**Metropolitan Washington
Council of Governments**

RECOMMENDATION OF THE MULTI-SECTOR WORKING GROUP

The Multi Sector Working Group's Policy Task Force recommends COG Board endorse the attached set of greenhouse gas emission reducing strategies in the Energy, Built Environment, Land Use and Transportation sectors. The recommendations fully respond to COG Board Resolution R59-2015, which convened a Policy Task Force of elected officials, representing the COG Board, the Transportation Planning Board, the Metropolitan Washington Air Quality Committee, and the Climate, Energy and Environment Policy Committee, to provide consensus recommendations for action by the Board based on the original analysis of the subject matter expert staff multi-sector working group.

All recommendations are voluntary and are organized into 3 groups:

1. Strategies implementable region-wide
   - Actions to implement the strategy could be taken by every member jurisdiction.
   - A supermajority of localities (representing at least two-thirds of the region's population) and applicable state/regional entities responded to the survey.
   - A majority of localities (representing more than one-half of the region's population) and applicable state/regional entities indicated the strategy is implementable.
   - Localities or regional entities may implement the strategy at a different level than was analyzed.
2. Strategies implementable jurisdictionally
   - Some localities and state/regional entities could implement the strategy, while others could not (not applicable or they lack authority).
   - Localities or regional entities may implement the strategy at a different level than was analyzed.
3. Strategies implementable by state/federal/private entities;
   - Authority or responsibility for action is not at the jurisdictional level.
   - Supporting actions could be taken by member localities/agencies.
   - State and federal entities may implement the strategy at a different level than was analyzed.

Each of the recommended strategies would be supported by community education and engagement actions.

Upon positive action by the COG Board, staff would advance the strategies to the COG membership and policy boards and committees for voluntary implementation as part of their planning and programming activities and action plans.

The recommendations were derived after an extensive consultation process implemented at the direction of the Policy Task Force. This process included a detailed survey of department directors and their senior staff from the local, regional and state transportation, planning and environmental agencies to address the three primary questions of the Policy Task Force about the original group of analyzed strategies:

1. Are the proposed strategies consistent with the agency's policies and feasible for implementation?
2. Are the proposed implementation levels, over time, reasonable for the agency?
3. What actions could be taken by the agency to implement the strategies?

ENERGY & BUILT ENVIRONMENT SECTOR

Implemented Regionally	Implemented Jurisdictionally	Implemented State/Federally
Reduce emissions from solid waste management (Note that three responding localities said while this was consistent with local policy, they lacked any current implementation plan)	Increase infrastructure systems efficiency & renewable energy use	Reduce emissions from electric generation through supporting state and federal actions
Reduce energy use from new buildings (Note that some localities have limited implementation authority due to state control of building energy codes)	Reduce energy use from existing buildings	Reduce natural gas pipeline emissions
	Increase use of distributed renewable energy resources	
	Reduce emissions from non-road equipment	

LAND USE SECTOR

Implemented Regionally	Implemented Jurisdictionally	Implemented State/Federally
Increase proportion of new development in activity centers		
Reduce loss of tree cover due to land development		

TRANSPORTATION SECTOR

Implemented Regionally	Implemented Jurisdictionally	Implemented State/Federally
Increase alternate fuel vehicles in public sector fleet	Implement programs/projects to improve traffic operations on local roadways	Implement programs/projects to improve traffic operations on state and federal roadways
	Encourage cash subsidy for public and private sector commuters using alternates modes of travel	Encourage cash subsidy for state or federal employee commuters using alternates modes of travel and offer assistance through a commuter subsidy program
	Increase frequency and/or reduce run-time for local and regional transit services	Increase speed enforcement on Interstates and limited access facilities
	Implement or expand existing transit fare buy-down programs on local and regional transit services	Offer funding assistance to localities operating transit fare buy down programs.
	Promote zero emissions vehicles in private sector fleet	Implement low carbon fuel standards for roadway vehicles (with local support)
	Install electric power units at truck stops	

MSWG STRATEGY SURVEY RESULTS AND EXAMPLE IMPLEMENTATION ACTIONS

COG distributed a survey to gather information from 22 local and 8 regional/state agencies. COG received responses from 21 agencies, although not all jurisdictions responded to all questions.

The following reports the input from senior staff from local, regional and state transportation, planning and environmental agencies to the survey

Energy and Built Environment Strategies

Reduce emissions from solid waste management

This strategy would provide for increasing diversion of solid waste from landfills and optimize energy recovery. Localities who operate solid waste management facilities such as recycling centers or material recovery plants, waste-to-energy plants, composting facilities, and landfills could take actions to implement the strategy.

- 14 localities (representing 76% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by all 14 of the responding localities and the 3 responding regional/state agencies.
- All 14 responding localities and the 3 regional/state respondents indicated the strategy is implementable. However, the of 3 localities (representing 31% of the region's population) and one of the regional entities found that while the strategy was consistent with local policy, they had no current plans to implement the strategy.

Implementation could include actions such as front-end waste reduction strategies, and expanding waste management strategies such as organic waste treatment in lieu of landfilling

Limitations noted include the difficulty in achieving a high waste management strategy compliance level in private properties and cost considerations

Reduce energy use from new buildings

This strategy would provide for actions to increase energy and water efficiency in new buildings. All localities, with assistance of the states such as through adoption of strong energy codes, could take actions to implement the strategy. Those with jurisdiction over building construction, such as through building codes, could take a stronger role.

- 18 localities (representing 98% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by 15 of the 18 responding localities (representing 76% of the region's population) and the 3 regional/state respondents. The 3 localities who responding negatively (representing 22% of the region's population) and a responding state agency noted that they lack the authority to implement the strategy.
- 13 localities (representing 66% of the region's population) and 2 of the regional respondents indicated the strategy is implementable.

Implementation could include actions such as LEED/green building policies for new local government and commercial buildings, implementation of more robust building energy codes (where authority exists), and creation of Net Zero Energy Districts,

MSWG STRATEGY SURVEY RESULTS AND EXAMPLE IMPLEMENTATION ACTIONS

Limitations included whether the analyzed goal could be reached when a locality has a high growth rate. Additionally, some localities lack authority to implement more stringent energy codes. Some also were unsure they could take actions to grow the numbers of net-zero buildings to the studied level.

Increase infrastructure systems efficiency & renewable energy use

This strategy would provide for increased deployment of energy efficiency and renewable energy sources across infrastructure systems. All localities, regional and state entities that operate infrastructure systems, such as water, wastewater, power, and telecommunications systems and community facilities, could implement this strategy.

- 15 localities (representing 88% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by 10 of the 15 responding localities (representing 56% of the region's population) and 2 of the regional/state respondents. 4 of the 5 localities and 1 of the regional/state agencies who responding negatively (representing 25% of the region's population) noted that they lack the authority to implement the strategy.
- 9 localities (representing 53% of the region's population) and 2 of the state/regional agencies indicated that the strategy is implementable.

Implementation actions include including improvements to system efficiency, energy recovery and renewable energy sources in water and wastewater treatment processes, increasing use of high efficiency, and increased use of on-site green power generation through the Maryland Smart Energy Communities.

Limitations noted included the need to sometimes trade off increased reliability of service for other efficiencies.

Reduce energy use from existing buildings

This strategy would provide for actions to increase energy and water efficiency in existing buildings. All localities, with assistance of the states such as through adoption of strong energy codes, could take actions to implement the strategy. Those with jurisdiction over building construction and renovation, such as through building codes, could take a stronger role.

- 18 localities (representing 98% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by 15 of the 18 responding localities (representing 69% of the region's population) and the 3 regional/state respondents.
- 13 of the responding localities (representing 41% of the region's population) and the 3 regional/state respondents indicated the strategy is implementable. 3 of the localities who responding negatively (representing 28% of the region's population) noted that they lack the authority to implement the strategy.

Implementation could include actions such as increasing retrofits of government buildings, promoting utility or establishing incentives for improved energy performance in private building retrofits, and achieving a higher compliance rate for energy codes for building renovations,

MSWG STRATEGY SURVEY RESULTS AND EXAMPLE IMPLEMENTATION ACTIONS

Limitations included whether the analyzed goal could be reached when a locality has a high growth rate, and that some localities lack the authority to require actions in privately-owned buildings.

Increase use of distributed renewable energy sources

This strategy would provide for increasing deployment of small-scale distributed renewable energy systems in the region. All localities and regional entities, with the support from the states, could implement this strategy.

- 17 localities (representing 89% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by 13 of the 17 responding localities (representing 78% of the region's population) and the 2 of the regional/state respondents. 2 of the 4 localities and the regional agency who responding negatively (representing 8% of the region's population) noted that they lack the authority to implement the strategy.
- 9 of the responding localities (representing 37% of the region's population) indicated the strategy is implementable. The other 4 localities indicated they had no local plans to implement this strategy.

Implementation actions include installing renewable power on municipal facilities, providing tax or development incentives for installation of distributed systems on private buildings, and supporting programs such as Solarize and Solar Coops to reduce system cost for local residents and businesses.

Limitations include the limited ability for commercial and multi-family properties to implement distributed renewable projects due to space constraints, lack of authority for community solar, and first-cost hurdles for renewable systems.

Reduce emissions from non-road equipment

This strategy would provide for improvements to non-road equipment such as used in construction, lawn care, and stationary power sources. All localities, with assistance from the states such as adoption of strong anti-idling policies, could take action to implement this strategy.

- 14 localities (representing 87% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by 13 of the 14 responding localities (representing 80% of the region's population) and the 3 regional/state respondents.
- Only 3 localities (representing 29% of the region's population) and the 3 responding regional/state agencies indicated that the strategy is implementable. 10 responding localities indicated they had no plans to or were unlikely to implement the strategy while 1 noted there was no local policy addressing this strategy.

Implementation could include actions such as promoting and enforcing anti-idling policies for non-road equipment and purchasing or retrofitting zero or low-emission equipment.

Some localities noted that enforcement of anti-idling policies are hard to enforce.

MSWG STRATEGY SURVEY RESULTS AND EXAMPLE IMPLEMENTATION ACTIONS

Reduce emissions from electric generation through supporting state and federal actions

This strategy would provide for supporting state implementation of the federal Clean Power Plan and supportive actions to grow utility-scale clean power sources. Maryland and Virginia, contingent upon final approval of the federal Clean Power Plan, would be the primary parties implementing this strategy. All localities and regional/state entities could take supporting actions.

- 17 localities (representing 97% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by 13 of the 17 responding localities (representing 68% of the region's population). 2 of the 4 localities who responding negatively (representing 21% of the region's population) and the 3 regional/state respondents noted that they lack the authority to implement the strategy.
- 9 localities (representing 39% of the region's population) indicated the strategy is implementable. Most of the respondents noted that they would have to review final state Clean Power Plans at the time they were developed before making a final decision on whether to support or not.

Local supporting actions include offsetting municipal government emissions from conventional electricity production through purchase of Renewable Energy Credits (RECs), purchasing electricity directly from wind and other renewable sources, and contingent on projects being compliant with land use and other local conditions, supporting utility-scale renewable development.

Limitations include limited land available to locally host utility-size renewable systems, the potential for increased electricity costs, and reliance on the continuation of the federal Clean Power Plan which may be changed or ended under the incoming federal administration

Reduce natural gas pipeline emissions

This strategy would provide for increased replacement of leaking natural gas pipes in the distribution systems serving the region. The region's natural gas utilities, with support from state public utility commissions, would implement this strategy.

- 13 localities (representing 74% of the region's population) and 2 regional agencies responded.
- The implementation level was found reasonable by the 2 of the 13 responding localities (representing 19% of the region's population).
- 8 of the 13 localities (representing 24% of the region's population) and the three regional/state agencies responding negatively noted that they lack the authority to implement the strategy. The remaining 3 localities (representing 31% of the region's population) noted that their locality lacked policy relating to this strategy.

Localities can support cost recovery of prudent infrastructure replacement costs at state utility commissions such as through Virginia's SAVE program. Respondents noted that the natural gas utilities serving their areas are taking advantage of these programs.

Limitations include that programs to recover prudent infrastructure replacement costs are subject to state public utility commission approval. Localities have no direct authority over these activities.

MSWG STRATEGY SURVEY RESULTS AND EXAMPLE IMPLEMENTATION ACTIONS

Land Use Strategies

Increase proportion of new development in activity centers

This strategy would provide for concentrating future residential and commercial growth in compact, mixed-use centers. All localities with jurisdiction over land use planning could implement this strategy.

- 15 localities (representing 88% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by all 14 of the 15 responding localities (representing 87% of the region's population). The 3 regional/state respondents noted they do not have the authority to implement these land use changes as these are local decisions.
- 13 localities (representing 84% of the region's population) indicated the strategy is implementable. The other respondent indicated it did not have plans to implement the strategy.

Implementation examples include implementation of transit-oriented, mixed use and higher intensity zoning in comprehensive plans and zoning codes and small area plans, increased connection of growing areas to high capacity transit, increased use of green building policies for higher density (FAR) buildings to increase building energy performance greater than is required by code.

Limitations include accounting for the differing development patterns in which more urban localities will inherently have more development in activity centers, and how to address pressures of continued growth, particularly when there are areas of by-right development yet to be built.

Reduce loss of tree cover due to land development

This strategy would provide for reducing loss of tree cover due to development and increasing reforestation and tree planting efforts. All localities with jurisdiction over land development, and through reforestation on public lands could implement this strategy.

- 14 localities (representing 76% of the region's population) and 3 regional/state agencies responded.
- The strategy was found to be consistent with local policy by all 14 of the responding localities and the 3 regional/state agencies. However, the 3 regional/state agencies noted they lack are unlikely to implement the strategy due to lack of available land for additional tree planting.
- 13 localities (representing 55% of the region's population) indicated the strategy is implementable. The other respondent indicated it did not have plans to implement the strategy.

Implementation examples include greater use of smart growth policies to further concentrate growth in existing built up areas resulting in less greenspace loss (see also TLU-2), municipal tree planting programs, establishing a tree conservation ordinance including requirements to increase tree canopy on development sites and providing for developer contributions for planting trees when site constraints prevent required tree planting and supporting non-government organizations pursuing reforestation.

Limitations include reductions in proffer authority to provide for actions such as tree planting and the difficulty to provide for higher levels of tree canopy in highly urbanized communities.

Transportation Strategies

Increase use of Alternative Fuels in Public Sector Fleets

This strategy would increase the adoption and use of alternative fuels in public sector fleets. All localities, state departments of transportation, and multi-jurisdictional transit providers (WMATA, MARC, and VRE) could take actions to implement the strategy.

- 15 localities (representing 89% of the region's population), all 3 state DOTs, and two multi-jurisdictional transit providers responded.
- The strategy was found to be consistent with local policy by 14 of the responding localities (representing 82% of the region's population), and all responding state DOTs and multi-jurisdictional transit providers.
- 12 responding localities (representing 78% of the region's population), and all responding state DOTs and multi-jurisdictional transit providers) indicated the strategy is implementable.

Implementation action could include developing new fleet purchasing policies, providing staff training for both use and maintenance of alternative fuel vehicles, and adding alternative fuels or charging equipment to public sector fleet refueling facilities.

Limitations and challenges for some of the above actions include incremental cost of both vehicles and refueling facilities, limits on available technology for certain vehicle types, and specific requirements for some public fleet vehicles (like police vehicles).

Enhance and Improve Roadway System Operations

This strategy would result in improved roadway operating conditions implemented in part to reduce wasted fuel. This strategy mainly applies to state DOTs and localities that own and operate roads; however, all localities could work with road operators to identify locations that would benefit from improved operations.

- 13 localities (representing 17% of the region's population), and all 3 state DOTs responded.
- The strategy was found to be consistent with local policy by all 13 of the responding localities (representing 71% of the region's population), and all 3 state DOTs.
- 8 responding localities (representing 38% of the region's population), and all 3 state DOTs indicated the strategy is implementable. The 3 state DOTs operate a majority of road facility types in the region that would be most applicable for operational improvements. 3 of the localities that responded that the strategy was not implementable responded that it is consistent with local policy, but indicated that they do not have the specific authority to implement this strategy.

Implementation action could include implementing vehicle and roadway based technological features on freeways, arterial corridors, and collector roadways; roadway ramp metering; intersection efficiency improvements - roundabouts, traffic signal retiming; freeway operations patrols / faster incident management); promoting driving patterns to reduce rapid acceleration/deceleration and extended idling; and developing policies to support advances in technology (such as those related to connected and autonomous vehicles).

Limitations and challenges for some of the above actions include market penetration of technologies, funding and the potential impediment to pedestrian mobility goals.

Commuter Cash Subsidy for Alternative Modes

The strategy as described in the survey would ensure that 60% of commuters receiving a cash subsidy of $50 per month for alternative commuting modes such as transit, carpool, vanpool, or bicycle. It should be noted that there are different le ways for subsidies to be provided. Depending on how the subsidies are provided all localities and or state DOTs could be responsible to implement the strategy.

- 13 localities (representing 71% of the region's population) and all 3 state departments of transportation responded to the survey.
- 12 localities (representing 69% of the region's population) and 3 state DOT's indicated that the strategy is consistent with their policy.
- 9 localities (representing 65% of the region's population) and two state DOT's indicated the strategy is implementable. In the comments section, one respondent noted that there is a system in place for administering commuter benefit programs. Three respondents noted subsidies that are available to their employees. Three respondents noted that they actively encourage voluntary actions by private sector employers to provide alternative commute subsidies. Five of the respondents noted that funding would be an issue for this strategy.

Implementation action could include providing commuter subsidies to public sector employees, additional promotion of state commuter subsidy (if exists), and encouraging or requiring private businesses to provide commuter subsidies.

Limitations and challenges for some of the above actions include funding, passing legislation (if seeking to require private business to provide subsidies), ensuring that the implementation actions are developed in conjunction with other policies to meet the desired outcomes.

Transit Service Enhancements

This strategy would result in increased frequency and improve run times of transit service. This strategy is applicable to the 11 localities with transit systems (which covers 91% of the region's population), and the multi-jurisdictional transit providers (WMATA, MARC, and VRE).

- 8 of the 11 applicable localities (representing 64% of the region's population and 71% of the applicable localities' population) and all of the multi-jurisdictional transit providers responded
- All 8 of the localities, and two of the multi-jurisdictional transit providers responded that this strategy is consistent with policy.
- All 8 of the localities and two of the multi-jurisdictional transit providers responded that this strategy is implementable.

Implementation action could include transit priority treatments, bus on shoulders, semi-express bus routes, designating exclusive bus lanes, constructing dedicated busways, construction of new fixed rail, enforcing stopping/parking regulations, ensuring accessible bus stops, all-door boarding for buses, off-board fare payment for buses, and road and infrastructure improvements.

Limitations and challenges for some of the above actions include funding for operations and maintenance, coordination between transit providers and road operators, full cost accounting between existing conditions and proposed improvements.

MSWG STRATEGY SURVEY RESULTS AND EXAMPLE IMPLEMENTATION ACTIONS

Transit Fare Reduction

This strategy would result in an across the board reductions in transit fare. This strategy is applicable to the 11 localities with transit systems (which covers 91% of the region's population), and the multi-jurisdictional transit providers (WMATA, MARC, and VRE)

- 8 of the 11 applicable localities (representing 64% of the region's population and 71% of the applicable localities' population), and all of the multi-jurisdictional transit providers responded
- 7 localities (representing 61 % of the region's population and 67% of the applicable localities' population), and two of the multi-jurisdictional transit providers responded that this strategy is consistent with policy.
- 7 localities (representing 61 % of the region's population and 67% of the applicable localities' population) and one multi-jurisdictional transit provider that this measure is implementable. In the comments section, six of the respondents provided examples of discounted or free fares or passes that are available to targeted groups of riders. Three respondents noted that across the board fare reductions are something that their respective Boards could choose to do, but the issue of the potential revenue shortfall would need to be addressed.

Implementation action could include across-the-board fare reductions, reduced or free fares for targeted groups (such as students and senior citizens), reduced fare monthly passes, free transfers between services, and free or reduced fares on circulator bus service.

Limitations and challenges for some of the above actions include replacing the potential lost revenue from fare reductions and political support to reduce fares.

Promote Zero-Emission Vehicles in the Privately-owned Fleet

This strategy would provide encouragement and support for the adoption of highly fuel efficient vehicles in the privately-owned (i.e. general public and private sector business) vehicle fleet. All localities and state departments of transportation could take actions to implement the strategy.

- 15 localities (representing 89% of the region's population) and all 3 state DOTs responded.
- The strategy was found to be consistent with local policy by 13 of the responding localities (representing 79% of the region's population), and all 3 state DOTs.
- 10 responding localities (representing 43% of the region's population), and 2 state DOTs indicated the strategy is implementable.

Implementation actions could include implementing a "Cash for Clunkers" program to encourage replacement of older, less fuel-efficient vehicles; offering incentives for consumer/private sector purchase of electric vehicles and charging equipment; providing disincentives for purchases of fuel-inefficient vehicles (gas guzzler tax/registration fees); install and improving access to public charging facilities. Localities (with state action, if required) can require access to electric vehicle charging facilities in new developments.

Limitations and challenges for some of the above actions include funding, support from governing bodies and public at local and state levels; measuring private sector compliance.

MSWG STRATEGY SURVEY RESULTS AND EXAMPLE IMPLEMENTATION ACTIONS

Install Electrification Equipment at Truck Stops

One locality in the region, Frederick County, could take actions to implement this strategy.

- Frederick County responded that this strategy is both consistent with local policy and implementable.
- The strategy was found to be consistent with local policy by 14 of the responding localities (representing 82% of the region's population), and all responding state DOTs and regional transit providers.

Limitations and challenges for some of the above actions include additional funding to expand installation.

Reducing Speeding on Freeways

This measure would result in greater enforcement of speed limits on freeways in the region. State Police would have to implement the strategy.

- Fourteen localities (representing 71% of the region's population) and all 3 state DOTs responded to the survey.
- Seven localities (representing 64% of the region's population) and 2 state DOTs responded that this strategy was consistent with policy
- Only two localities (representing 18% of region's population) and one state DOT responded that it was implementable. Several noted that they do not have the authority to implement this strategy

Implementation action could include increased speed enforcement, which may include more speed patrols and/or electronic monitoring of freeway speeds.

Limitations and challenges for some of the above actions include state police coordination, and state legislation for electronic enforcement.

Support Implementation of a Low Carbon Fuel Standard

This strategy would be implemented at the state or federal level. All localities could take actions to support the implementation.

- 15 localities (representing 89% of the region's population) responded.
- The strategy was found to be consistent with local policy by all 15 of the responding localities.
- Implementation for this strategy would take place at the state or federal level.

Limitations and challenges for some of the above actions include support from vehicle manufactures and governing/regulatory bodies state and federal levels.