk — Date

APPENDIX A
Resolution 2026-04

Program Description
Renewable Energy Conversion Incentive Program

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Summary of Purpose

The purpose of this program is to address the carbon footprint of housing stock and petroleum-based vehicles in Washington Grove (WG), which account for roughly 67% of our emissions as modeled per the 2021 Emissions Inventory. The incentives program is modeled after federal subsidies for heat pump installations and conversions, with specific requirements tailored to the Grove.

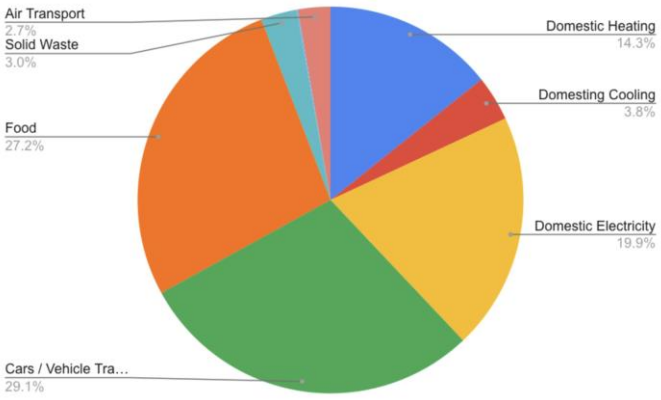


Figure 1. Relative breakdown of Grove carbon emissions among 7 different categories. Analysis valid for 2021.

Several federal and state programs have been established to reduce carbon emissions. For example, H.R.5376 - Inflation Reduction Act of 2022 (signed into law on August 16, 2022) establishes tax credits and rebates to promote the installation of heat pump and other energy efficient heating systems. The Maryland Energy Administration has also established loan programs to promote the installation of energy-efficient heating and renewable electricity systems. Notably, many residents may be ineligible for rebates under these programs due to limitations on the systems covered and income-based provisions.

In tandem with federal and Maryland policies, the Town of Washington Grove has also stated its intention to abide by the climate goals of the Paris Accords and modifications thereof. In 2021 the Sustainability Committee (then only an informal group) set out to identify and quantify sources of CO2 emissions in the Grove. The ultimate goals of that analysis were to understand the scope of the

climate-change problem and provide actionable information in support of town mitigation strategies. An initial analysis of 2021 emissions is now complete.

Between the categories listed in the pie chart to the right, WG created about 6000 tons of CO2 in 2021. While the 2021 figures for transportation are likely lower than 2023-2026 levels, housing and food contributions should be roughly on par with our current emissions. Moreover, transportation values still provide a *lower bound* on the corresponding emissions (meaning that at worst, we are understating their contribution to our CO2 footprint). To put these numbers in context, in 2021 WG would have required roughly 25 times as much forest land as we currently have to sequester our 2021 emissions. Thus, our forests have a relatively minimal impact on our carbon footprint, and there is very little we can do to significantly increase their sequestration potential. Considering the sources of emission in Fig. 1, it is therefore clear that we must take active steps to mitigate our footprint.

It is notable that in 2021, housing stock and transportation accounted for more than 2/3 of our town-wide footprint. As a practical matter, we may also think of this breakdown as applying to an average Grove household: ~ 1/3 of emissions came from running the house, and another 1/3 from the associated vehicles. Therefore, if starting in 2023, each household (i) converted vehicles to electric (EVs), (ii) converted all heating units to heat pumps (HPs), and (iii) purchased 100% renewable electricity, the town-wide carbon footprint would be slashed by nearly 2/3.

The challenge is that HPs and EVs are expensive, and renewable electricity is not always well-known or understood. This suggests a local government incentive to: (i) defray costs of conversion; and (ii) assist homeowners to easily switch to renewable electricity. We also note that in WG, some homes already have HPs but use propane or oil as a backup. Thus, it is desirable to incentivize these homes to install a more efficient heat pump and/or switch to electric backup, since the latter is compatible with renewable electricity.

It is also important to understand the scope of conversions that are needed. In 2021, there were roughly 170 houses in town with oil, propane or methane as either primary or backup heating, slightly more using non-renewable electricity and on the order of 500 vehicles. Local Governments for Sustainability (ICLEI) suggests a target of 62% reduction of CO2 emissions by 2030 (see also **Additional Analyses and Justification**). This target is achievable *if* we eliminate emissions due to housing stock and vehicles over a 7 year period starting in 2023. *However, this would require nearly 100 conversions per year, spread between stationary combustion and vehicle sources, e.g., 25 HP conversions/year,70 EV conversions/year and 5 backup conversions/year. Moreover, the needed rate of conversions only increases the longer the community waits to take definitive action.*

While we cannot expect the Town government to fully mitigate this situation, it does have the ability and resources to make a significant impact by promoting adoption of clean energy and transportation. Such programs may be especially productive if they piggy-back on federal and state programs. The local incentives program described below is one such opportunity.

2026 Update

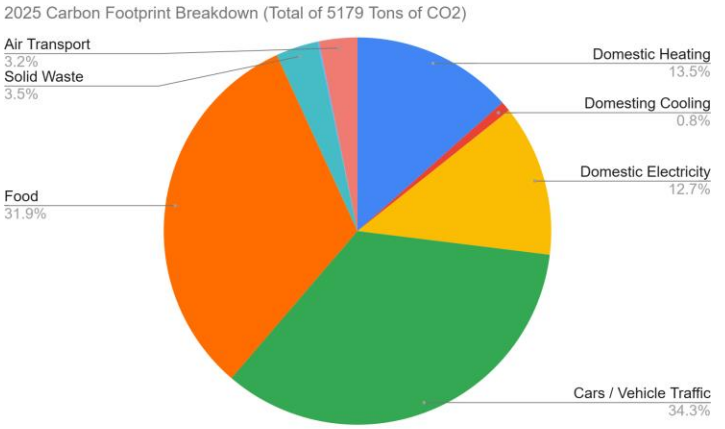
Starting in 2024 and continuing through 2025, the WG SC began conducting a new carbon footprint analysis, taking into account additional information obtained through resident surveys, incentive applications, and updated modeling. While the overall methodology of the analysis remains the same, it incorporates some new sources of data and updated emissions factors associated with electricity generation and vehicles. This is necessary to account for a slow but measurable national trend towards decarbonization, which has affected Pepco electricity generation, for example.

Another element of this analysis includes minor improvements in methodology. These amount, for example, to small modeling changes in how outliers and detailed house data were used to construct estimates of energy-consumption per-square-foot of a typical Grove house. There were also the occasional "bugs" in the code performing these computations, but these typically only affected calculations for one or two houses in town. All told, the changes in methodology only appear to have affected our estimates of 2021 gross emissions by approximately 7 tons out of nearly 6000, meaning that our original estimates appear justified even in light of our revised methods.

The overall conclusion of this analysis is that while WG has made significant strides towards reducing our carbon footprint, much work remains. We find that by the end of 2025, our gross emissions have been reduced from approximately 5950 tons (in 2021) to approximately 5200 tons by the end of 2025. This amounts to a roughly 13% reduction.

Table 1 below shows percent reductions across the main categories associated with the town footprint. These decreases are driven by three major effects. First, nearly a third of WG houses are now using renewable electricity. Second, we estimate that there have been 15 conversions from oil to heat pumps. Third, Pepco emissions factors in the last few years appear to have reduced by roughly 20%, meaning that every kilowatt-hour of electricity produces 20% less CO2 than 4 years ago. Among these three, the number of houses switching to renewable electricity has been responsible for roughly 60% of the reduction in the domestic cooling and electricity, with the remainder due to the improved Pepco emissions factors. Reductions in our footprint due to domestic heating are due to the combined effect of removing oil and switching to renewable electricity. Vehicle emissions see a small increase, due to the likely increase in number of cars on the road after the end of the pandemic. However, decreases in emissions factors (due to the increased number of electric vehicles) means that this increase is largely offset by national trends. We also note that the

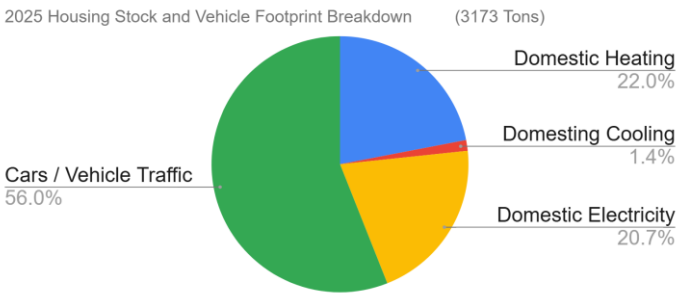
Table 1: Main carbon sources for



Carbon Source	Data Source	2021 Valu			
Domestic Heating	Detailed Grove Analysis				%
Domesting Cooling	Detailed Grove Analysis				%
Domestic Electricity	Detailed Grove Analysis	1208	656	12.67%	-45.70%
Cars / Vehicle Traffic	EPA-Based Estimate	1768	1777	34.31%	0.55%

vehicle data is the least reliable and is subject to ongoing revisions in methodology, which will likely be used in the next update to our carbon footprint.

The carbon footprint breakdown by source is shown in the pie charts above and to the right. As indicated by the first of these, housing stock and transportation still comprise a large portion of our footprint. However, housing stock now comprises only about 25% of our footprint, whereas vehicles account for nearly 35%. This suggests that the current program goals of incentivizing electric vehicles, heat-pumps, and renewable electricity remain the most important factors for reducing our carbon footprint.



Rebate Program

The updated rebate program will be as follows. Upon (1) successful installation of a clean-energy heating/cooling system, or purchase of an EV, combined with (2) electricity supplied by a renewable electricity provider, residents will be eligible for a rebate from the Town of Washington Grove. The following 4 specific cases will be covered under the program.

I. **Conversion of Oil/Propane/Methane units to Heat Pumps with electric backup, plus use of a renewable residential electricity provider.**

For houses that use oil, natural gas and/or propane as the primary heating, the Town will provide a rebate of 10% of the system cost, up to a maximum of $1500, after the following requirements are met:

1. Installation of an Energy Star or "CEE High Tier" HP system (incl. geothermal) with electric backup, *AND*
2. Residential electricity supplied by a Community Solar Energy provider or another provider of at least 90% renewable electricity.

II. Upgrade of an existing heat pump, or conversion of Backup Oil/Propane to Electric backup plus use of a renewable residential electricity provider.

For houses with an existing stationary combustion backup system, OR one or more heat pumps, the Town will provide a rebate of 10% of the system cost, up to a maximum of $1000 after the following requirements are met:

1. Residential electricity supplied by a Community Solar Energy provider or another provider of at least 90% renewable electricity, *AND EITHER*
2. Conversion of the existing backup system to electric resistance heat, *OR*
3. A heat pump upgrade to an Energy Star or "CEE High Tier" HP system (incl. geothermal) that eliminates the fossil fuel backup system (if any).

III. Installation of a heat pump while maintaining an *existing* (not new) fossil-fuel system or resistance heat system as a backup system, plus use of a renewable residential electricity provider.

For houses with an existing stationary combustion heat system, the Town will provide a rebate of 10% of the system cost, up to a maximum of $750 after the following requirements are met:

1. Installation of an Energy Star or "CEE High Tier" HP system (incl. geothermal), *AND*
2. Residential electricity supplied by a Community Solar Energy provider or another provider of at least 90% renewable electricity.

IV. Purchase of an Electric Vehicle (EV) plus use of a renewable residential electricity provider.

Any resident will be eligible for a rebate of 10% of cost of the vehicle up to a maximum of $1500 provided that:

1. They purchase a 100% electric EV or a plug-in hybrid EV with a battery that meets the minimum size for a state rebate (4 kWh) *AND*
2. Residential electricity supplied by a Community Solar Energy provider or another provider of at least 90% renewable electricity.

Leasing an EV for a minimum of 3 years is equivalent to the purchase for the purposes of this rebate.

Assistance with Conversions by the Sustainability Committee

As part of the installation process, the Sustainability Committee (SC) can provide free advice, upon request of the homeowner, on the pros and cons of different HP systems or EVs.

SC members can also aid homeowners in filling out paperwork for federal and state programs that may supplement the town rebate.

Operation of the Program

1. The Town Council (TC) will select a representative (the Town's representative) to formally administer the program. The Town's representative may be the mayor, TC, Town Treasurer, or any other entity as determined by the TC.
2. The SC will assume responsibility for verifying all claims against the program and advising the Town's representative in writing on whether a claim satisfies the terms of the program.
3. The Town's representative will make an official decision on the status of a claim and if approved direct the Town Treasurer (if different from the Town's representative) to disburse payments. Specifically, the Town's representative shall:
    A. Verify that all documents required to verify the claim have been submitted.
    B. Audit the application to ensure that the SC has correctly interpreted the documentation according to the provisions herein; and
    C. Approve the claim provided both conditions are met.
4. The rebates described above will be available to all households while funds exist in the program.
5. The program will commence as of the effective date of Resolution 2023-06 of the TC and run until such time as the TC decides to end the program.
6. Claims may only be submitted for heat pump systems fully installed and inspected or EVs delivered after July 1, 2023.
7. Conversion from oil or propane systems that require a Montgomery County Permit and inspection must provide evidence of a completed favorable final inspection.
8. The date an applicant first qualifies for the incentive for a heat pump conversion is the date of the Montgomery County final mechanical or electrical inspection.
9. The date an applicant first qualifies for an EV incentive is the date the applicant takes delivery of the vehicle.
10. The application for an incentive must be filed within one year of the qualification date unless an extension has been granted by the Town Representative.
11. Claims must be submitted using Town-provided paper forms.
12. In the event that funding for the program runs out before its termination, the TC will continue receiving claims for a period of 12 months. If during or after this time the TC renews funding for the program, claims will be processed and submitted for reimbursement according to the level of priority as set forth in item 4 of the Provisions and Limitations.
13. The SC will update the TC once yearly, or more often if deemed necessary by the TC, on the status of the program, rate of disbursing funds, and CO2 emissions reductions achieved through the program.

14. The SC will maintain a working document that describes the technical assessment of the WG carbon inventory.
15. The SC and/or Town Treasurer, as determined by the TC, will maintain all records associated with each reimbursement for a period of at least 5 years after the date of submission of the corresponding claim.
16. The program will be subject to audit, peer-review, and/or modification by the TC.
17. Recipients will be asked (but not required) to provide electricity usage for a period of 3 years to support continuing SC modeling efforts. When available, data from years before conversion will also be requested. All electricity usage data will be stored on encrypted systems that are not connected to the internet, or on town servers as determined by the TC. Unless explicit permission is granted in writing, personally identifiable information (PII) will not be made public and will only be used for the purposes of verifying claims and disbursing payments.

Provisions and Limitations

1. Each household will be eligible for only one HP rebate for the duration of the program.
2. Each household will be eligible for up to two EV rebates for the duration of the program.
3. Applications will be processed in the following order.
    A. The first applications from each household will be processed in the order in which it was received and before any second or third application of any type, or any application from the mayor, TC, or SC.
    B. The second applications from each household will be considered in the order in which they were received and before any third-time applications or applications from the mayor, TC, or SC but after all first-time applications in the queue have been processed.
    C. Likewise, the third application from each household will be considered in the order of receipt, before applications from the TC, SC, or mayor, and after all second-time applications are processed.
    D. Applications from the mayor, TC, and SC will be processed only after all other applications in the queue, and with a similar order of priority.
5. WG will not be responsible for any terms or conditions imposed by their HP installation contractor, EV seller, or electricity provider.
6. The SC will aid homeowners in filling out rebate paperwork for federal and state programs that may supplement the town rebate.
7. Residents already having renewable electricity will still be eligible for the full rebate in each of the categories I-IV.
8. HP systems must be either Energy Star Certified OR meet the "highest tier CEE" level of efficiency or be certified as a "cold-climate heat pump". This corresponds to SEER2 >16, EER2 >12, and HSPF2 > 9.
9. Heat pump systems must be sized to function as a primary heat source for the residence, with a minimum capacity of 1 ton. However, for households with multiple heating zones and/or several heating systems serving different parts of a house, this rebate will be available even if the installed system is not the sole heating source, provided the heat pump is replacing a fossil-fuel

system or upgrading an existing heat-pump. For applications requesting Rebate Case I (up to $1500), the backup (if any) for the newly installed heat pump must be electric, and the system must fully replace at least one fossil-fuel heat system in the house. For applications requesting Rebate Case III, the heat pump cannot include installation of a *new* fossil-fuel backup system.

10. For applications submitted up to the time of approval of this resolution that were denied because they did not meet Limitation 9 of Resolution 2025-06 (requiring that the new heat pump + electric backup be the sole heat source), the SC will retroactively reconsider such applications under the new conditions of Limitation 9 in this resolution.
11. Window and portable heat pump units will not be considered for the purposes of this rebate.
12. EVs must meet the minimum battery capacity of 4kWh as required for the Maryland EV rebate.

Benefits to the town

Based on the 2021 carbon footprint analysis, we estimate that on average, every oil to HP + renewable conversion will save roughly 4.25 tons of CO2 / year due to heating, another 1.25 tons CO2 / year due to cooling, and 6.5 tons of CO2 / year due to other or "baseline" electricity usage converted to renewables, for a total of 12 tons of CO2 / year.
For propane to electric backup + renewable conversions, the numbers are the same except that the town saves 2.25 tons of CO2 due to heating, for a total of 10 tons of CO2 / year.

The benefit comes not just from the HP, but the conversion to renewable electricity, which impacts ***all*** cooling and other electricity CO2 footprints.

EV conversions should have a comparable impact. While we are still calculating the exact estimates, replacing a gasoline car with an EV is on the same order of magnitude as replacing an oil furnace with an HP. However, the benefit of requiring residents to switch to renewable electricity is that in doing so, even if the heating is stationary combustion, the baseline electricity and cooling will be run by clean energy. Thus, we can expect 10 tons to 12 tons CO2/year reduction associated with EV + renewable conversions as well.

Note that these figures are averages and represent the fact that most residents in town do not yet have renewable electricity or EVs.