MSWG Energy and Built Environment Preliminary Qualitative Assessment – DRAFT (April 9, 2015)

Primary Sector	Strategy	New or Existing?	CO_2e Reduction Potential[1] (L, M, H)	Timeframe for Implement. (S, M, L)	Costs (L, M, H)	Policy Acceptance (L, M, H)	Current Authority (Y, P, N)	Tech Avail (C, E, F)	Co-Benefits										Related Sectors	Notes
									S	R	C	Q	E	M	A	W	B	C A		
T= Transportation B=Built Environment E=Energy L=Land Use		New = New regional strategy Existing = Exists in region; expandable	Low (L) <0.5% reduction Medium (M) – 0.5% - 1.5% reduction High (H) – 1.5%+	Short-Term (S): by 2020 Medium-Term (M): between 2020 and 2040 Long-Term (L): after 2040	Low (L): <$50M Medium (M): between $50M and $500M High (H): $500M+	Low (L): May be controversial Medium (M): Acceptable by some stakeholders High (H): Wide support	Yes (Y): within current authority Partial (P): Action needed is some jurisdictions No (N): New auth. needed	Current (C): Widely available Experimental (E): In pilot phase Future (F): Not yet launched	Safety	Reliability	Congestion Reduction	Air Quality (Criteria Pollutant	Economic Vitality, Jobs, Equity	Mobility	Accessibility	Current and Future Weather Resilient	Chesapeake Bay/stormwater	Community Amenity	T= Transportation B=Built environment E=Energy L=Land Use	
B	Existing Buildings EBE-1: Achieve an annual reduction in energy and water consumption in existing buildings	N+E	H Built environment-related electricity, natural gas and fuel oil contribute about 2/3 of total GHG emissions. Best practices, exemplified by commitments to the Better Buildings Challenge, demonstrate that 2.5% annual savings are possible.	All Requires continuous improvement. Can generate savings immediately, challenge is to sustain savings over decades.	All Zero-cost improvements are available as well as intensive retrofits. Over the long-range timeframes, energy savings will cover costs for most improvements.	M-H Municipal and county governments have existing goals, policies and programs. More aggressive policies might meet resistance.	P	C, E		X		X	X			X	X		E	Pepco has benchmarking data from AMI rollout. Incentives and yard waste fees to encourage low maintenance landscaping and rainwater management. DCSEU incentivizes efficient purchases. 2008 National Capital Region Climate Change Report identified savings opportunities for 10% under BAU by 2012, 20% below 2005 levels by 2020, and 80% below 2005 levels by 2050. DC has committed to the Better Buildings Challenge of 20% energy savings through 2020. MC 2009 Climate Protection Plan includes goal to save 2.5%/year through 2020. Arlington County Comprehensive Energy Plan has goal of 70% savings by 2050.
L	Location Efficiency EBE-2: Encourage development near activity centers	E	H	M-L	L	M	Y	C	X		X		X	X	X	X	X	X	L,T	Cross-cutting with Land Use/Transportation working groups.
B	New Buildings Design and Construction EBE-3: Improve new building energy performance EBE-4: Increase use of WaterSense fixtures EBE-5: Adopt updated building codes and energy performance standards	N+E	M-H Total potential is higher in existing buildings but to reach targets requires maximizing savings in new construction.	All	All Low cost measures such as building orientation as well as higher cost full-building integrated design.	All Depends on sector and level of code aggressiveness.	Y	C, E		X		X	X			X		X		MD and VA energy codes are preemptive, local code can not always go above these standards.
E	Public and Private Infrastructure EBE-6: Achieve targeted reductions by improving Infrastructure efficiency	E	All Diverse range of potential projects from lighting retrofits to new transmission lines.	M Overall share is not as much as others.	M-H	M-H	P-N	C-E		X	X	X	X	X	X	X	X	X		CHP and other upgrades at DC Water plants, including Blue Plains Advanced Wastewater.
E	Energy Source and Supply EBE-7: Achieve targeted reductions in power sector emissions EBE-8: Achieve targeted reductions in reduce natural gas pipeline leaks	N+E	H Largest single emissions source, electricity generation accounts for 30% of US GHG emissions.	M-L	M-H Green power purchasing can be relatively affordable and short term.	M Variable.	Y	C		X		X	X							MD EmPower – 15% by 2020. MD RPS is currently 20% by 2022, could be upped to 40% by 2025. DC RPS 20% by 2020, 2.5% solar by 2023. Green power purchasing is an option, MC purchases wind totaling 40% of electricity use. DC commercial PACE, MD and Virginia have PACE state-level PACE legislation framework, no local programs. Potential for green power tariff that attaches permanently to an address for green power purchasing.

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E	Resource Recovery, Conservation and Management EBE-9: Achieve targeted reduction in municipal solid waste	E	L	S	L-M	H	Y	C				X					X	X		
E	Non-road Engines EBE-10: Reduce emissions from non-road engines	E	L	S	L	H	Y	C				X							T	
B	Awareness and Education EBE-11: Educate and motivate public through community engagement	E	L	S	L	H	Y	C					X				X			

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