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EGBCM Overview of Preliminary Recommendations

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5.1 Expert Group on Black Carbon and Methane (EGBCM)

Introduction

This agenda item will focus on draft recommendations developed by the Expert Group on Black Carbon and Methane (EGBCM) pursuant to the Arctic Council's [Framework for Action on Black Carbon and Methane](#). As provided in the Framework's Terms of Reference, the EGBCM is developing recommendations for enhanced action and options for an "ambitious, aspirational and quantitative collective goal on black carbon."

The EGBCM now seeks feedback on its draft recommendations, so that the views of the SAOs/PPs can inform discussions at the EGBCM's next in-person meeting on October 25-26.

Background

To slow the pace of warming over the next two to three decades – globally and in the Arctic – reducing emissions of short-lived climate pollutants such as black carbon and methane is essential, along with action to reduce CO₂ emissions. Not only do these short-lived substances persist in the atmosphere for far shorter periods than CO₂, but they also trap far more heat on a per-unit basis. In addition, black carbon that falls on Arctic ice or snow reduces reflectivity and increases heat absorption, further accelerating melting and warming.

Prompted by the climate impacts of these emissions, in April 2015 the Ministers of the Arctic Council adopted a Framework for Enhanced Action to Reduce Black Carbon and Methane Emissions. Under the Framework, Arctic States agreed to submit biennial national reports on their existing and planned actions to reduce black carbon and methane, national inventories of these pollutants and projections of future emissions, where available. The Framework establishes an Expert Group, to be chaired by the nation holding the Council chair for that two-year cycle.

The Expert Group is tasked with developing a "Summary of Progress and Recommendations" report based on the national reports and other information as appropriate, along with recommendations for enhanced action. The Framework also provides that the Ministers will adopt an "ambitious, aspirational and quantitative collective goal on black carbon" at the 2017 ministerial, and tasks the Expert Group with developing and proposing such a goal. Observer States were invited to join the Arctic States in implementing the Framework, and to participate in the Expert Group upon submission of a national report.

The EGBCM will finalize the text of the summary report by January 2017, then transmit it to Senior Arctic Officials for their review and approval at their March 2017 meeting. The final report will then be forwarded to Arctic Council Ministers for consideration at the Ministerial meeting in May 2017.

Expert Group on Black Carbon and Methane Overview of Preliminary Recommendations

These are PRELIMINARY recommendations that are intended to reflect best practices for reducing black carbon and methane emissions. The EGBCM has not yet finalized its recommendations and will continue to refine them, such that the final recommendations submitted to SAOs for approval may well change from those reflected here. Arctic States are not required to adopt the final recommendations; rather, each nation will be invited to adopt one or more recommendations as it deems appropriate given its national circumstances.

Recommendations for Enhanced Action on Black Carbon and Methane

The EGBCM is focusing its 2017 report on the four sectors identified below because these sources have the greatest Arctic warming impact of all black carbon and methane sources generated by the Arctic States. Amongst these, mobile sources and oil/gas methane and flaring have the greatest impact and should therefore be prioritized for mitigation action. The EGBCM's preliminary recommendations are as follows:

Mobile Sources¹ (On- and Off-road Vehicles and Engines)

1. Reduce emissions from *new* on- and off-road vehicles and engines, by adopting world-class particulate matter (PM) exhaust emission standards that require the use of best available control technologies or use of alternative fuels. Such standards should be equivalent to Euro VI or Tier 3/US 2007 standards for on-road vehicles, and Tier IV/Stage V for off-road applications.²
2. Reduce emissions from *legacy* on- and off- road vehicles and engines by adopting targeted grants, fiscal measures, and/or regulations that support or require the early upgrading or replacing of equipment e.g.:
 - Flexible national grant programs applied across a wide array of applications and project types can give governments a larger pool of projects to choose from and enable the most cost-effective mitigation solution for each application.
 - Fiscal measures, such as extra taxes on high-polluting diesel engines or tolls levied according to emissions performance may also drive emissions reductions.
 - Regulations targeting emissions from legacy engines can serve as an alternative or complement to grant and fiscal programs.
3. Ensure the availability and use of clean fuel through policies and programs including mandatory fuel quality standards for on and off-road applications, with regional requirements and fiscal policy incentives where needed, as well as robust compliance programs. Availability of ultra low-sulphur fuel is essential to reduce tailpipe emissions from both new and legacy vehicles, as high-sulphur fuel hinders the effective operation of advanced emission control technologies.

Oil/Gas Methane Leakage, Venting and Flaring

1. Develop [by December 2017] and promptly begin implementing national methane emission reduction strategies. Such strategies should among other elements include provisions on leak detection and repair to address fugitive emissions from oil/gas production and from gas processing and distribution; and practices and technologies that minimize venting and emissions from key sources.

¹ Due to on-going deliberations on shipping, recommendations for this sector are not included here.

² All Arctic States are phasing in on-road standards equivalent to Euro V or VI. Arctic and Observer States have been requested to provide details on the coverage of their off-road regulations so that they can be compared, to inform the decision regarding whether or not this recommendation is warranted.

2. Arctic States endorsing the World Bank's Zero Routine Flaring by 2030 Initiative³ resolve to implement the initiative; to incorporate relevant information in their biennial national report to the Arctic Council as appropriate; and to engage in technical cooperation to make progress towards the Initiative's aspirational target. Where flaring is necessary, countries should implement regulations, programs or collaborate to increase the use of effective technologies and best practices to minimize emissions.
3. Urge firms headquartered or operating within their borders to join multilateral fora (e.g., Zero Routine Flaring by 2030, GMI, CCAC Oil and Gas Methane Partnership) and where relevant domestic programs (e.g. Natural Gas STAR and Methane Challenge) aimed at promoting voluntary action and enhanced methane-emissions data availability.

Residential Wood Combustion Appliances (Heating Stoves)

1. Accelerate deployment of cleaner and more efficient *new* wood burning appliances e.g. through a combination of approaches:
 - Adoption of a standardized testing protocol for black carbon emissions for wood burning appliances;
 - Cooperation with producers to develop lower-cost stove designs and technologies that reduce operator error and thereby reduce black carbon emissions;
 - Implementation of policies that reduce the cost and increase penetration of cleaner and more efficient heating appliance technologies; and
 - Promotion of efficiency standards – voluntary and regulatory – for new appliances.
2. Reduce emissions from *legacy* heating appliances by:
 - Incentivizing the replacement of older wood burning appliances with cleaner and more efficient alternatives, and
 - Conducting effective education and awareness campaigns to reduce operator error.
3. Promote enhanced home heating and energy efficiency to reduce energy use and corresponding emissions by promoting the use of proper insulation, air sealing, and energy-efficient windows and doors. Policy measures could include voluntary standards or financial incentives for energy efficiency such as tax credits, rebates, or financing.

Solid Waste Disposal

1. Avoid methane emissions through a combination of three complementary policies: waste minimization, waste diversion and alternative treatment, and avoidance of landfilling organics. Countries should:
 - Minimize generation of food waste and other organic waste, adopting actions that will contribute to a reduction of global food waste goal of 50% by 2030, in line with Goal 12 of the Sustainable Development Goals, and consider adopting national food waste reduction goals where appropriate.
 - Enhance waste diversion and alternative treatment, *mandating* separate collection and treatment of organic waste; where regulation is not possible, incentivize voluntary diversion, through policies such as differentiated fees/taxes.
 - Incentivize or adopt bans on landfilling organics at the appropriate jurisdictional level.
2. Adopt regulations for landfill gas capture and control from existing, new, modified or reconstructed landfills, as well as require or incentivize *utilization* of methane.

³ The Initiative addresses routine flaring, i.e., flaring other than for emergency or safety purposes.