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Catalog of State Actions Cross-Cutting (CC) Issues Working Group

DRAFT

A catalog of state-level, GHG-reducing actions and policy options prepared by the Center for Climate Strategies (CCS), Maryland Department of Environment, and others based on actions undertaken or considered by Maryland and other states, including regional, state, local and private actions.

Important Note: The GHG Reduction Policy Options below are numbered solely for convenience in referencing them. Their numbers do NOT reflect a ranking or prioritization of the policy options.

Notation regarding options:

Options marked with an asterisk (*) indicate options that are at least partially “base case” policies, i.e., that have been considered or undertaken at some level in Maryland.

Cross Cutting Issues (CC)

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
1	INVENTORIES AND FORECASTING			
1.1.	Establish & fund mandatory GHG emission inventory function at state agency*			<ul style="list-style-type: none"> • State has already established on-going inventory capacity within the MDE. • Preliminary draft inventory at this point. To be refined further.
1.2.	Establish & maintain GHG emission forecasting function			<ul style="list-style-type: none"> • Growth assumptions are from existing sources. • Reference case assumes no major changes. • * Generation Attributes Tracking System (GATS)
2	GHG REPORTING AND REGISTRY			
2.1.	Establish or adopt a GHG emissions reporting program*			<ul style="list-style-type: none"> • State recently joined <i>The Climate Registry</i> which, at least for voluntary participants, will include compliance with reporting protocols for registering GHG emissions and emission reductions.
2.2	Participate in the development of a multi-state GHG emissions reduction registry*			
2.3	Provide assistance in reporting & registering GHG emissions *			
2.4	Recruit members for Registry statewide			
2.5	Facilitate development of an effective carbon credit system for MD			<ul style="list-style-type: none"> • The state could purchase carbon credits associated with its own activities, function as a purveyor of credits to others, or act as a certification entity of others' carbon reductions.

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3	GHG REGISTRY—COMBINED WITH OPTION 2			
43	STATEWIDE GHG REDUCTION GOALS AND TARGETS			

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
43.1	<p>Establish goals or targets for statewide GHG emission reductions [NOTE 1: Executive Order contains the presumptive goals. MCCC is tasked with recommending GHG reduction goals for the state.]</p> <p>NOTE 2: The CC TWG has developed a more aggressive and comprehensive goals proposal <u>and the MWG fine-tuned it</u>. It is outlined in the notes column.</p>		4	<ul style="list-style-type: none"> • Governor’s Executive Order directs that the MWG develop a Comprehensive Greenhouse Gas and Carbon Footprint Reduction Strategy. The strategy should: <ol style="list-style-type: none"> i. Evaluate and recommend goals that include but not be limited to the reduction of Maryland’s greenhouse gas emissions to 1990 levels by 2020 and 80% of 2006 levels by 2050; ii. Recommend short and long-term goals and strategies that include both energy and non-energy related measures to mitigate greenhouse gases and offset carbon emissions; and iii. Provide a detailed implementation timetable, with benchmarks, for each recommendation and strategy. <p>MD CC MWG Goals Proposal:</p> <ul style="list-style-type: none"> • <u>2015: 10 below 2006 levels by 2012 and 15% below 2006 levels by 2015 (consumption based)</u> • <u>2020: 25-50% below 2006 levels (min. to aspiration)</u> • Zero emissions or carbon neutral by 2100 • <u>2100- Zero emissions = carbon neutral</u> • <u>2050: 90% below 2006 levels (80% from 1990)Mid-course reviews at least every four years starting in 2012</u> • <u>Review every four yearsTrack progress from 1990 levels as well</u>

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43.2	Institute an accountability program to measure and report progress in reducing GHG emissions.			<ul style="list-style-type: none"> Purpose is to ensure that overall implementation of the climate plan proceeds toward its targets. Implementation accountability for individual policy options should be included in policy option straw proposals developed by the TWGs.
43.3	Participate in development of accountability programs in other states			<ul style="list-style-type: none"> Purpose is to avoid duplication of efforts, create uniformity or reporting requirements and to utilize other states' expertise
43.4	Consider proposing a Global Warming Solutions Act to establish state goals			<ul style="list-style-type: none"> This should include the short and long-term GHG reduction goals emanating from this process. It might also include a proposal along the lines of the CA AB- 32 law.
54	STATE AND LOCAL GOVERNMENT GHG EMISSIONS (LEAD-BY-EXAMPLE)			
5.1.4.1	Lead by example by establishing targets for reductions in State GHG emissions			<ul style="list-style-type: none"> *Empower MD initiative to reduce state GHG emissions by 15% by 2010. MEA developing proposals.
5.2.4.2	Create a multi-agency body to oversee on-going state and local climate efforts.			<ul style="list-style-type: none"> MCCC established, but is not the culmination of these efforts. A permanent MCCC-style oversight and implementation office should be created and staffed appropriately.
5.3.4.3	Disaggregate the State's own GHG emissions to the agency level and require annual agency-specific reports on GHG reduction progress.			
5.4.4.4	Institute an accountability program to measure and report progress in reducing GHG emissions.			

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5.5.4.5	Utilize climate-neutral bonding			
5.6.4.6	Require evaluation of GHG emissions in Environmental Impact Statements and similar environmental studies.			<ul style="list-style-type: none"> • Environmental studies, such as environmental Assessments (EAs) and Environmental Impact Statements (EISs).
5.7.4.7	Review sources of renewable energy			
5.8.4.8	Utilize preferential purchasing to promote GHG reductions.			
4.9	Investigate new types of Performance Contracting			
5.4.10	Encourage and assist in the development of local government planning efforts to reduce greenhouse gas emissions, establish targets, etc.			<ul style="list-style-type: none"> • Identify state roles in promoting local GHG reduction initiatives • Formulate suggestions to help provide resources to local governments for GHG reduction initiatives.
4.5.11	Integrate local land use planning w/ GHG reductions			
7.5	PUBLIC EDUCATION AND OUTREACH – See Appendix A for Details for each Audience Category			
7.1.5.1	State Government Education and Outreach Actions The State should lead by example (i.e., walk the talk) regarding education and outreach.			
7.2.5.2	Target Audience: Policymakers (legislators, regulators, executive branch, agencies) Implementation of climate actions hinges on policymakers’ approval.			

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
7.3.5.3	Target Audience: Future Generations Integrate climate change into educational curricula, post-secondary degree programs, and professional licensing.			
7.4.5.4	Target Audience: Community Leaders & Community-Based Organizations (e.g., institutions, municipalities, service clubs, social & affinity groups, NGOs, etc.) Recognize leadership; share success stories & role models; expand involvement and participation within civic society.			
7.5.5.5	Target Audience: General Public Increase awareness and engage in climate actions in personal and professional lives.			
7.6.5.6	Target Audience: Industrial, Trades & Economic Sectors Sector-specific climate change education and outreach.			
7.7.5.7	Target Audience: Media Coordinate media campaigns related to GHG.			

68 TAX AND CAP POLICIES				
8.1.6.1	Institute tax incentives and disincentives to encourage GHG reductions.			<ul style="list-style-type: none"> • <u>MWG: Need to review negative tax policies that promote energy inefficiency, e.g. vehicle mileage; subdivision of ag lands, etc.</u>
8.2.6.2	Other market-based programs including cap and trade			<ul style="list-style-type: none"> • Cap and Trade should not be limited to only the power/utilities sector
8.3.6.3	Explore other regional opportunities, both public and private			
8.4.6.4	Inventory and ultimately phase out subsidies for high GHG emitting energy sources.			
8.5.6.5	Review utility pricing policies and tax status issues.			
8.6.6.6	State should advocate for a national cap and trade system.			<ul style="list-style-type: none"> • Emphasize federal outreach by states.
79 SEEK FUNDING FOR IMPLEMENTATION OF MWG RECOMMENDATIONS				
9.1.7.1	Seek and stimulate funding and investment in climate solutions in Maryland.			<ul style="list-style-type: none"> • Individual TWGs should look at funding of their respective options but CC TWG might want to examine the broader funding issues. • <u>MWG: How can we creatively apply savings from GHG reductions to investment in capacity development?</u>
9.2.7.2	Explore the viability of a revolving loan type approach to finance GHG reduction initiatives.			

9.3.7.3	Review macroeconomic issues pertaining to climate change			<ul style="list-style-type: none"> Review and encourage public/private partnerships
10	ADAPTATION & VULNERABILITY			
10.1.	Undertake a comprehensive planning effort to assess and address Maryland's vulnerability to climate change and adaptation opportunities.			<ul style="list-style-type: none"> Adaptation & Response Working Group addressing this so the MWG will not need to address it.
8.1	PROMOTE AND PARTICIPATE IN REGIONAL, AND MULTI-STATE AND NATIONAL GHG REDUCTION EFFORTS			
11.1.8.1	Identify opportunities for Maryland to join with other state or regional GHG reduction efforts.			
11.2.8.2	Join or explore joining a regional climate reduction initiative.			<ul style="list-style-type: none"> MD is now a member of RGGI. Consider expanding it. Clean Cars initiative. Inter-modal Passenger and Freight program [should be addressed in TLU TWG]
8.3	<u>Promote national initiatives to address climate change</u>			<ul style="list-style-type: none"> <u>MWG: Added at 10/26/07 meeting</u>
12.9	PROMOTE ECONOMIC DEVELOPMENT OPPORTUNITIES ASSOCIATED WITH REDUCING GHG EMISSIONS IN MD			
12.1.9.1	Create an entity to promote business development opportunities in climate protection.			<ul style="list-style-type: none"> Need a vehicle for entrepreneurs to connect with investors.

12.2. <u>.2</u>	Promote strategic business initiatives and share information about business efforts to reduce GHG emissions			
12.3. <u>.3</u>	Institute ecological impact review as part of loan process			
12.4. <u>9.4</u>	Lender review of financed projects			
12.5. <u>9.5</u>	Consider establishing a “Market Advisory Group” consisting of experts to provide guidance to the state on the design of market-based compliance programs to manage GHG emissions. Look at the California system as a potential model.			<ul style="list-style-type: none"> • CA Market Advisory Group under its GHG cap law, AB-32.
<u>9.6</u>	<u>Explore need for Research and Development initiatives</u>			<ul style="list-style-type: none"> • <u>MWG: Want to address R&D in April 2008 Report, particularly for clean vehicles and power plants</u>
130	CREATE CAPACITY TO ADDRESS CLIMATE CHANGE ISSUES IN AN “AFTER PEAK OIL” CONTEXT			
13.1. <u>10.</u> <u>1</u>	Create an Advisory Committee to simultaneously investigate and address climate change issues in an “after peak oil” context.			<ul style="list-style-type: none"> • <u>MWG: Develop tools in state government to address.</u>
141	EVALUATE CLIMATE CHANGE POLICY OPTIONS TO DETERMINE PROJECTED PUBLIC HEALTH RISKS/COSTS/ BENEFITS			

<p>14.1.11. 1</p>	<p>Create mechanism to determine projected public health risks, costs, and benefits <u>and cost-effectiveness</u> of climate change policy options.</p>			<ul style="list-style-type: none"> • Coordinate with Adaptation Work Group, which may also be addressing this issue. • This might also become one of the “metrics” for evaluating options. • <u>MWG: Address cost-effectiveness too.</u>
<p>12 REVIEW INSTITUTIONAL CAPACITY TO ADDRESS CLIMATE ISSUES</p>				
<p><u>12.1</u></p>	<p><u>Develop institutional, management, technical and fiscal capacity to address climate change issues</u></p>			<ul style="list-style-type: none"> • <u>MWG: New option added @ 10/26/07 meeting</u>

Appendix A. PUBLIC EDUCATION AND OUTREACH
Third-Level Sub-Options by Audience for Option 57 of Catalog

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
75	PUBLIC EDUCATION AND OUTREACH			
7.1.5.1	State Government Education and Outreach Actions The State should lead by example (i.e., walk the talk) regarding education and outreach.			
7.1.1.5.1.1	Establish an education & outreach committee to educate audiences regarding climate plan policies and to oversee those relating to education.			
7.1.2.5.1.2	Include state public education and higher education officials in the committee established above			
7.1.3.5.1.3	Create and maintain one or more “outreach coordinator” positions specifically tasked with climate outreach and coordination among state agencies and outside entities.			
7.1.4.5.1.4	Educate state employees and state policy makers across-the-board, and assign “point persons” to do so on an on-going basis.			
7.1.5.5.1.5	Institute annual Governor’s Awards to recognize climate action of several types/categories.			• A “Nobel Prize” for GHG reduction programs by businesses.

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7.2	Target Audience: Policymakers (legislators, regulators, executive branch, agencies) Implementation of climate actions hinges on policymakers' approval.			
<u>7.2.1.5.2.1</u>	Educate policy makers on CAP policy recommendations, climate change in general, scientific and technological advances, and progress toward state goals through regular briefings in order to promote acceptance and implementation of mitigation and adaptation policies.			
<u>7.2.2.5.2.2</u>	Provide continuing outreach & assistance to Governor's office, legislature, and implementing agencies on a regular basis.			
7.3	Target Audience: Future Generations Integrate climate change into educational curricula, post-secondary degree programs, and professional licensing.			
<u>7.3.1.5.3.1</u>	Add climate change to public education performance standards for science and social studies; identify (a) gaps in climate change education, and (b) specific curricula to fill any gaps.			
<u>7.3.2.5.3.2</u>	Organize groups of educators to identify, assemble, and employ climate change curricula appropriate to age groups			

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7.3.3.5. 3.3	Integrate “best practices” into public school design & construction to educate students (and parents) first-hand in their communities & colleges (i.e., walk the talk).			
7.3.4.5. 3.4	Integrate climate change into core college curricula.			
7.3.5.5. 3.5	Promote research into climate change and solutions at state universities; develop university “Centers of Excellence” on climate issues, new approaches, and technologies.			
7.3.6.5. 3.6	Integrate climate change into existing and/or new educational competition programs.			
7.3.7.5. 3.7	Work with science centers, zoos, and museums to include a climate science focus appropriate to their core mission			
7.3.8.5. 3.8	Introduce core competencies on climate change into professional licensing programs (e.g., energy efficiency in building design and construction, use of recycled materials, etc.)			<ul style="list-style-type: none"> • RCI is also addressing this issue.

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75.4	Target Audience: Community Leaders & Community-Based Organizations (e.g., institutions, municipalities, service clubs, social & affinity groups, NGOs, etc.) Recognize leadership; share success stories & role models; expand involvement and participation within civic society.			
7.4.1.5. 4.1	Educate community planning and zoning officials about climate change, impacts, and opportunities.			
7.4.2.5. 4.2	Identify individual community leaders who are acting effectively on climate change; showcase and share their successes.			
7.4.3.5. 4.3	Identify individual community leaders who are not yet acting on climate change and make a special effort to educate and encourage them to act.			
7.4.4.5. 4.4	Engage associations and attend their periodic meetings to reach out on climate change, impacts, sector-specific mitigation actions, and adaptation opportunities.			
7.4.5.5. 4.5	Identify, assist, and leverage community-based organizations that have expertise or interest in climate-related issues			
7.4.6.5. 4.6	Work with community-based organizations to identify & build upon climate issues related to their core mission			

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<u>7.4.7.5.</u> <u>4.7</u>	Develop & coordinate a network of community-based organizations acting on climate change so they can link up, organize joint events, etc.			
<u>7.4.8.5.</u> <u>4.8</u>	Support and facilitate outreach and education within community-based organization regarding climate change issues and actions			
<u>7.4.9.5.</u> <u>4.9</u>	Develop and provide concrete information on co-benefits to entities to use in boosting their climate efforts			
<u>7.4.10.5</u> <u>4.10</u>	Organize & host events that focus on leading by example, sharing “how-to,” illuminating financial risks and opportunities, co-benefits, etc.			
<u>7.4.11.5</u> <u>4.11</u>	Encourage municipal leaders to join ICLEI’s ¹ Cities for Climate Protection program and/or the Mayors Climate Protection Agreement ²			
<u>7.4.12.5</u> <u>4.12</u>	Help communities statewide implement local Climate Wise programs.			

¹ ICLEI is the International Council for Local Environmental Initiatives. See www.iclei.org.

² See <http://www.ci.seattle.wa.us/mayor/climate/>.

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
75.5	Target Audience: General Public Increase awareness and engage in climate actions in personal and professional lives.			
<u>7.5.1.5.1</u>	Educate broadcasters, reporters, editorial boards, etc. about climate change, the risks it imposes, and solutions.			
<u>7.5.2.5.2</u>	Work with state broadcasters and print media associations to develop & run climate change public service announcements.			
<u>7.5.3.5.3</u>	Conduct public polling to benchmark strength and depth of climate understanding.			
<u>7.5.4.5.4</u>	Keep a high profile on climate change issues and actions through regular public mention by Governor and other public leaders			
<u>7.5.5.5.5</u>	Develop and use a state-based “brand” on climate awareness and action			
<u>7.5.6.5.6</u>	Develop & maintain a state climate change website for the public including a clearinghouse of climate change information and resources.			

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
7.5.7.5.5.7	Work with existing company outreach efforts to customers to enhance awareness of climate change issues & opportunities			
7.5.8.5.5.8	Undertake a concerted planning effort to identify and address climate adaptation issues & needs in the state			
7.5.9.5.5.9	Work to educate consumers – and home designers, builders, and contractors – to ensure that they are aware of the different choices they have for space heating and cooling (e.g., evaporative vs. refrigerative) and the impacts of those choices.			
7.5.10.5.5.10	Develop a statewide voluntary program to structure and assist individuals in undertaking actions to reduce GHG emissions.			
75.6	Target Audience: Industrial & Economic Sectors Sector-specific climate change education and outreach.			
7.6.1.5.6.1	Residential, Commercial, & Industrial			<ul style="list-style-type: none"> • Require public to analyze and reduce their individual carbon footprint
7.6.2.5.6.2	Transportation & Land Use			<ul style="list-style-type: none"> • Have a State award for the car dealer that sells the most hybrids? • Pay as You Drive Insurance programs • Use regulations to modify behaviors •

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7.6.3.5. 6.3	Energy Supply and Use			<ul style="list-style-type: none"> • Do public service announcements to education the public about DSM. • Include environmental disclosure in monthly electricity bills. • Help municipal utilities move to greater demand-side emphasis rather than supply-side.
7.6.4.5. 6.4	Agriculture & Forestry			
7.6.5.5. 6.5	Implement a state program of voluntary business actions to reduce GHGs			
7.6.6.5. 6.6	Institute a “business incubator” program to attract and support new business development relating to the new energy economy.			
7.6.7.5. 6.7	Audiences outside Maryland too			