Agenda Item 5C
April 22, 2014
Action

MEMORANDUM

TO: County Council

FROM: Amanda Mihill, Legislative Attorney
Michael Faden, Senior Legislative Attorney

SUBJECT: **Action:** Bill 5-14, Environmental Sustainability – Social Cost of Carbon Assessments

Transportation, Infrastructure, Energy and Environment Committee recommendation (3-0): enact Bill 5-14 with an amendment to require that when the Department of General Services is reviewing the energy efficiency of a County building, the Department should include the social cost of carbon as a factor in determining the return on investment of the proposed energy efficiency improvements.

Bill 5-14, Environmental Sustainability – Social Cost of Carbon Assessments, sponsored by Councilmembers Berliner, Floreen, Riemer, Elrich, Andrews, and Navarro, was introduced on January 28, 2014. A public hearing was held by the Committee on February 11 and a Transportation, Infrastructure, Energy and Environment Committee worksession was held on March 24. At the hearing, a representative of the Executive expressed the Executive's general support for the package of environmental initiatives (©23).

As introduced, Bill 5-14 would require the Office of Management and Budget to submit an analysis of the social cost of carbon with certain capital projects in the Capital Improvements Program. The use of conventional fuels, particularly coal, extracts a cost on society that is not reflected in its price. These "external" costs should be factored into the cost/benefit calculations that the County uses when it assesses the potential for energy efficiency improvements.

Councilmember Berliner explained the purpose of this Bill in his January 14 memorandum describing his proposed energy/environmental package (see ©24).

Bill 5-14 is not expected to have a fiscal impact (©28).

A fact sheet from the Environmental Protection Agency providing background information on the social cost of carbon, including how the values are determined and the process used to determine the cost, is on ©6. The most recent social cost of carbon estimates for certain years is on ©8.

Committee Discussion/Recommendation

At the Committee worksession on February 26, the Committee discussed with the Executive Branch the challenges in applying a social cost of carbon analysis to new building projects in the Capital Improvements Program. Chairman Berliner explained his intent that Bill 5-14 not apply generally to new building projects. Rather, when the Department is reviewing the energy efficiency of a County building, the Department should include the social cost of carbon as a factor in determining the payback period of the proposed energy efficiency improvements.

At the Committee worksession on March 24, the Committee (3-0) recommended amending Bill 5-14 to reflect the intent as described above. Staff from the Department of General Services noted that that they were generally supportive of the language proposed by Council staff, but recommended minor changes. Most notable, the Department preferred to use the phrase "return on investment" rather than "payback period". These changes are incorporated into the Committee bill on ©1.

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Bill No. 5-14
Concerning: Environment Sustainability – Social Cost of Carbon Assessments
Revised: 3/31/2014 Draft No. 2
Introduced: January 28, 2014
Expires: July 28, 2015
Enacted: ______
Executive: ______
Effective: ______
Sunset Date: None
Ch. ____, Laws of Mont. Co. ______

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: Councilmembers Berliner, Floreen, Riemer, Elrich, Andrews, and Navarro

AN ACT to:

(1) require the Office of Management and Budget to submit an analysis of the social cost of carbon with certain capital projects in the Capital Improvements Program; and

(2) generally amend County law regarding the analysis of capital projects and environmental sustainability.

By adding
Montgomery County Code
Chapter 18A, Environment Sustainability
Section 18A-16A

Boldface	*Heading or defined term.*
Underlining	*Added to existing law by original bill.*
[Single boldface brackets**]**	*Deleted from existing law by original bill.*
Double underlining	*Added by amendment.*
[[Double boldface brackets**]]**	*Deleted from existing law or the bill by amendment.*
* * *	*Existing law unaffected by bill.*

The County Council for Montgomery County, Maryland approves the following Act:

Sec. 1. Section 18A-16A is added as follows:

18A-16A. Social cost of carbon assessment.

(a) *Definitions.* In this Section, the following words have the meanings indicated:

Department means the Department of General Services.

Director means the Director of the [[Office]] Department or the Director's designee.

Energy Project means an energy efficiency or renewable energy improvement to a building or facility that is expected to reduce the onsite consumption of electricity, natural gas, or other fuels.

[[*Applicable capital project* means any proposed building project administered by the Department of General Services or the Parking Management Division of the Department of Transportation.]]

[[*Office* means the Office of Management and Budget.]]

Return on Investment means a performance measure used to evaluate the financial return of an energy project, including reasonable forecasts of energy costs and other factors.

Social cost of carbon means an estimate of the economic damages or damages avoided associated with the increase or reduction of one metric ton of carbon dioxide emissions.

(b) [[For each applicable capital project in the Capital Improvements Program during facility planning, the Office of Management and Budget must include in, or transmit with, the CIP an analysis of the social cost of carbon from that project]] When evaluating a building to determine whether to improve the building's energy efficiency, the Department must include the social cost of carbon as a factor in determining the return on investment of the proposed energy efficiency improvements.

(c) In performing its analysis, [[OMB]] the Department must use the standard developed by the United States Environmental Protection Agency or a standard the Director finds equivalent.

(d) In performing its analysis, [[OMB]] the Department should consult the Department of Environmental Protection and any other County department or agency with expertise in environmental sustainability.

Approved:

Craig L. Rice, President, County Council Date

Approved:

Isiah Leggett, County Executive Date

This is a correct copy of Council action.

Linda M. Lauer, Clerk of the Council Date

LEGISLATIVE REQUEST REPORT

Bill 5-14
Environmental Sustainability – Social cost of Carbon Assessments

DESCRIPTION:	Would require the Office of Management and Budget to submit an analysis of the social cost of carbon with certain capital projects in the Capital Improvements Program.
PROBLEM:	The use of conventional fuels, particularly coal, extracts a cost on society that is not reflected in its price. These "external" costs should be factored into the cost/benefit calculations that the County uses when it assesses the potential for energy efficiency improvements.
GOALS AND OBJECTIVES:	To require the County to use EPA's "social cost of carbon" calculation or a comparable methodology for Capital Improvements Program purposes.
COORDINATION:	Office of Management and Budget, Department of General Services
FISCAL IMPACT:	To be requested.
ECONOMIC IMPACT:	To be requested.
EVALUATION:	To be requested.
EXPERIENCE ELSEWHERE:	To be researched.
SOURCE OF INFORMATION:	Michael Faden, Senior Legislative Attorney, 240-777-7905
APPLICATION WITHIN MUNICIPALITIES:	To be researched.
PENALTIES:	Not applicable.

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ROCKVILLE, MARYLAND

MEMORANDUM

February 5, 2014

TO: Craig Rice, President, County Council

FROM: Jennifer A. Hughes, Director, Office of Management and Budget
Joseph F. Beach, Director, Department of Finance

SUBJECTS: Bill 2-14, Environmental Sustainability – Buildings – Benchmarking
Bill 3-14, Buildings – Energy Efficiency – Energy Standards
Bill 4-14, Street and Roads – County Street Lights
Bill 5-14, Environmental Sustainability – Social Cost of Carbon Assessments
Bill 6-14, Environmental Sustainability - Office of Sustainability – Established
Bill 7-14, Contracts and Procurement – Certified Green Business Program
Bill 8-14, Buildings – County Buildings – Clean Energy Renewable Technology
Bill 9-14, Environmental Sustainability – Renewable Energy – County Purchase
Bill 10-14, Buildings – Solar Permits – Expedited Review
Bill 11-14, Buildings – Electric Vehicle Charging Station Permits – Expedited Review

As required by Section 2-81A of the County Code, we are informing you that transmittal of the fiscal and economic impact statements for the above referenced legislation will be delayed because more time is needed to coordinate with the affected departments, collect information, and complete our analysis of the fiscal and economic impacts. While we are not able to conduct the required detailed analyses at this time, it is clear that a number of these bills could have significant fiscal impacts.

Due to this year's heavy workload on Executive branch staff in developing both a full capital budget and an operating budget, the fiscal and economic statements will be transmitted after March 17, 2014.

JAH:fz

cc: Bonnie Kirkland, Assistant Chief Administrative Officer
Lisa Austin, Offices of the County Executive
Joy Nurmi, Special Assistant to the County Executive
Patrick Lacefield, Director, Public Information Office
Marc P. Hansen, Office of the County Attorney
Robert Hagedoorn, Department of Finance
David Platt, Department of Finance
Alex Espinosa, Office of Management and Budget
Mary Beck, Office of Management and Budget
Naeem Mia, Office of Management and Budget
Felicia Zhang, Office of Management and Budget

Fact Sheet: Social Cost of Carbon

Background

EPA and other federal agencies use the social cost of carbon (SCC) to estimate the climate benefits of rulemakings. The SCC is an estimate of the economic damages associated with a small increase in carbon dioxide (CO_2) emissions, conventionally one metric ton, in a given year. This dollar figure also represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO_2 reduction).

The SCC is meant to be a comprehensive estimate of climate change damages and includes, among other things, changes in net agricultural productivity, human health, and property damages from increased flood risk. However, it does not currently include all important damages. As noted by the IPCC Fourth Assessment Report, it is "very likely that [the SCC] underestimates" the damages. The models used to develop SCC estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research. Nonetheless, the SCC is a useful measure to assess the benefits of CO_2 reductions.

The timing of the emission release (or reduction) is key to estimation of the SCC, which is based on a present value calculation. The integrated assessment models first estimate damages occurring after the emission release and into the future, often as far out as the year 2300. The models then discount the value of those damages over the entire time span back to present value to arrive at the SCC. For example, the SCC for the year 2020 represents the present value of climate change damages that occur between the years 2020 and 2300 (assuming 2300 is the final year of the model run); these damages are associated with the release of one ton of carbon dioxide in the year 2020. The SCC will vary based on the year of emissions for multiple reasons. In model runs where the last year is fixed (e.g., 2300), the time span covered in the present value calculation will be smaller for later emission years—the SCC in 2050 will include 40 fewer years of damages than the 2010 SCC estimates. This modeling choice—selection of a fixed end year—will place downward pressure on the SCC estimates for later emission years. Alternatively, the SCC should increase over time because future emissions are expected to produce larger incremental damages as physical and economic systems become more stressed in response to greater levels of climatic change.

One of the most important factors influencing SCC estimates is the discount rate. A large portion of climate change damages are expected to occur many decades into the future and the present value of those damages (the value at present of damages that occur in the future) is highly dependent on the discount rate. To understand the effect that the discount rate has on present value calculations, consider the following example. Let's say that you have been promised that in 50 years you will receive $1 billion. In "present value" terms, that sum of money is worth $291 million today with a 2.5 percent discount rate. In other words, if you invested $291 million today at 2.5 percent and let it compound, it would be worth $1 billion in 50 years. A higher

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discount rate of 3 percent would decrease the value today to $228 million, and the value would be even lower—$87 million-- with a 5 percent rate. This effect is even more pronounced when looking at the present value of damages further out in time. The value of $1 billion in 100 years is $85 million, $52 million, and $8 million, for discount rates of 2.5 percent, 3 percent, and 5 percent, respectively. Similarly, the selection of a 2.5 percent discount rate would result in higher SCC estimates than would the selection of 3 and 5 percent rates, all else equal.

Process Used to Develop the SCC

An interagency working group was convened by the Council of Economic Advisers and the Office of Management and Budget in 2009-2010 to design an SCC modeling exercise and develop estimates for use in rulemakings. The interagency group was comprised of scientific and economic experts from the White House and federal agencies, including: Council on Environmental Quality, National Economic Council, Office of Energy and Climate Change, and Office of Science and Technology Policy, EPA, and the Departments of Agriculture, Commerce, Energy, Transportation, and Treasury. The interagency group identified a variety of assumptions, which EPA then used to estimate the SCC using three integrated assessment models, which each combine climate processes, economic growth, and interactions between the two in a single modeling framework.

SCC Values

The 2009-2010 interagency group developed a set of four SCC estimates for use in regulatory analyses. The first three values are based on the average SCC from three integrated assessment models, at discount rates of 5, 3, and 2.5 percent. SCC estimates based on several discount rates are included because the literature shows that the SCC is highly sensitive to the discount rate and because no consensus exists on the appropriate rate to use for analyses spanning multiple generations. The fourth value is the 95th percentile of the SCC from all three models at a 3 percent discount rate, and is intended to represent the potential for higher-than-average damages. See the SCC Technical Support Document (PDF, 51pp, 848K) for a complete discussion about the methodology and resulting estimates.

The interagency group recently updated these estimates, using new versions of each integrated assessment model and published them in May 2013. The 2013 interagency process did not revisit the 2009-2010 interagency modeling decisions (e.g., with regard to the discount rate, reference case socioeconomic and emission scenarios or equilibrium climate sensitivity). Rather, improvements in the way damages are modeled are confined to those that have been incorporated into the latest versions of the models by the developers themselves and as used in the peer-reviewed literature.

The SCC estimates using the updated versions of the models are higher than those developed in the 2009-2010 modeling exercise. The four 2020 SCC estimates reported in the 2010 interagency group were $7, $28, $44 and $86 per metric ton (2011$). The corresponding four updated SCC estimates for 2020 are $13, $46, $68, and $137 per metric ton (2011$). The May 2013 SCC Technical Support Document (PDF, 22pp, 780K) provides a detailed discussion of the model updates relevant to these estimates.

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The table below summarizes the four SCC estimates in certain years.

Social Cost of CO_2, 2015-2050 [a] (in 2011 Dollars)

Year	Discount Rate and Statistic			
	5% Average	**3% Average**	**2.5% Average**	**3% 95th percentile**
2015	$12	$39	$61	$116
2020	$13	$46	$68	$137
2025	$15	$50	$74	$153
2030	$17	$55	$80	$170
2035	$20	$60	$85	$187
2040	$22	$65	$92	$204
2045	$26	$70	$98	$220
2050	$28	$76	$104	$235

[a] The SCC values are dollar-year and emissions-year specific.

Examples of SCC Applications to Rulemakings

EPA has used the SCC to analyze the carbon dioxide impacts of various rulemakings since the interagency group first published estimates in 2010. Examples of these rulemakings include:

- The Joint EPA/Department of Transportation Rulemaking to establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards (2012-2016)
- Amendments to the National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards (NSPS) for the Portland Cement Manufacturing Industry
- Regulatory Impact Results for the Reconsideration Proposal for National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters at Major Sources
- Proposed National Emission Standards for Hazardous Air Pollutants (NESHAP) for Mercury Emissions from Mercury Cell Chlor Alkali Plants
- Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units Standards
- Final Mercury and Air Toxics Standards
- Joint EPA/Department of Transportation Rulemaking to establish Medium- and Heavy - Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards
- Proposed Carbon Pollution Standard for Future Power Plants
- Joint EPA/Department of Transportation Rulemaking to establish 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards

Limitations of SCC

The interagency group noted a number of limitations to the SCC analysis, including the incomplete way in which the integrated assessment models capture catastrophic and non-catastrophic impacts, their incomplete treatment of adaptation and technological change, uncertainty in the extrapolation of damages to high temperatures, and assumptions regarding risk aversion. Additional details are discussed in the 2010[1] and 2013[2] SCC Technical Support Documents.

Next Steps

The U.S. government committed to updating the current estimates as the science and economic understanding of climate change and its impacts on society improves over time. For example, EPA and Department of Energy also hosted a series of workshops to inform SCC development. The first workshop focused on conceptual and methodological issues related to integrated assessment modeling and valuing climate change impacts, along with methods of incorporating these estimates into policy analysis. The second workshop reviewed research on estimating impacts and valuing damages on a sectoral basis. Papers based on the presentations from both workshops were published in a special issue of Climatic Change (April 2013). In addition, EPA funded a workshop on discounting in September 2011 that invited world-recognized experts to discuss how the benefits and costs of regulations should be discounted for projects with long horizons. In particular, it explored what principles should be used to determine the rates at which to discount the costs and benefits of regulatory programs when costs and benefits extend over very long horizons.

EPA and other agencies continue to engage in research on modeling and valuation of climate impacts to improve these estimates.

[1] See http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf
[2] See http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/technical-update-social-cost-of-carbon-for-regulator-impact-analysis.pdf

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AIA Potomac Valley
A Chapter of the American Institute of Architects

Date: February 11, 2014

To: Roger Berliner, Nancy Floreen, Hans Reimer
Montgomery County Council, Transportation and Energy Committee Members

From: American Institute of Architects, Potomac Valley Chapter

Subject: February 11, 2014, Public Hearing on Proposed Environmental and Energy Bills

The local American Institute of Architects, Potomac Valley Chapter (AIA-PV) is writing to provide comment on proposed environmental, sustainability, green building and energy legislation that is summarized in Attachment A.

Throughout 2013, the AIA-PV has been working to assist the Department of Permitting Services by providing multi-disciplinary expert review and comment on green building codes that the county is considering adopting. We have submitted detailed comments to the Department and urged them to proceed slowly and cautiously in order to give design professionals, builders, and owners time to acclimate to the requirements, especially criteria that have the potential to slow economic development in the county. We advise you to do the same before moving forward to adopt new or revised environmental and energy legislation.

In addition, we advise you to seek green building **code solutions** that are effective industry-standard tools to achieve your goals and avoid regulations that make development more time consuming and confusing.

Sincerely,

Eileen Emmet, AIA, IgCC Task Force Co-Chair, eemmet.aia@gmail.com
William (Bill) LeRoy, AIA, IgCC Task Force Co-Chair, wl70@icloud.com

cc:
Loreen Arnold, AIA-PV President 2014, larnold@ktgy.com
Scott Knudson, AIA; AIA-PV Past-President 2013, sdgknudson@gmail.com
Ralph Bennett, AIA-PV, IgCC Task Force, ralph@bfmarch.com
Dan Coffey, AIA-PV, IgCC Task Force, dcoffey@therrienwaddell.com

Attachment A: AIA-PV July 30, 2013 IgCC Executive Summary
Attachment B: AIA-PV Feb. 4, 2014 Letter to Diane Schwartz-Jones w/AIA-PV Executive Summary 7.30.2013

AIA Potomac Valley
A Chapter of the American Institute of Architects

Attachment A

2-14: Benchmarking
Benchmarking typically means a baseline against which performance is measured. Reporting for a year is required here (reasonable given seasonal variation) using Portfolio Manager (appropriate), but continuing energy reporting is inevitable and could be addressed by the legislation.

3-14: Building Energy Efficiency - Countywide
The County adopted the International Energy Conservation Code in 2013. This proposal refers to other energy codes included in LEED, and its impact should be assessed. Assumedly, the law intends to include LEED v.3; it should specify since v.4 is more stringent. LEED addresses many more issues than energy; if energy is the concern, it may be better to use energy codes.

4-14: County Street Lights
The assumed purpose is to reduce energy costs while maintaining appropriate lighting levels. LEED may not be, and is not the only answer here. So energy performance of possible alternatives should be addressed.

5-14: Social Costs of Carbon
Good intention - Many sectors of the economy exist only by shedding externality costs onto others. This also addresses the equity leg of the three-legged stool of sustainability.

Metrics here are new, unevenly available, and contentious. As long as the measurements are for information and not used to penalize or qualify projects, this may be a useful window into real sustainability.

6-14: Office of Sustainability
Parallels such agencies elsewhere - their success should be studied before full commitment. Full inclusion of appropriate agencies should be mandated - turf wars are inherent in the placement of such an agency within DEP. Implementation expertise is in permitting. Consider attaching to the Executive.

7-14: Certified Green Business Program
Which Certification will DEP use? Without this, it is difficult to know what the impact will be. The procedures included for selection of a system or systems will take a year, at least.

8-14: County Buildings, Renewable Energy Technology
This assumes that all county buildings can feasibly provide 1kw/1000 sf by photovoltaic generation. This may not be feasible for all buildings - offsets and other on-site energy technologies should be permitted including ground source heat pumps which LEED does not recognize as on-site energy. Renewable Energy Credits be clarified in lieu of 'Offsets.'

9-14: Renewable Energy Purchase: 50% by next year; 100% by 2020
Assumedly, this addresses County government's energy use. Will this extend to quasi-government agencies like HOC? Do they know about this?

10-14: Expedited Review of Solar Permits; 50% permit fee reduction.
Good idea.

11-14: Electric Vehicle Charging Station Permits; 50% permit fee reduction
Good idea.

12-14: County Employee Telecommuting
Good idea.

AIA Potomac Valley
A Chapter of the American Institute of Architects

ATTACHMENT A

EXECUTIVE SUMMARY

AIA-PV IgCC Task Force

July 30, 2013

Start Small:

There are many reasons to start small and expand with subsequent revision cycles. This allows time for the industry to come to grips with the new requirements of green codes. It also allows the opportunity to gather real data on the costs and benefits of its implementation.

Montgomery County has diverse building types in urban, suburban and rural settings therefore allowing alternative compliance paths is helpful and necessary to address these varying conditions.

One method for a phased approach is to make compliance optional and create incentives for complying with the code. Incentives can take the form of tax breaks, expedited permitting, or reduced permitting fees.

Another method is to make the most demanding requirements electives and specify a minimum number required. This also provides the opportunity to collect real world data. There is still skepticism about the business model for green building and energy efficient operational directives. Carefully crafted electives and pilot studies can help address that issue. This is the approach taken in the PV-Task Force's detailed recommendations in Attachment B.

Administrative Provisions:

The manner in which the DPS will manage review of projects under the green code is critical to its success. The PV-TF recommends that the DPS create standard forms, templates, and electronic submission protocols and have them in place on the date of adoption in order to administer the requirements in an efficient and effective manner. The requirements of the code also indicate a need for additional DPS review staff to avoid lengthening already long review times. DPS staff will need to be educated and fluent in the code criteria of several compliance paths because alternative compliance paths will have the best chance of a successful implementation process.

Jurisdictional Requirements:

Chapter 3 Jurisdictional Requirement 301.1.1, Scope Application: The task force recommends retaining the option of IgCC **or** ASHRAE 189.1 compliance paths, thus retaining maximum flexibility for the design team to choose the compliance path applicable to the building type and location. The task force further recommends that LEED Silver should be allowed as an alternative, non-mandatory, compliance path, because it has an established format, method of compliance, and documentation templates.

Electives:

Table 302.1, Requirements Determined by the Jurisdiction: The task force recommends striking the adoption of Table 302.1, the list of 22 additional requirements to be designated by the AHJ. The group feels that the overall number of electives required should apply to the entire code with some exceptions as noted in the Detailed Chapter Analysis and Recommendations.

Flexibility for the applicant is important. For new construction, 20% of electives are a reasonable number if the credits are spread among a minimum of four chapter categories. For existing buildings, 15% of electives are a reasonable number if the credits are spread among a minimum of two chapter categories.

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Square Footage (SF) Size Thresholds:

Across-the-board square-footage size requirements will make adoption of the IgCC a hardship for many project types. The recommendation is to scale the SF thresholds based on the industry standards for type of use and energy use because the variables fall into three categories: a) applicability of the code, b) mechanical systems, and 3) envelope design. This will take more time to analyze and the PV-Task Force can assist the DPS to better define these thresholds.

Adoption in Other Jurisdictions:

While the scope of regional adoption of the IgCC was not a primary task for the PV-Task Force, the group notes the following observations in regard to green code adoption in the region:

Baltimore City Adoption

- In Baltimore City all newly constructed, extensively modified buildings that have or will have at least 10,000 square feet must be LEED-Silver certified or comply with the Baltimore City Green Building Standards (a LEED-like standard).
- Baltimore City is soon to introduce legislation expanding the options for building owners to select from a menu such that a project can be: LEED-Silver certified, or complies with the IgCC, or meets the ASHRAE 189.1 standard, or satisfies Enterprise Green Communities requirements, or complies with ICC 700. (This menu approach is similar to what DC is moving to.)
- The menu approach under legislative consideration will amend the existing Baltimore City Green Building Law whereby the listed options may be available in 4th quarter 2013 and the existing city-drafted regulatory alternative to LEED will remain available until June 1, 2015.
- The only real controversy in proposed legislation has been about the definitions for modified (i.e. the threshold for renovated buildings) structures and in the newly proposed code nearly all renovations will have to comply with the law.

Washington, D.C.

- Although typically slower than Maryland in adopting new code cycles, DC includes stakeholders in the process of code adoption. In the case of the IgCC, to date the input seems to be a great success.
- DC is considered a national green building leader. Green building standards there do not seem to be a deterrent to development.
- DC has adopted a modified approach to IgCC adoption. They moved many items to the Appendix section and recommended 15 credits be achieved, in any category, from 75 credit options.
- DC is more urban than Montgomery County, yet has several paths to compliance: IgCC, ASHRAE 189.1, LEED, and Enterprise Green Communities

Virginia Adoption

Adoption of the IgCC does not seem imminent. In conversations with VA officials, one of the main issues in adopting the IgCC is related to the land use, zoning, related impact the overlay code might have. Since the state of Virginia sets building codes, without local amendments, the IgCC might be considered too difficult to implement with such a diverse landscape, the officials stated that they do not plan to adopt at this time. If less restrictive to permit there, it could be perceived as an economic disadvantage to build or renovate in Montgomery County.

AIA Potomac Valley
A Chapter of the American Institute of Architects

February 4, 2014

Ms. Diane Schwartz-Jones, Director
Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, Maryland 20850-4166

Copy via email to diane.jones@montgomerycountymd.gov

Dear Ms. Schwartz-Jones,

Re: AIA-Potomac Valley Chapter, IgCC/ASHRAE 189.1 Task Force Recommendations

On July 30, 2013, the AIA-Potomac Valley Chapter (AIA-PV) submitted recommendations to you in regard to possible adoption of the International Green Construction Code (IgCC). As you know, the AIA-PV has a task force group who has been working together on this subject matter for some time. The group is comprised of a multi-disciplinary group of design professionals: architects, engineers, a developer/landscape architect, a builder, and others.

This letter provides supplemental information that responds to your staff's request that our group also review and make recommendations in regard to possible adoption of the ANSI/ASHRAE/USGBC/IES Standard 189.1-2011 -- Standard for the Design of High-Performance Green Buildings, Except Low-rise Residential Buildings (also referred to as ASHRAE 189.1, 2011. ASHRAE 189.1 Is an alternative means of compliance incorporated into the IgCC 2012 codebook. We hope this additional information meets your needs:

As mentioned in our July 30, 2013 letter, the AIA-PV group still recommends that Montgomery County:

- Refer to our July 30, 2013 Executive Summary (Attachment A) and detailed recommendations previously submitted
- Proceed slowly and cautiously in order to give design professionals, builders, and owner's time to acclimate to the requirements, especially criteria that have the potential to slow economic development in the county while other nearby jurisdictions are taking a measured approach or not yet shifting to these codes.
- Adopt the IgCC and alternative compliance paths (including ASHRAE 189.1) and do away with the current Montgomery County Green Building Law.

In addition, we recommend you create an industry advisory panel to make a solid implementation plan with the Department of Environmental Protection (DEP). We feel this is important because most of the details and issues to implement the County Council's proposed green building legislation are at the direction and responsibility of the Director of DEP and because those legislations overlap with requirements in green building codes that DPS is proposing.

The following items in Attachment B summarize the detailed analysis and recommendations of the AIA-PV-Task Force in regard to ASHRAE 189.1*:

- Section 5, Site Sustainability
- Section 6, Water Use Efficiency
- Section 7, Energy Efficiency
- Section 8, Indoor Environmental Quality
- Section 9, The Building's Impact on the Atmosphere, Materials, and Resources
- Section 10, Construciton and Plans for Operation

* Unlike the IgCC, ASHRAE 189.1 does not have a chapter for historic and existing buildings so comments on those building types have been incorporated into each section's recommendations.

Once you have had a chance to review our recommendations, the PV-Task Force members would be pleased to meet with you in person to answer questions, clarify our recommendations, or address any item of interest that we may have overlooked. Thank you for giving us this opportunity to assist you.

Sincerely,

Scott Knudson, AIA; AIA-PV Past-President 2013, sdqknudson@gmail.com
Eileen Emmet, AIA, IgCC Task Force Co-Chair, eemmet.aia@gmail.com
William (Bill) LeRoy, AIA, IgCC Task Force Co-Chair, wl70@icloud.com

Attachment A: AIA-PV July 30, 2013 IgCC Executive Summary
Attachment B: AIA-PV ASHRAE 189.1 Recommendations

cc DPS: Hadi Mansouri, hadi.mansouri@montgomerycountymd.gov,
Mark Nauman, mark.nauman@montgomerycountymd.gov
Hemal Mustafa, hemal.mustafa@montgomerycountymd.gov

Cc: IgCC/ASHRAE 189.1 Task Force Members:

Ralph Bennett, AIA; Bennett, Frank, McCarthy Architects
Bruce Blanchard, Senior Consultant, Polysonics Acoustics & Technology Consulting
Daniel Coffey, Vice President, Therrien Waddell, Inc., Chairman USGBC-NCR, Montgomery County Chapter
Stephen Kirk, International Code Council, Associate Member
Suketu Patel AIA LEED AP BD+C; President, Integrated Design Studio LLC
Kirill Pivovarov, AIA, LEED AP; Principal, RTKL Associates Inc.
Steven Schwartzman, AIA, LEED AP; Associate Principal, WDG ARCHITECTURE
Geoff Sharpe, ASLA
Catherine E. Sheehan, AIA, LEED AP
Adam Spatz, PE, LEED AP; Senior Mechanical Engineer, Greenman-Pedersen, Inc.
Paul Tseng, PE, CxAP, CPMP, CMVP CEM, LEED AP; President, Founder, Advanced Building Performance
Amy Upton, LEED AP BD+C; Director of Environmental Design, Senior Associate, Grimm + Parker

THE VOICE OF MONTGOMERY COUNTY BUSINESS

MONTGOMERY COUNTY COUNCIL
PUBLIC HEARING

BILLS 2-14 THROUGH 12-14

FEBRUARY 10, 2014

As a Chamber of Commerce that recognizes the economic and environmental imperative of greening the way we do business, we commend the County Council for the intent of this package of bills. We believe that positioning our county as a place to do green business is a compelling competitive advantage in today's marketplace. Supporting a green infrastructure is critical, as is growing the number of green jobs that are created to meet the needs of the new marketplace.

There are, however, areas of concern with regard to the package. Below are specific comments on a few of the bills. Broadly speaking, the fiscal impact statements will likely address the costs associated with the various activities. It will be important to review these so as not to impose undo burden as we try to move the marketplace. Where possible, incentives should be deployed to encourage adoption of new practices and attainment of environmentally sustainable goals. We would also like to see these bills work in concert with other county regulations so there is not confusion in following or enforcing the regulations.

We see green as part of a larger economic development strategy for the county. The Green Business Certification program is a terrific example of the business community working in partnership with the Department of Environmental Protection and Montgomery College to achieve environmental goals through a voluntary program. We look forward to working with you, the County Council, to make sure this package is able to realize the stated intention of addressing climate change at the local level to the greatest extent possible.

Comments on specific bills:

Bill 7-14 Contracts and Procurement -Certified Green Business Program
We applaud the County Council for recognizing the Montgomery County Green Business Certification Program and finding ways to incentivize those companies interested in working with the county to participate. We encourage the county government - or units within it - to become "Green Certified" and to green its own supply chain by using environmentally preferable purchasing of products and practices where appropriate. There is a green procurement bill requested by DGS (HB 629) pending at the state which could serve as a guide.

According to the information provided by the Council staff, "The goal is to encourage businesses to develop strategies for protecting the environment in their day to day operations." If the goal is

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indeed to encourage more businesses to adopt green practices internally (such that they can be certified by Montgomery County or another comparable entity), the county may also want to explore using one or more of the many tools available outside of the county procurement process and appropriate to all businesses to incentivize that initiative.

Coincidentally, there is also a bill in the General Assembly that focuses on creating Green Business Incentive Zones (HB 473/SB 787) which also encourages the growth and success of this new market player by offering incentives such as tax credits.

This bill, as drafted, uses the procurement process and the opportunity to gain preference as an incentive. The procurement process is complex. Any modification to that process should be to make it easier to do business with the county. We are concerned that by restricting the language to "percentage price preference" companies that do have the right products or services, but have not met the green business certification preference, may be at a disadvantage that ultimately undermines the overall effort to reduce our collective ecological footprint. Therefore, we suggest reviewing the ways that the procurement process can be used effectively, perhaps by including green certification in the evaluation criteria or as a "tip over." This may more effectively encourage companies to green themselves without inadvertently making the procurement process more cumbersome and ultimately counter-productive in meeting the goal. It is worth noting that "percentage price preference" language was struck from HB 629 mentioned above.

Bill 2-14, Environmental Sustainability - Buildings - Benchmarking
To the extent that buildings are a critical piece of the climate puzzle, it is important to understand energy usage and work to conserve where we can. That being said, we encourage the Council to look to federal regulations as many tenants in the county are federal offices or contract with the federal government. Therefore, any new requirements for owners and/or tenants should conform to federal standards.

Second, we firmly believe that if the county requires benchmarking of private property owners, the county must be able to participate in the program as well. Taxpayers should know the efficiency of the buildings they are paying to operate. Last, for those older buildings that will be among the least efficient, the program must provide some process to help with mitigation, whether it be providing priority for county programs or other education and incentives to address problems.

Bill 5-14, Environmental Sustainability - Social Cost of Carbon Assessments
It is unclear, based on our reading of this bill, how the EPA method that was developed for regulations/legislation would be applied to Capital Improvement Projects or energy efficiency improvements in general. It is also unclear how information gleaned from the calculation would be used to reach any conclusion on the viability of a project.

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Bill 6-14, Environmental Sustainability - Office of Sustainability - Established
Based on the bill as written, this new office would record and manage the county's greenhouse gas emissions. We see Montgomery County's position as a leader in sustainability as a driver of economic development. We therefore believe that this effort should include an economic development component as well as clear coordination with the extensive land use and transportation work that happens throughout the county government and with Park and Planning. In addition to producing an annual report, there should be some demonstrable gain to county taxpayers to justify the creation of a new office, which will require additional staffing and new responsibilities.

With regard to the remaining bills that are part of this package, we would encourage Council Members to be mindful of hidden costs and unintended consequences that may arise from the adoption of some of these bills. We hope that the fiscal impact statement will speak to some of these and that the committee work sessions will be constructive and produce useful information.

As mentioned at the outset, we see green as part of a larger economic development strategy for the county. We look forward to working with you to make sure this package is able to realize the stated intention of addressing climate change at the local level to the greatest extent possible.

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Charles K. Nulsen, III – Speaker #5

Against Bills 2, 3, 5, and 6-14

Outline Testimony

I. Thank you for letting me speak tonight. My name is Charlie Nulsen. I am the President and Owner of Washington Property Company, a small Bethesda based real estate company. I have worked in real estate in Montgomery County for 35 years. I am here to speak in opposition of 4 of the bills. #2, 3, 5, and 6, I disapprove more than just these 4. I have been warned that I will speak to you in English, but you will hear a foreign language. Not a great characterization from my business brothers, but bad communication is a 2 way street and I am here for the first time as my attempt to help address this issue.

II. I want to start with big picture

a. Montgomery County is in a double dip recession of the likes it has never seen. Ever!

b. The Federal Government's economic impact on Montgomery County will be declining for the next 20 years – It is a technology thing –Montgomery County for the first time must rely heavily on private sector growth.

c. Our commercial tenant base is dwindling – 25% vacancy in our office market is structural.

d. WPC's commercial property taxes have decreased 30% in last five years and I predict another 15-20% drop in the next two because of lower rents, increased vacancy, causing lower assessments. I have commercial properties in Bethesda, Silver Spring, Rockville, I-270; they are all at the distressed stage.

e. Montgomery County has supplemented this loss in commercial real estate income with taxes – particularly on utilities to the tune of $233M in 2013. Montgomery County Energy Tax accounts for approximately 30% of commercial Pepco bill and 15% of residential Pepco bill.

III. <u>Bill 2-14 – Environmental Sustainability – Buildings Benchmarking</u>

a. Modelled after the District – creates 2 weeks of reporting man hours for the owner. Probably 3 times that on the Government side. D.C. owners do their own energy assessments as a matter of business. So do Montgomery County owners.

b. Taken in the context of Montgomery County.

   i. It will highlight to corporate tenants a Corporate Energy Tax that could be highest in the country! Montgomery County utility bills are 30% higher than DC or VA. Montgomery County collects more for the distribution of electricity than Pepco itself. What policy goal are we serving here?

   ii. It comes at a terrible time for the commercial industry. More cost – zero pay back. "The house is on fire, but turn out the lights before you leave."

IV. <u>Bill 3-14 Silver LEED requirements</u>

a. Silver LEED for residential is very hard to obtain and further drives up the cost of rental and for-sale product.

b. Commercial Construction is dead – inside beltway development activity is 11-1 residential / office. Why throw up another road block to commercial growth?

c. County Buildings - ok

V. Bill 5-14 Carbon Assessment

a. If you have a Silver LEED requirement for County Buildings why is there a need for social carbon assessment?

VI. Bill 6-14 Office of Sustainability

a. Does the County, within it's current budget constraints, really have the resources to add an additional department?

b. Sustainability is an often used term: but let's look at Montgomery County's overall direction: Decreasing commercial tax base / exploding residential base (especially rental) Is this really sustainable?

I am the poster child for a real estate owner in Montgomery County. I had a $16M office building on 270, then Lockheed moved out. An appraisal 2 weeks ago (done by lender) gave the value at $6M. Basically the value of the ground. But, in 2 months I will be starting my 3rd apartment project in Montgomery County, which will bring in more renters that need County services.

I don't think this path is sustainable for a healthy Montgomery County. We need balance.

To put it in another context – over the past 8 years Montgomery County has gotten an A- in environmental stewardship and an F in economic stewardship. I suggest we collectively, as a community, focus on pulling our F up to a C instead of our A- to an A so we may pass on to future generations a healthy, sustainable Montgomery County.

Thank you.

TESTIMONY ON BEHALF OF COUNTY EXECUTIVE ISIAH LEGGETT

ON ENVIRONMENTAL AND SUSTAINABILITY PACKAGE

Bills 2-14, 3-14, 4-14, 5-14, 6-14,7-14, 8-14, 9-14, 10-14, 11-14, 12-14

February 11, 2014

Good evening Council President Rice and members of the County Council. My name is Bonnie Kirkland and I am pleased to be here on behalf of County Executive Isiah Leggett to testify on the package of environmental and sustainability measures introduced on February 4, 2014 by Councilmember Berliner and others. Mr. Leggett supports Councilmember Berliner's initiative and the Council's efforts to address the need for more sustainable development in Montgomery County. Following up on recommendations from the Sustainability Workgroup, this package of renewable energy, energy efficiency and sustainability measures will take the County to the next level of environmental excellence.

Sustainable development has been defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs.[1] The path forward requires understanding and planning: understanding how existing buildings perform and how planned buildings are expected to perform; and designing buildings and other infrastructure that reduce materials consumption, reuse materials, reduce energy consumption and maximize the use of renewable resources.

County Executive Leggett recognizes that the path forward will involve substantial change and commitment on the part of both the public sector and the private sector. He is committed to working with the Council on this package during the coming weeks to develop the most progressive and reasonable legislation achievable that will balance both the compelling need to achieve sustainable development and the budgetary realities faced by the County and our local businesses to fully implement the approved changes the legislative package requires.

Stewardship for future generations has been a cornerstone of Mr. Leggett's Smart Growth Initiative in terms of planning for future growth at appropriate transit oriented locations. The County Executive applauds Councilmember Berliner's and the sponsoring council members' vision and recognition of the need for stewardship of our precious resources for future generations.

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[1] International Institute for Sustainable Development quoting from the World Commission on Environment and Development (WCED). *Our common future.* Oxford: Oxford University Press, 1987 p. 43.

MONTGOMERY COUNTY COUNCIL
ROCKVILLE, MARYLAND

ROGER BERLINER
COUNCILMEMBER
DISTRICT 1

CHAIRMAN
TRANSPORTATION, INFRASTRUCTURE
ENERGY & ENVIRONMENT COMMITTEE

January 14, 2014

Dear Colleagues,

Next week I will be introducing a package of 13 energy/environmental measures that are designed to ensure that Montgomery County remains at the sustainability forefront. I would be pleased to have you cosponsor some or all of these measures.

These measures focus on renewable energy, energy efficiency, transportation, and government accountability. I have attached a fact sheet that gives a brief description of each of them, and of course would be happy to discuss any of them in greater detail should you have questions.

I was inspired by our Council's decision to assert its leadership in the context of reducing the gap in income disparities by passing a local minimum wage law. I think all of us appreciate that the federal government has become so dysfunctional that we can expect little progress on many of the issues we care deeply about. Indeed, Bruce Katz of Brookings recently described the federal government as a "large health insurance company with an army." His thesis, which I share, is that our governing paradigm has shifted from a top down led by the federal government to a bottom up led by local governments like ours.

I say all of this because we need to do more if we are to address climate change. It is obviously not a hoax and we know what we need to do to address it. We need to use less energy and cleaner energy. Period. This package of bills is taken in many instances from what other leading jurisdictions are doing – from Chicago to Seattle to California and New York states. They are a mix of leading by example, rewarding green businesses, supporting market forces, adopting more exacting standards, and holding our county government accountability.

Holding ourselves accountable is important. When the Council passed a similar package in 2008, we tasked a Sustainability Working Group with the principle responsibility for guiding our County to achieve our formal goal of reducing greenhouse gas emissions by 80 percent by 2050. It is time now to make this a core government responsibility, and this package includes a measure that will create an Office of Sustainability within DEP whose principal responsibility will be to monitor how we are doing and to help develop the policies and practices that will get us to where we need to be.

I hope you will join me in making sure Montgomery County burnishes its reputation as a community that embraces sustainability at our core.

Sincerely,

FACT SHEET ON

COUNCILMEMBER BERLINER'S 13 ENERGY/ENVIRONMENT LEGISLATIVE INITIATIVES

Councilmember Roger Berliner (D-1), Chair of the Montgomery County Transportation, Infrastructure, Energy & Environment Committee, will be introducing 13 energy/environmental measures on January 21. The measures are designed to underscore and support the County's commitment to sustainability and would (1) promote increased energy efficiency; (2) increase use of renewable energy; (3) decrease consumption of gasoline and support electric vehicles; and (4) create more accountability and responsibility within County government for achieving the County's goal of reducing greenhouse gas emissions 80% by 2050. Below is a brief description of each of these measures:

Renewable Energy

- Renewable Energy Purchasing –50% Renewables by 2015; 100% by 2020 – Today the County purchases approximately 30% of its energy from renewable energy resources. Washington, DC; Austin, Texas; and Portland, Oregon are already at 100% renewable energy.

- Renewables Onsite – This bill, modeled after a recently passed law in Prince George's County, would require new or extensively remodeled county buildings, to generate at least 1 kilowatt of renewable energy for every 1,000 square feet of floor area.

- Greentaping Solar – Two of the impediments to increased solar utilization are the cost and time involved in getting permits. This measure, patterned after a successful program in Chicago, requires our Department of Permitting Services to devise an expedited and less costly process for solar related permits.

- Solar Zoning Accommodation– Current set back requirements limit the use of solar in residential dwellings. This ZTA would modestly amend our zoning laws to permit solar to extend 2 feet into the side or rear setback.

Energy Efficiency

- Benchmarking Buildings – This legislation, modeled after laws in New York, Chicago, and the District of Columbia, would require building owners to measure the energy efficiency of their buildings, make that information public, and periodically commit to ensuring that their energy efficiency equipment is working properly. It is designed to work with the recently passed PACE program to create market based incentives for building owners to increase the efficiency of their buildings. Information provided would aid tenants in forecasting future utility costs.

- Silver LEED for New Buildings – Current county law requires new commercial buildings to be LEED certified, while county buildings must meet the more environmentally stringent Silver standard. This bill would require all new commercial buildings to meet Silver LEED.

- Cost of Carbon -- The use of conventional fuels, particularly coal, extracts a cost on society that is not reflected in its price. These "external" costs should be factored into the cost/benefit calculations that the county utilizes when it assesses the potential for energy efficiency improvements. This bill would require the County to use EPA's "social cost of carbon" calculation or a comparable methodology for those purposes.

- LED Street Lighting -- It is generally recognized that LED lighting is far more energy efficient and requires far less maintenance. This bill would require DOT, upon the expiration of its current contract for street lighting, to contract with an LED company.

Transportation

- EV Infrastructure – Electric Vehicles will only become mainstream when there are sufficient charging stations to inspire confidence in the public. California recently passed legislation requiring all new buildings over a certain size to be "EV ready." This ZTA would require all new buildings to install 1 EV charging station for every 50 parking spaces.

- Greentaping EV stations – Just as in solar installations, EV charging stations can be subject to a lengthy and costly permitting process. This bill would require DPS to institute an expedited and less costly permitting process.

- Teleworking – Teleworking is becoming far more common and accepted. Other jurisdictions, including Fairfax, have made significantly more progress in establishing teleworking goals and meeting them. This legislation would require the County Executive to publish regulations that set forth a definitive teleworking policy and a requirement to designate a telecommuting manager.

Government Incentives & Accountability

- Create an Office of Sustainability within DEP – This bill would create a new Office of Sustainability within DEP. When the Council passed legislation in 2008, it tasked a Sustainability Working Group with the responsibility of guiding our County's greenhouse gas reduction implementation. It is now time to make this a fundamental responsibility of the county government and to hold ourselves accountable.

- County Green Certified Businesses – The County has created a program whereby a local business can be "green certified" by adopting good sustainable practices. This bill calls upon the County Executive to issue regulations that would give a preference in contracting to local businesses that are green certified.

ROCKVILLE, MARYLAND

MEMORANDUM

April 14, 2014

TO: Craig Rice, President, County Council

FROM: Jennifer A. Hughes, Director, Office of Management and Budget
Joseph F. Beach, Director, Department of Finance

SUBJECT: Council Bill 5-14, Environmental Sustainability – Social Cost of Carbon Assessments

Please find attached the fiscal and economic impact statements for the above-referenced legislation.

JAH:fz

cc: Bonnie Kirkland, Assistant Chief Administrative Officer
Lisa Austin, Offices of the County Executive
Joy Nurmi, Special Assistant to the County Executive
Patrick Lacefield, Director, Public Information Office
Joseph F. Beach, Director, Department of Finance
Michael Coveyou, Department of Finance
David Platt, Department of Finance
Robert Hagedoorn, Department of Finance
Darlene Fairfax, Office of Management and Budget
Amy Wilson, Office of Management and Budget
Alex Espinosa, Office of Management and Budget
Felicia Zhang, Office of Management and Budget
Naeem Mia, Office of Management and Budget

Fiscal Impact Statement
Council Bill 5-14
Environmental Sustainability – Social Cost of Carbon Assessments

1. **Legislative Summary.**
The proposed bill requires the Executive branch to transmit an analysis of the social costs of carbon (SCC) for projects in the facility planning phase in the Capital Improvements Program (CIP). The projects affected are those in facility planning that are administered by the Department of General Services (DGS) or the Parking Management Division of the Department of Transportation (DOT).[1] The scope of the proposed bill limits the scope of the analysis to include the SCC as a factor in determining the payback period of a proposed energy efficiency improvement for a building.

   The proposed bill requires OMB to use standards developed by the U.S. Environmental Protection Agency (EPA) or a standard that the OMB Director finds equivalent. The EPA and other federal agencies use the social cost of carbon (SCC) to estimate the climate benefits of rulemakings. The SCC is an estimate of the economic damages associated with a small increase in carbon dioxide (CO_2) emissions, conventionally one metric ton, in a given year. This dollar figure also represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO_2 reduction).

2. **An estimate of changes in County revenues and expenditures regardless of whether the revenues or expenditures are assumed in the recommended or approved budget. Includes source of information, assumptions, and methodologies used.**
No additional revenues or expenditures are expected to be generated from the proposed bill.

   OMB assumes that the bulk of the analysis work will be performed by DGS and other County departments.

   As the scope of the proposed bill is limited to factoring the SCC into the payback period of a proposed building or energy efficiency improvement, both DGS and OMB anticipate that *no additional resources* will be required to implement the bill.

3. **Revenue and expenditure estimates covering at least the next 6 fiscal years.**
Not applicable – see item #2 above.

4. **An actuarial analysis through the entire amortization period for each bill that would affect retiree pension or group insurance costs.**
The legislation does not affect retiree pension or group insurance costs.

5. **Later actions that may affect future revenue and expenditures if the bill authorizes future spending.**
The legislation does not authorize future spending.

6. **An estimate of the staff time needed to implement the bill.**

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[1] Projects administered by DGS include, but are not limited to: libraries, police stations, fire stations, recreation centers, and other County administrative buildings.

DGS reports that no additional staff time will be required. OMB anticipates that most of its activities under the proposed bill will be limited to coordination and review with other County departments to determine the social costs of carbon and no additional staff resources will be necessary.

7. **An explanation of how the addition of new staff responsibilities would affect other duties.**
DGS and OMB do not anticipate any impact on existing duties. Under the proposed bill, OMB and other County staff will engage in the following duties:
   - Initial assessment of which capital improvement projects in facility planning are applicable for SCC analysis;
   - Determining the applicable standard of analysis as adopted by the U.S. EPA (or equivalent standard);
   - Consulting and coordinating with DGS, DEP, and other affected departments to determine the appropriate assumptions for the amount of carbon generated (or reduced) due to a capital project or improvement, the payback period, and the discount rate (among other factors); and
   - Tracking changes to the project that could alter its SCC estimates, as it proceeds along the development and planning phases.

8. **An estimate of costs when an additional appropriation is needed.**
Not applicable – see item #2 above.

9. **A description of any variable that could affect revenue and cost estimates.**
As the scope of the analysis is limited to using the SCC as a factor in determining the payback period of a building or efficiency improvement, then there is likely to be no significant impact to cost estimates as the workload can be absorbed by existing staff resources.

10. **Ranges of revenue or expenditures that are uncertain or difficult to project.**
Not applicable.

11. **If a bill is likely to have no fiscal impact, why that is the case.**
Not applicable.

12. **Other fiscal impacts or comments.**
OMB notes that any project that includes the SCC analysis may be more or less feasible.

13. **The following contributed to and concurred with this analysis:**
Eric Coffman, Department of General Services
Erika Lopez-Finn, Office of Management and Budget
Naeem Mia, Office of Management and Budget

Jennifer A. Hughes

Jennifer A. Hughes, Director
Office of Management and Budget

4/15/14
Date

Economic Impact Statement
Bill 5-14, Environmental Sustainability – Social Cost of Carbon Assessments

Background:

This legislation would require the Office of Management and Budget (OMB) to submit an analysis of the social cost of carbon with certain capital projects in the Capital Improvement Program; and generally amend County law regarding the analysis of capital projects and environmental sustainability.

1. **The sources of information, assumptions, and methodologies used.**

   While the results of analysis of capital projects and environmental sustainability could have an economic impact, Bill 5-14 only requires that such analysis be undertaken and therefore this Bill has no direct economic impact.

2. **A description of any variable that could affect the economic impact estimates.**

   Not applicable.

3. **The Bill's positive or negative effect, if any on employment, spending, saving, investment, incomes, and property values in the County.**

   Bill 5-14 has no effect on employment, spending, savings, investment, incomes, and property values, therefore there is no economic impact.

4. **If a Bill is likely to have no economic impact, why is that the case?**

   Bill 5-14 only requires an analysis of the social cost of carbon for capital projects, and therefore this bill has no economic impact.

5. **The following contributed to and concurred with this analysis:**

   David Platt and Rob Hagedoorn, Department of Finance;

   Naeem Mia, Office of Management and Budget;

   Eric Coffman, Department of General Services

Joseph F. Beach, Director
Department of Finance

4-2-14
Date