Equity in Permit Reviews During the Clean Energy Transition

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DEFINITIONS

Addition – “An extension or increase in the conditioned space floor area, number of stories or height of a building or structure.”[1]

Alteration – “Any construction, retrofit or renovation to an existing structure other than a repair or addition.”[2] Also the most common permit type for the past two years.

Building Energy Performance Standards – Pending approval from the council, BEPS are “policies that establish performance levels for buildings and drive all buildings that BEPS covers to achieve these levels in the long-term with required progress at regular intervals in the interim.” BEPS will apply to buildings above 25,000 square feet.[3]

Bill 13-22 – “Bill 13-22 requires the County Executive to issue all-electric building standards for new construction, major renovations, and additions by January 1, 2024.”[4]

Bill 44-21 - Enacted on February 1, 2022, Bill 44-21 requires that 10% of the fuel-energy tax revenue be appropriated to the County Green Bank. 20% of the funds must support the bank’s activities in Equity Emphasis Areas in the County and that 15% of the funds must be used to reduce the cost of energy projects undertaken by property owners.[5]

Climate Action Plan – “The Montgomery County Climate Action Plan was completed in June 2021 and is the county’s strategic plan to cut greenhouse gas emissions 8% by 2027 and 100% by 2035.”[6]

Commercial Change of Use - A commercial change of use building permit is required for all projects in an existing building where a change of International Building Code use and/or occupancy occurs.[7]

Equity Emphasis Area - EEAs, created by MWCOG are “census tracts with high concentrations of traditionally underserved communities, such as low-income individuals and/or traditionally disadvantaged racial and ethnic population groups.”[8]

Equity Focus Area – Developed by Montgomery Planning, Equity Focus Areas are parts of Montgomery County that are "characterized by high concentrations of lower-income people of color, who may also speak English less than very well."[9]

Electrification – "Electrification converts an energy-consuming device, system, or sector from non-electric sources of energy to electricity."[10] Electrification for the purpose of this research project occurs within the context of Montgomery County's clean energy transition.

Environmental Justice Communities – "EJ communities are composed of marginalized racial/ethnic, low-income/poor, rural, immigrant/refugee, and indigenous populations that live in areas disproportionately burdened by environmental hazards, unhealthy land uses, psychosocial stressors, and historical traumas, all of which drive environmental health disparities."[11]

Montgomery County Green Bank – "The Montgomery County Green Bank is a publicly chartered 501(c)3 nonprofit corporation dedicated to accelerating energy efficiency, renewable energy, and clean energy investment in Montgomery County, MD."[12]

New Construction – "A commercial new construction building permit is required for all projects to build or erect a new building or structure, or to relocate an existing building or structure." [13]

Permit Review Cycle – When a permit applicant is denied during the first round of review and must go through additional reviews until the applicant is code compliant.

Racial Equity and Social Justice - "a process that focuses on centering the needs, leadership, and power of communities of color and low-income communities with a goal of eliminating racial and social inequities"[14]

Technical Assistance – third party resources that assist permit applicants with energy related code compliance to avoid delays during review.

Under-Resourced – "Under resourced building means a qualified affordable housing building, a common-ownership community, a non-profit owned building, or a local small business owned building."[15]

INTRODUCTION

Commercial buildings within Montgomery County account for approximately 26% of Countywide greenhouse gas (GHG) emissions, given their use of electricity and natural gas.[16] In order to achieve the County's net zero emissions (NZE) goals by 2035, the Climate Action Plan (CAP) establishes a path toward decarbonization through targeted energy consumption strategies in both existing and newly constructed commercial buildings. However, the CAP also indicates that many of the commercial building regulatory changes during this transition may have a negative impact on equity. This would be the result of increasingly stringent energy codes every code cycle (three years), designed and implemented by the Department of Permitting Services (DPS), becoming more resource and capital intensive for property owners. As a result, the path to building decarbonization could pose a challenge for under-resourced property owners, as well as property owners that serve vulnerable communities to meet the needs of these codes during the permitting review process.

In order to ensure new and existing assistance efforts are effectively administered, it is necessary to identify where the disparities currently exist that may be further exacerbated as a result of more stringent code requirements. A 2020 Building Energy Performance Standards (BEPS) stakeholder recommendation report acknowledges this as well and recommends that assistance outreach efforts should target specific sectors identified from the benchmarking data.[17] However, these sectors can likely be identified using equity indicators as well. This will not only ensure that no one is left out in the clean energy transition but will also establish a more robust impact measurement of assistance overall embedded in DPS' institutional memory.

The stakeholder report also states that "jurisdictions that have implemented BEPS…tend to see additional resources, programs, and/or funding to assist building owners in meeting the increased requirements."[18] However, this should also be true for jurisdictions like Montgomery County in which aim to implement increasingly stringent energy codes in addition to BEPS.[19] It is crucial to understand as best as possible the depth of the impact of these decarbonization related resources to maximize effectiveness now and in the future. As Montgomery County pioneers a jurisdictional NZE pathway, it can also look to set examples for operationalizing equity considerations (from the CAP) in building decarbonization.

Problem Definition

Under-resourced buildings/businesses that serve vulnerable communities may experience a lengthier permitting review cycle as they require more capital and resource intensive energy solutions. The County does not currently track the extent of this. Therefore, in order to not only understand the scale of the impact of resources like technical assistance provided to these types of commercial properties but also to inform more effective community engagement and outreach strategies, DPS should measure the existing inequities as well as the observed trend over time as current and future energy codes aim to become more stringent. DPS must establish methods to identify these disparities to ensure as best as possible that resources are being equitably distributed. The most rapid and intensive changes to the energy codes have yet to be implemented so being able to measure these gaps now and in the future are critical to ensuring no one is left behind in the clean energy transition.

A U.S. Department of Energy building energy code webinar from July of 2024 highlights strategies for addressing these energy code equity challenges for local jurisdictions which include:

• *Support (or lead) data collection on energy code compliance in Environmental Justice (EJ) communities to identify specific needs and strategies and address compliance gaps.*[20]

• *Use outcomes from field studies to address compliance disparities in EJ and under-resourced communities.*[21]

Related CAP Actions

B-1: Electrification Requirements for Existing Commercial and Public Buildings

Existing buildings make up a vast majority of total buildings across the United States.[22] Therefore, CAP action B-1 will apply to most of the permits requested by property owners across the County.[23] Given that building use of electricity and natural gas accounts for most of the total emissions produced by commercial buildings in the County, B-1 aims to facilitate the transition away from fossil fuels in existing buildings. However, many of these buildings are older or under-resourced, and therefore may find the transition more challenging for reasons previously stated. The CAP acknowledges this and the following excerpts from the CAP apply an equity lens to this item:

B- 1 Equity Score

- "Very Negative"[24]

B- 1 Equity Consideration (CAP)

- "Provide technical and financial support to small and minority-owned businesses to replace fossil fuel appliances with electric options."[25]

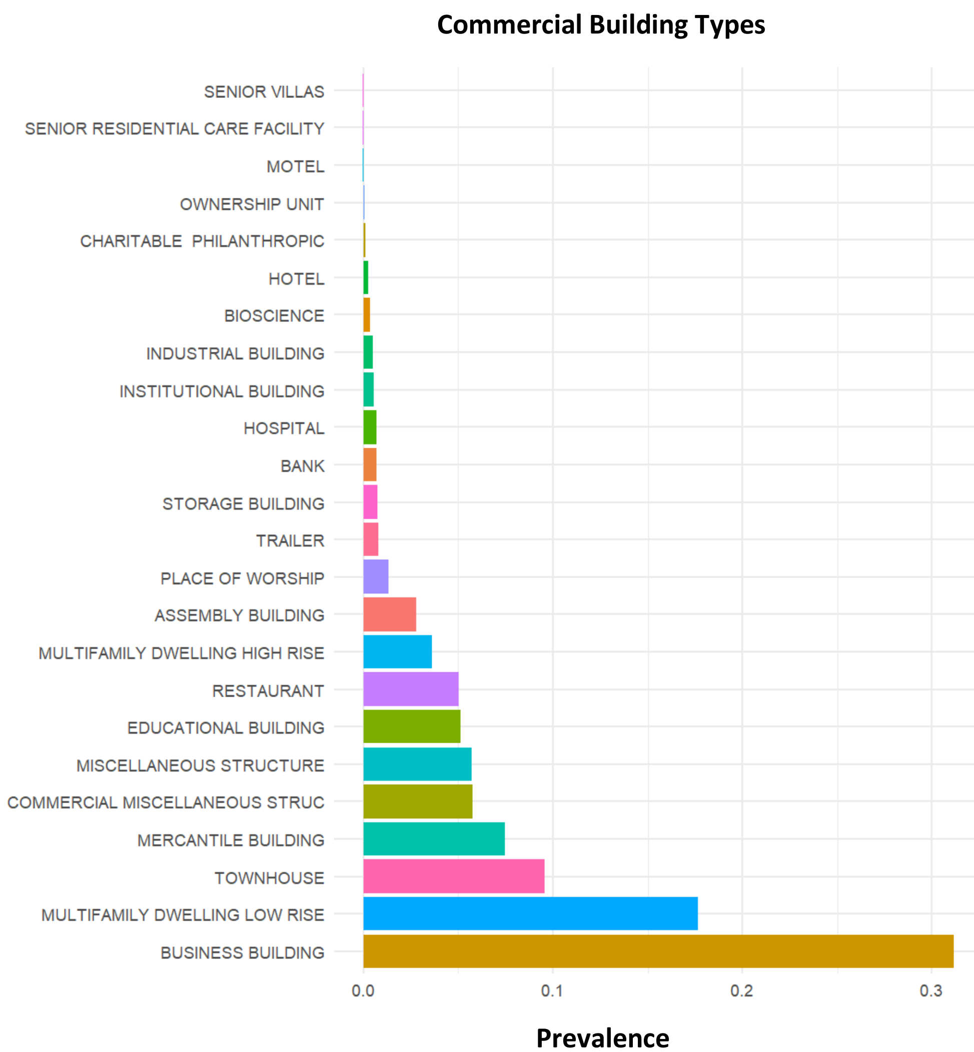
The legislative infrastructure for this CAP item was enacted in Executive Regulation 13-22, the Comprehensive Building Decarbonization Law, in 2022. E.R. 13-22 requires the County Executive to "issue all-electric building standards for new construction, major renovations, and additions by January 1st, 2024".[26] To address equity concerns, the RESJ impact assessment for the bill points to the climate action plan's previously aforementioned recommendation of providing technical assistance for "all electric code compliance for certain building types or owners."[27] Additionally, the RESJ impact statement for Bill 13-22 acknowledges that the extent to which equity will be favored through electrification legislation will ultimately be decided by how centered RESJ is in the County's decarbonization efforts.[28] This is especially important given that the same impact statement also suggests that predicting the impact of legislation on equity is a “challenging analytical endeavor due to data limitation, uncertainty and other factors.”[29] This research project will help guide a conversation around addressing these limitations to ensure equity needs are better understood within future energy codes and legislation, especially how it relates to resource distribution.

B-4: Electrification Incentives for Existing Buildings

CAP action B-4 acknowledges the need for resource assistance during this transition. It is important to note that the CAP was released prior to Bill 44-21, which created a sustained funding source for the Montgomery County Green Bank (MCGB) to support the bank’s energy-related assistance in Equity Emphasis Areas.[30] However, CAP action B-4 also recognizes that existing assistance programs (at the federal, state, and county level) have not necessarily been offered in all building sectors equitably and that “opportunities for significant improvements in building energy efficiency still exist, particularly in medium to small businesses, multifamily properties, and the residential sector.”[31] A challenge remains that it is difficult to retroactively take stock of what businesses may be considered “medium to small.” This missing information is critical in understanding and identifying underlying inequities in the permitting reviews.

Assessing the impact of County-wide clean energy related assistance was also a concern raised by a previous Montgomery County Fellow’s Bill 44-21 policy analysis.[32] Focusing on commercial buildings, this analysis will serve as a guide to ensure that resources meant to reduce the burden of lengthy review cycles on under-resourced buildings are distributed so that the impact will not be disproportionately felt in one commercial area/building sector over another, like certain business buildings.

Figure 1. *A composition of commercial building permits from the previous 2 years in Montgomery County illustrating the diversity of existing building types. It also demonstrates the broadness of the business identifier.*



EMPIRICAL ANALYSIS INSIGHTS

Caveat

This analysis intended to identify measurable gaps in permitting reviews within Montgomery County. However, there are several limitations to the subset of permits used that severely weaken its internal validity (see limitations section further below). Therefore, the results should not necessarily be viewed as a conclusive reflection of disparities, but rather a need for greater data collection efforts in the future.[33]

Data Analysis

This analysis made use of a subset of permits within Montgomery County that were issued within the past 24 months. To capture building owners within or serving vulnerable communities, Equity Focus Areas (EFAs) were overlayed with the permits in the dataset. The use of EFAs are a slight deviation from Equity Emphasis Areas (EEAs), a requirement in the Bill 44-21 language. However, it was strongly suggested by experts in the issue area to employ the use of EFAs as they are constructed by the Maryland-National Capital Park and Planning Commission (M-NCPPC) and include more County-specific factors than their EEA counterpart developed by the Metropolitan Washington Council of Governments (COG).

In addition to EFAs as an equity indicator, the analysis sought to identify permits within the population that may be eligible for an “under-resourced” designation. The under-resourced definition comes from Executive Regulation 17-23 in which will codify the BEPS requirements if passed by the County Council. Given time limitations and data collection challenges, only non-profits and places of worship were able to be identified in the data. To determine the length of permitting reviews, the total amount of time in between a permit being processed and it being issued was calculated and expressed in number of days. Finally, since not all construction permits may be subject to the County’s energy requirements, it was determined whether a permit was subject to an energy review or not.

Given the complexity of constructing indicators and time limitations, this analysis only observes construction types that were designated "commercial change of use." Commercial changes of use however are similar in scope of work to alterations, a permit type that makes up around 3/4ths of the data, so future research should apply this methodology to additional types of construction projects like alterations.

EFA Construction Costs

Figure 2 reflects the range of costs for construction projects in the sample within EFAs. 3/4^{ths} of the projects are below approximately $173,200. The maximum observation in the dataset is $723,391. Additionally, the mean of the valuation for construction projects within EFAs is $99,282.

Min	$100
25th	$21,100
Median	$68,223
75th	$173,200
Max	$723,391

Figure 2.

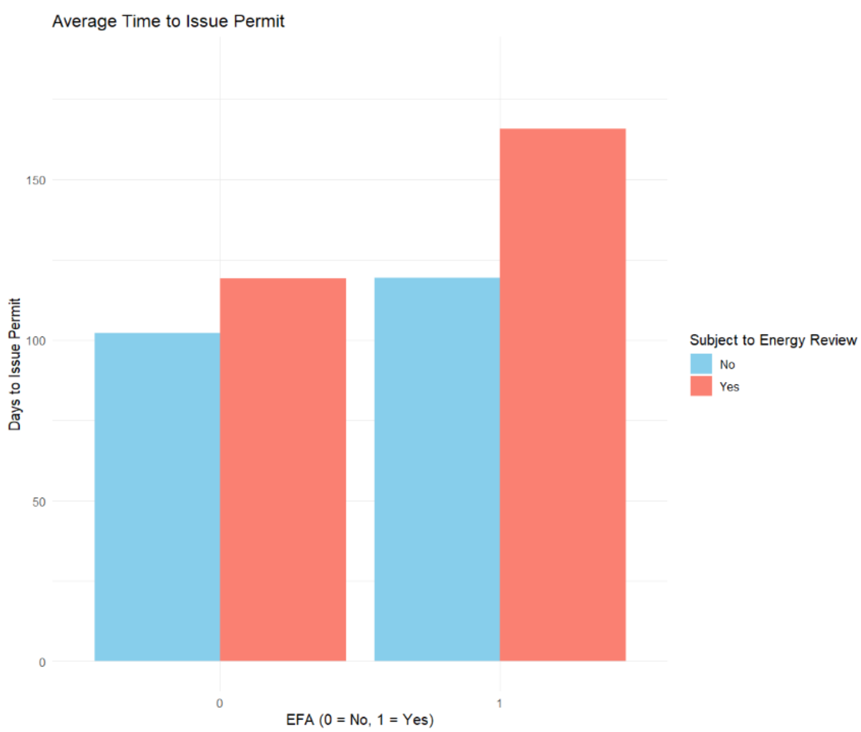
Non-EFA Construction Valuation

Figure 3 reflects the range of costs for the construction projects in the sample outside of EFAs. 3/4^{ths} of the projects are below approximately $158,503 USD. The mean of the valuation for construction projects within EFAs is $134,316 USD.

Min	$100
25th	$23,825
Median	$56,506
75th	$158,504
Max	$426,800

Figure 3.

Figure 4 illustrates the difference in permit review length between total projects within the sample both in and outside of EFAs that were and were not subject to an energy review. Comparing both types of projects serves to demonstrate the effect energy codes may have on length of the review cycle. The results reflect an approximate 46-day difference on average between construction projects subject to an energy review between buildings in and outside of EFAs.



A difference of 46 days may be suggestive of an increased cost burden on property owners as many construction expenses and loans fall within 30 day pay cycles. Therefore, a prolonged review process of 46 days would mean an average property owner in an EFA may unwillingly incur an additional month's cost of fees. This difference would also be meaningful given that these projects are similar in cost. Additionally, a gap of this size is only observed within EFAs, as the gap is significantly reduced between projects with comparable energy reviews outside EFAs.

Discussion

Permit review gaps that may exist within the County can be further reinforced and exacerbated by the County's climate policies and therefore require resources to ensure that that the transition away from fossil fuels does not disproportionally affect any area of the County or building sector. To ensure that assistance programs prioritize building areas and sectors that need it the most, especially businesses, a more robust analysis should be conducted following a similar methodology. As previously aforementioned, there is currently a lack of metrics to distinguish which buildings, for example small businesses, that would be potentially negatively impacted by future regulations. This information is important to collect given that there are commercial buildings in the County that may be negatively impacted by the clean energy transition that cannot be currently identified.

Limitations

There are several limitations to this analysis. First, given time constraints, this association only was identified for commercial change of use permits, a very small subset of the overall population of permits. A more extensive analysis needs to be conducted in which measures this gap across all work and use types.

Second, the sample size for commercial change of use permits was relatively low (72 permits total). The extent of this gap is unknown if permit lengths for the previous four years or longer were to be explored. Furthermore, the number of observations between property use types were also low and thus make it challenging to discern a difference between sectors, at least for commercial change of use permits. Further research on alteration permits for example, which is the most common permit type according to the data, should seek to determine to what extent energy reviews affected the total amount time to permit issuance.

RECOMMENDATIONS

DPS can serve as a model in the County for data collection and analysis as well as diligently report metrics related to technical assistance. Empirically informed outreach and engagement efforts as well as impact analyses will ensure that attention is provided to areas and building sectors in which might not have received support in the past. It can also generate momentum towards more in-depth measurement on the impact of assistance programs through programs such as MCGB. Actionable approaches to materialize this objective can include:

1. *Tracking Relevant Data*

This analysis serves as a guide for establishing and organizing DPS' equity related priorities. To effectively understand the disparities in which exist, important variables must be captured and measured. This will lead to outreach and engagement efforts designed to ensure that limited assistance resources are equitably distributed. The indicators this analysis deployed that would be critical to future research are:

- Whether the permit existed in an EFA
- Whether the permit can be designated "under-resourced" under the BEPS law (i.e. small business)
- Number of energy related review cycles

DPS should pay special attention to identifying the "under-resourced" building sectors, specifically small businesses. Given the challenges that currently exist that make retroactively identifying small business difficult, there are a few options available to DPS in which may make identifying small-businesses easier in the future. This would involve asking applicants at the start of the permitting process questions likely reflecting a pattern of characteristics specific to small businesses. This could potentially be achieved by coordinating with the Montgomery County Business Center to determine questions to ask applicants that are within the scope of the law.

2. *Equipping DPS with an Equity Mechanism*

This recommendation ensures that DPS is fully equipped with the resources necessary to satisfy the needs of the previous recommendation and aims to promote public awareness through transparency in equity related concerns within DPS. DPS' current equity lever is the racial CORE team which was established by the Office of Racial Equity and Social Justice. The previous recommendation can be a primary part of the CORE team's priorities. However, there are significant barriers that the DPS CORE team faces in which may hinder the implementation of the data collection recommendations. Some challenges the CORE team currently face include:

- Lack of representation
    - CORE's members are only comprised of DPS employees within the residential side even though these issues are commercial related
- Volunteer nature makes committing to time intensive research challenging
- Small team size

Recommendations that may increase the effectiveness of DPS' CORE teams and consequentially CORE teams around the county:

- Increasing CORE team awareness within executive agencies
- ORESJ facilitating a platform for which all CORE teams can post their priorities and progress to foster more informed and innovative approaches to equity across the County

Given these challenges, data collection efforts may best fit within the scope of DPS' commercial team for now.

3. Transparency, Accountability, and General Awareness Recommendations

DPS should also disclose its progress in addressing equity issues that fall under its jurisdiction by publishing related information online or to the County Council. This will allow other County agencies as well as the public to see the priorities of the department and the ways in which they are being addressed. This is especially important given the public facing nature of the department. The County should have an interest in this information not only for the equity concerns being addressed but also given the unclear economic development implications lengthier permitting reviews may have. A recommendation to ensure this information is available Countywide and to the public are:

- DPS releasing its progress reports online or to the County Council

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[19] BEPS only will apply to buildings over 25,000 square feet whereas the new and more stringent energy codes will have a much broader application. This means that certain buildings that are subject to the new codes as well as BEPS will need assistance as well.

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[33] Although challenges to internal validity, the results still may be suggestive of gaps that can be extrapolated to other permit types. This requires further research.