



## Fairfax Green Initiatives Implementation Matrix

On February 5, 2019, the Board of Supervisors (Board) unanimously adopted the [Fairfax Green Initiatives Board Matter](#), introduced by Supervisors Storck, Foust and (now Chairman) McKay to expedite consideration and implementation of 19 energy-related action items.

On July 28, 2020, the Board unanimously adopted the [Fairfax Green Initiatives #2 Board Matter](#). Introduced by Supervisor Storck, the Fairfax Green Initiatives #2 Board Matter includes 14 additional environment and energy-related action items.

In June 2019, staff developed an Implementation Matrix to track progress on Fairfax Green Initiatives action items. For each action item, the matrix identifies the County department(s) charged with implementation, whether the item is ongoing, when consideration is anticipated, and a summary of action to date. February 2022 updates to the matrix are shown below in **bold**. Completed action items are greyed out while items that will be addressed through the Community-wide Energy and Climate Action Plan (CECAP) are highlighted in yellow.

### Fairfax Green Initiatives #1

Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
1. Direct the County Executive to report to the Environmental Committee no later than June 2019 on:						
1a. A draft process, resources and timeline to develop a CECAP.	OEEC	X		X		Staff presented a draft process, resources and timeline for CECAP at the June 2019 Environmental Committee meeting. The Board approved funding in September 2019. The CECAP planning process was initiated in January 2019 and culminated with a final report, approved by the Board in September 2021.



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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
1b. A process for contracting with an ESPC or recommend other such initiatives that produce a similar outcome and timeframe.	OEEC	X				<p>Staff presented a process to contract with an Energy Service Company (ESCO) at a June 2019 Environmental Committee meeting. Following Board endorsement, two ESCOs were selected to undertake an Investment Grade Audit at select County facilities.</p> <p>Through a separate process, in September 2020, DPWES contracted with an ESCO to perform an Investment Grade Audit at the Noman Cole Pollution Control Plant.</p>
2. Refer to the Development Process Committee for discussion and consideration whether County staff should review and report back to the Committee on the costs and benefits of the following:						



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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
2a. Comprehensive Plan and Zoning changes that would incentivize and support more environmentally sustainable development.	DPD		X	X		As part of the Zoning Ordinance Modernization (zMOD) project, a new Zoning Ordinance, adopted in March 2021, includes new uses to support electric vehicle charging infrastructure and solar projects at residential, commercial and County facilities.  Additional Comprehensive Plan and Zoning changes may be identified through CECAP.
2b. Building design and code changes, including the International Green Construction Code (IgCC), that could inspire and expedite energy saving practices on all new construction and significant renovations.	LDS Gov't Relations		X		CY2021 - CY2022	As directed in an April 2021 Board Matter, LDS is seeking adoption of the IECC and energy provisions of the IRC into statewide building codes during the 2021 code development cycle. LDS has also established a voluntary green builder recognition program in the County.
3. Refer to the Budget Committee for discussion and consideration the following:						



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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
3a. GO, ED and other capital bonding options that could accelerate energy saving initiatives, provide high economic returns on investments and support other community benefits that would enable green building, energy savings renovations and green purchasing practices.	DMB	X				The County will continue to utilize all debt financing mechanisms to address its capital needs and maintain adherence to its self-imposed debt ratios. The County's Capital Improvement Program assumes an out-year bond referenda program that incorporates LEED certification for all future project cost estimates to further the County's commitment to green initiatives.
3b. Support for the County Executive's current consideration for the FY 2020 budget of increased dedicated County energy, climate change and environment related staffing.	DMB	X				The FY 2020 budget included dedicated funding for the Office of Environmental and Energy Coordination (established in July 2019).
4. Refer to the Environmental Committee for discussion and consideration the following:						



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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
4a. Discuss accelerating goals and targets for the Operational Energy Strategy.	OEEC FMD FCPA DVS	X				First adopted in 2018, the Board adopted an update to the Operational Energy Strategy (OES) on July 13, 2021. The update includes a new goal to be energy carbon neutral by 2040, as well as accelerated goals and targets across the energy use and efficiency, green buildings, renewables, fleet electrification, goods and services and waste management focus areas.



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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
<p>4b. Brief Committee on options to increase the pursuit of grant and cooperative agreement funding for energy efficiency, conservation, weatherization, cogeneration, renewable energy, energy resilience and greenhouse gas emission reductions, through public-private partnerships, foundations, the Commonwealth of Virginia and the Federal government to provide greater energy reduction support for all residents, consistent with One Fairfax.</p>	<p>DEI DPWES Gov't Relations</p>		<p>X</p>		<p>CY2021 - CY2022</p>	<p>DPWES receives remittances from two energy efficiency grants, which funded equipment upgrades at Noman Cole Pollution Control Plant and result in annual energy use savings of 10,399 kWh.</p> <p>Grant funding from the Virginia Clean Air Communities Program is being used to purchase 4 electric transit buses (FCDOT), a transit truck (DVS/DPMM) and 4 EVs for Solid Waste Collection and Transport (DPWES), as well as charging infrastructure for each. Staff is working to install charging infrastructure to support vehicle operation.</p> <p>FCDOT and DEI were granted a one-year extension of the Relay pilot project operating in Merrifield to continue research on the impacts on local ridership and transit. <b>The project team is creating a revised route for the Relay shuttle to expand ridership and visibility.</b></p> <p><b>FCDOT and DEI continue to look for funding to support the innovative research and project implementation associated with the Relay project. This type of research will further establish Fairfax County as a leader in connected autonomous vehicle technology (CAV). The team will also explore opportunities emerging from the federal Infrastructure Bill.</b></p>



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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
4c. Discuss setting a goal that by 2025, locally generated energy (like solar) would offset County Government energy usage.	OEEC DPWES DPD FMD FCPA Gov't Relations	X				<p>The 2021 update to the OES includes a target to produce 25 percent of county electricity from renewable energy by 2030, and 50 percent by 2040, using FY 2018 energy use as the baseline.</p> <p>To implement renewable energy targets in the OES and Sustainable Development Policy, DPWES is incorporating solar PV in new Capital Building projects to offset energy usage and meet Net Zero Energy standards. Several agencies are also working with the County's solar power purchase agreement (PPA) service providers to install rooftop and canopy-mounted solar installations at County facilities. DPWES continues to evaluate off-site renewable energy credits to offset the energy usage.</p> <p>To address barriers to renewable energy generation, the County has had a longstanding position in the legislative program in support of removing barriers to net metering for municipalities, including eliminating restrictions on the use of PPAs. This continues to be an issue in the 2022 General Assembly.</p>



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4d. Complete Committee and staff work for C-PACE adoption by July 2019 with implementation by the end of 2019.	OEEC	X				Fairfax County's C-PACE program launched in February 2020.
4e. Expedite consideration of R-PACE or other capital funding options to support residential energy use reductions.	Gov't Relations OEEC		X			Implementation requires the passage of enabling legislation in the General Assembly. Staff will continue to monitor and provide updates on legislative activity to the Board. The 2021 General Assembly passed budget language that directs DMME to establish a work group to assess the feasibility of creating a Virginia R-PACE program. DMME was directed to submit a report with its findings to the General Assembly by December 2021.
4f. Identify timeframe for developing a County-specific Climate Resiliency and Adaptation Plan.	OEEC DPWES OEM DPD LDS FCHD	X				Staff presented a timeframe for a Climate Adaptation and Resilience Plan at the May 2020 Environmental Committee meeting. The Board approved funding in September 2020, and the Resilient Fairfax planning process is underway.
4g. Report quarterly on all energy and climate initiatives.	OEEC				Updates shared on quarterly basis	Staff has developed a quarterly reporting schedule for the Board's Environmental Committee. Additional updates are distributed in memoranda to the Board.





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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
5a. Recommending to the Board low-cost and no-cost options along with public-private partnerships that can assist residents in planting additional trees that will increase existing tree canopy. The Commission should report annually to the Board on progress and accomplishments.	DPWES FCPA	X	X		Reports shared on annual basis	<p>The Tree Commission approved a letter at its June 2021 meeting that serves as its second annual report. The letter states that 22,247 trees were planted or distributed through combined efforts of non-profits and government agencies during FY 2021. The next annual report will be incorporated into the Tree Commission's consolidated annual report anticipated to be delivered in fall 2022.</p> <p><b>DPWES Urban Forestry's pilot project with a local non-profit to plant trees on residential properties continues. Over 100 trees have been planted at single and multi-family residential properties along the Route 1 corridor, with plans to plant an additional 50 trees in early spring 2022. A full report about the success of this pilot project will be sent to the Board through a memorandum in March 2022.</b></p>
6. Direct the County Executive to report to the Board no later than September 2019 the following:						



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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
6a. Report on strengthening Green Building Policies for County Facilities.	DPWES FMD FCPA FCRHA OEEC	X				The 2021 update to the Operational Energy Strategy (OES) includes a target that all new construction and major renovations over 10,000 ft. <sup>2</sup> beginning planning and design in 2021 meet net zero energy standards, unless the Board is informed why it cannot meet such standards by the 30 percent design phase. The Sustainable Development Policy will be revised to align with the OES targets. DPWES continues to evaluate and implement new strategies to meet these targets.
6b. Report on a solar public-private partnership agreement.	OEEC	X				In December 2019, the County announced contracts with multiple solar PPA service providers to implement solar PPA projects at sites throughout the County.



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Action Item	Lead Dept.	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
6c. Report on increasing County leadership and accountability for climate change initiatives:						
i. Ensure County leadership accountability for results and outcomes through SMART goals.	OEEC		X		CY2022	
ii. Include energy management criteria in performance evaluations of departmental heads and senior executives.	DHR	X				6c.ii. In February 2021, DHR issued an updated performance evaluation form for departmental heads, which includes criteria related to the Environmental Vision and green initiatives.
iii. Engage County staff and departments in competitions to lower energy use.	OEEC		X		CY2022	6c.v. DEI, OEEC, university and technology partners continue to plan a Pitch and Pilot event focused on carbon neutral technology <b>to be held in fall 2022.</b>
iv. Develop incentive program to reward employees who provide energy saving ideas that are acted upon.	OEEC		X		CY2022	DEI, FCDOT, Smart City Works, and the Center for Innovative Technology are partnered on a Bike/Ped Safety Pilot project to inform new approaches to bike/ped safety in the community. <b>The Bike/Ped pilot project, being conducted by Street Simplified, is currently in the data collection stage. Analysis and recommendations are due in mid-2022.</b>
v. Develop partnerships like the DOE's Better Buildings Challenge.	DEI OEEC		X		CY2021 - CY2022	



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7. Encourage each Board office to:						
7a. Identify, if it has not already done so, a District environmental liaison to foster community energy savings outreach, initiatives, education and engagement, County programs awareness, partnerships with local groups and serve as liaison with County staff and other Board offices.	BOS	X				OEEC has developed an Environmental and Communications Collaborators group to share relevant environmental and energy information with liaisons in each of the Board offices.



## Fairfax Green Initiatives #2 Implementation Matrix

### Fairfax Green Initiatives #2

Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
1. Direct DPWES to:							
1a. Research and report to the Environment Committee on the options for expanding our existing internal County compost pilot to the community as part of our trash/recycling services or drop off locations. Options to be considered could include partnering with Arlington or Prince William, like with our purple bins – placing “green” compost bins beside purple bins; collections at Farmers Markets, FCPS locations, libraries and community centers; collecting, selling and/or giving away compost materials at the I-95 Landfill Complex & I-66 Transfer Station. In addition, work with other County agencies to provide community education on backyard composting at community centers, libraries and RECenters.	DPWES	FCPA		X		CY2021 - CY2022	<p>DPWES launched a food scraps drop-off pilot program in November 2020, allowing community members to drop off food scraps for composting at the I-66 Transfer Station and I-95 Landfill. DPWES is in the process of issuing a new contract for continuation of this service beyond the pilot period.</p> <p>DPWES presented to the Environmental Committee on February 2, 2021 on organics collection options and ongoing and proposed pilots. DPWES coordinated with FCPA to identify three FCPA farmers markets as well as one location at a year-round market run by FreshFarm to participate in the pilot program. Service began on June 23, 2021. Food scraps drop off is available only during regular market hours.</p>



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
2. Direct the County Executive to:							
2a. Update the vehicle purchasing policy to accelerate purchases of County electric vehicles for the fleet of eligible sedans and expand the County's charging infrastructure to support additional electric vehicles. One hundred percent of eligible vehicles scheduled for purchase in FY2021 shall be replaced with electric vehicles and the infrastructure needed can be supported in FY2021.	DVS FMD OEEC	DMB DPMM FCPA Gov't Relations	X				<p>One hundred percent of eligible vehicles scheduled for purchase in FY2021, of which there were 14, have been replaced with EVs. DVS has received these 14 Nissan Leafs.</p> <p>In November 2020, DPMM announced a contract with an EV charging services vendor to provide charging stations at County facilities. DVS recently ordered stations for the Gov't Center, Herry and Pennino Buildings, Public Safety HQ and Merrifield Center.</p>



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
2b. Direct staff to return to the Board with a schedule to accelerate the replacement of vehicles and infrastructure to support these vehicles, with the associated investment required, before the end of calendar year 2020 to inform the FY 2022 Budget.	DVS FMD OEEC	DMB DPMM FCDOT FCPA	X				<p>One hundred percent of eligible vehicles scheduled for purchase in FY2022 were replaced with electric vehicles.</p> <p><b>With funding from two state grants, FCDOT ordered eight electric transit buses and expects they should be in service by the end of 2022. Dominion installed the electrical transformer necessary to support the charging of these buses at the West Ox garage. Charging equipment is expected to arrive in April 2022. In addition, FCDOT is expected to complete an analysis of electric buses for the Richmond Highway Bus Rapid Transit project by spring 2022.</b></p>



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
2c. Direct the OEEC to find immediate solutions to charging infrastructure, such as upgrading existing electrical outlets in County garages to accommodate plug-in EVs, and to adapt purchasing practices to new goal.	OEEC	DMB DPMM DVS FCPA FMD Gov't Relations		X		CY2022	<p>Wall-mounted chargers are being installed in the parking garages at the Government Center, Pennino Building, Herrity Building, Public Safety Headquarters and Merrifield Center. <b>FMD has completed construction of the required infrastructure; installation of the chargers is expected to be completed in March 2022.</b></p> <p>FCPA is currently not allowed by state law to resell electricity through EV charging stations; <b>the County is pursuing enabling authority in the 2022 General Assembly through HB 443, introduced by Delegate Bulova.</b></p>
3. Direct the County Attorney to:							



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
3a. Report to the Environment Committee on whether the County can provide incentives for consumer EV purchases and charging stations, or similar kinds of energy reduction or efficiency investments; or what legislative changes might be necessary to do so.	Gov't Relations OCA	DMB DEI		X	X		OCA determined that the Board has authority to adopt a lower tax rate for electric vehicles, but other incentives the Board may want to provide would require enabling legislation in the General Assembly. These incentives need to be identified and assessed prior to the pursuit or support of such legislation. Incentives will likely be considered through CECAP.
4. Direct the OEEC to:							
4a. Provide a plan to the Environment Committee for consideration to implement a five-cent plastic bag fee in 2021, as now allowed by law.	OEEC	DMB DPWES DTA OCA	X			CY2020 - CY2021	<b>An ordinance on a five-cent disposable plastic bag tax was adopted on September 14, 2021. As of January 1, 2022, the bag tax is in effect in Fairfax County.</b>
5. Direct FMD to:							



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
<p>5a. Assess and report to the Environment Committee costs and process to phase out all existing hydrofluorocarbon (HFC) refrigerators, refrigerant cases and air conditioners from all County facilities and equipment purchases as soon as practical but no later than 2030, including ensuring proper disposal and recovery of gases and materials. Where comparably performing non-HFC products are available, effective in 2021, all new purchases would not contain HFC.</p>	<p>FMD DPWES FCPA FCRHA</p>	<p>DMB DPMM</p>		<p>X</p>		<p>CY2021 - CY 2022</p>	<p>The lead departments are collaborating to assess, determine and report on the process necessary to accomplish this item by 2030. The departments are investigating market options, timelines and resource needs to purchase HVAC equipment with non-HFC refrigerants. However, FCPA notes that replacement options are currently not widely available to the domestic U.S. market.</p> <p><b>On new construction and major renovation projects, Capital Facilities is investigating options for use of non-HFC refrigerants, their availability, and timelines for phase-out by 2030.</b></p> <p>The departments will continue to properly dispose of HFC refrigerants under the DPWES-Solid Waste Management program.</p>



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
6. Refer to the Land Use Policy Committee for consideration:							
6a. Require energy use disclosures on residential home sales. Direct the County Attorney to provide legal review for considerations.	Gov't Relations OCA	DPD	X				OCA determined that legislation passed in the 2020 General Assembly, requiring a seller of a residential property to disclose that a buyer may obtain a building energy analysis, does not require the seller to provide an energy cost and consumption history such as the one required by Montgomery County, MD. Additional legislation would need to be passed in the General Assembly to impose the requirement on sellers or authorize localities to do so.



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
6b. Direct DPD to evaluate and report to the Land Use Policy Committee on further strengthening the County's Comprehensive Plan policy regarding provisions for EV ready or EV infrastructure during the rezoning process in private parking facilities.	DPD	LDS		X		CY2021 - CY2022	As part of the zMOD project, a new Zoning Ordinance was adopted in March 2021, which permits electric vehicle charging (EVC) as a new accessory use, with certain provisions. The ordinance allows EVC spaces to count toward minimum parking requirements, canopies for solar collection systems, and the inclusion of EVC infrastructure accessory to county facilities.  <b>LDS and DPD continue to work on the Zoning Ordinance Amendment related to parking rates, which is expected to be completed this winter, and may include EV parking space rates. Based on the outcome of that work, staff may develop recommendations for associated EV infrastructure needs and potential changes to the Green Building policy.</b>



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
6c. Direct DPD and the County Attorney to provide a report analyzing requirements and impediments for new commercial construction and incentives for new residential construction to incorporate community solar and/or geothermal systems in project planning.	DPD LDS	OCA	X				<p>Solar Power Facilities and Solar Collection Facilities are new uses proposed as part of zMOD to more readily incorporate solar projects into County and other community facilities, commercial construction projects and individual residential sites. As part of the zMOD project, a new Zoning Ordinance was adopted in March 2021.</p> <p>The County has processes in place to expedite reviews for solar and geothermal systems and permitting costs are waived for residential and commercial solar systems. LDS recently developed a geothermal publication, providing guidance on permitting and review processes for customers. This is similar to guidance LDS offers for residential solar customers. LDS will incorporate these materials into future outreach opportunities.</p>



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
6d. Direct DPD to provide a report for ways to encourage and incentivize developers and builders in the County to adopt or accelerate residential and commercial green building practices. For example, create a green building profile that builders and developers can receive a rating on their green building practices.	DPD LDS		X				DPD and LDS have determined that the creation of a Fairfax County Green Building Profile would duplicate existing third-party certifications and rating systems, and as such, the agencies suggest such a profile not be developed.
7. Direct the County Executive to:							



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
7a. Report to the Environment Committee on the feasibility of creating an Energy Efficiency Funding Pool (EEFP) pilot. Consider potential Public Private Partnerships (PPP), existing non-profit housing partnerships and other energy efficiency-focused organizations to provide a competitive grant process for funding local entities to provide workforce energy efficiency and weatherization (green jobs) training opportunities while upgrading the energy efficiency on eligible low-income and seniors homes.	DEI	CSB FCRHA OEEC OSM		X		CY2021 - CY2022	DEI is exploring a partnership with Dominion Energy to understand their workforce needs. Dominion is interested in creating pathways to energy-related jobs from middle school on and partnering with Fairfax County in job fairs and in other workforce development activities. DEI continues to work with the FCEDA to segment green economy sectors to understand areas of economic competitiveness.



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
7b. Report to the Environment Committee on the feasibility of creating a Fairfax Green Bank.	DOF Gov't Relations	DEI DMB OCA OEEC		X		CY2022	<p>In fall 2020, OCA determined that the Board lacked enabling authority to establish a Fairfax Green Bank. At the request of the Board, Delegate Kory sponsored HB 1919 in the 2021 session of the Virginia General Assembly, enabling a locality to enact an ordinance establishing a green bank. The bill was signed in law in March 2020.</p> <p><b>The OEEC has engaged ICF International on a feasibility study for a green bank. OEEC, DEI, DOF, and OCA are contributing to this effort.</b></p>



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Action Item	Lead Dept.	Partners	Complete	Ongoing	CECAP	Anticipated Consideration	Action to Date
8. Direct the County Executive and County Attorney to:							
8a. Report to the Board on the feasibility and legality of providing guidance to Fairfax County retirement fund managers to increase support for non-greenhouse gas emitting energy investments, local green business investments and decreasing those in fossil fuels.	OCA	Retirement Administration Agency	X				OCA determined that the Board may lawfully provide guidance to Fairfax County retirement fund managers on increasing support for non-greenhouse gas emitting energy investments and decrease support for fossil fuels. However, legal difficulties could arise if mandates or limitations on investment choices are imposed.