The Greenhouse Gas Emission Reduction Act

Where We Do We Go From Here?

Progress, Next Steps and the Critical Decisions During the 2016 General Assembly Session

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Overview

• Background
• Current Status
• Where to go next
• Discussion
Background - Earliest Actions

• 2006 – Maryland Healthy Air Act
  – Multi-pollutant power plant reductions
  – Set up a process that lead to Maryland becoming a member of the Regional Greenhouse Gas Initiative (RGGI) in 2007

• 2007 – Maryland Clean Cars Act
  – Comprehensive effort to reduce a host of emissions from vehicles
  – Toughest standards allowed by law
  – Significant greenhouse gas (GHG) emission reductions
Maryland Commission on Climate Change

- Established in 2007 by Executive Order
- Cabinet Secretaries and six members from the General Assembly
- Charged with addressing Maryland’s climate change challenge on all fronts
- Three specific areas of concern:
  - Mitigation (MDE)
  - Adaptation (DNR)
  - Science and effects in Maryland (UMD)
- Mandated that a State Climate Action Plan be developed by 2008
The Climate Action Plan

- Finalized in August, 2008
- Includes reports from the three Working Groups
- Addresses Five Sectors:
  - Energy Supply
  - Residential, Commercial, and Industrial
  - Transportation and Land Use
  - Agricultural, Forestry, and Waste
  - Cross Cutting
- Other sections on:
  - The cost of inaction
  - Maryland’s effort into a future Federal program
The Greenhouse Gas Emissions Reduction Act

… of 2009

- The Greenhouse Gas Emission Reduction Act (GGRA) signed into law in April 2009
- Requires the State to develop and implement a Plan to reduce GHG emissions 25% from a 2006 baseline by 2020
- Must have a positive impact on Maryland’s economy and jobs
- Climate Action Plan used as a “roadmap”
GGRA – The 2012 Plan

• The Plan is comprehensive, multi-sector, and involves multiple State agencies

• Implementation of the 150-plus programs and initiatives described in the Plan will achieve 25% reduction required by GGRA
  – Must reduce Maryland’s GHG emissions by 55 million metric tons of carbon dioxide-equivalent (MMtCO₂e) annually
    • This reduction includes offsetting growth that is expected to occur between 2006 and 2020
Earlier analyses project that the Plan would result in estimated economic benefits of $1.6 billion and support over 37,000 jobs … being updated

Provides an update on climate change science
  - Based on materials provided by the University of Maryland Center for Environmental Science
    - Included an update on the cost of inaction in Maryland based on materials provided by the University of Maryland Center for Integrative Environmental Research.
More Recent Activities

• 2014: Executive Order 01.01.2014.14
  – Signed on November 19, 2014
  – Expanded the mission and membership of the Maryland Commission on Climate Change
  – Added new tasks

• 2015: Senate Bill 258
  – Maryland Climate Commission Act of 2015
  – Now in law - Maryland Commission on Climate Change now in statute
  – Similar to EO, but adds new members and new tasks
Critical Upcoming GGRA Activities

• Totally separate from the E.O. and SB 258, the GGRA of 2009 also requires major efforts in late 2015
  – By October 1, 2015 MDE must submit a report to the Governor that includes:
    • A summary of the State’s progress toward achieving the 2020 emissions reduction goal.
    • An analysis of the overall economic costs and benefits to the state’s economy, environment, and public health of a continuation or modification of the requirements to achieve a 25% reduction.
    • Recommendations on the need for adjustments to the requirement to reduce statewide GHG emissions by 25% by 2020.
    • A review of best available science regarding the level and pace of GHG emissions reductions and sequestration needed.
    • An update on emerging technologies to reduce GHG emissions.
    • A summary of additional revised regulations/control programs/incentives that are necessary to achieve the 25% reduction goal.
    • The state of any federal program to reduce GHG emissions.

• In 2016, the General Assembly must take an action to keep, change or enhance the goals of the GGRA or the laws requirements sunset
Where to Go From Here?

Four basic questions

- How are we doing with achieving the GGRA goals for 2020?
- What might we want to do to improve the 2020 effort?
- Where do we want to go beyond 2020?
- What else have we learned over the past 10 years?
Some Preliminary Ideas From MDE Staff

• Based upon last ten years of developing, implementing and analyzing the GGRA
  – Also looking at what is going on in other states and other countries

• Staff level thoughts … designed to generate discussion
  – Does not represent MDE or State policy

• Key building blocks
  – What made the 2009 GGRA work so well in the General Assembly?
  – What we have learned over the past 10 years?
  – Where is the science leading us?
  – What is happening in other states?
Getting to 2020 Goals

• 25% reduction by 2020

• We will make it or be very, very close

• Programs have helped, but market driven changes have also helped in a significant way

• This is not unexpected !!!
Predicting the Future …

… is always a challenge

• When MDE built the 2020 Plan we knew that market forces were driving change in several key “predicting the future” areas
  – Two examples
    • The role of natural gas in the energy market
    • The trends in vehicle use that indicate that the growth in “Vehicle Miles Travelled” … or VMT … is beginning to decrease … not increase
Building the Plan …

… versus the “True Up”

• When MDE built the 2020 Plan, like all of our plans that try and predict the future, we generally use best estimates of growth based on the past - not emerging trends
  – That is what we did

• During true up, the best estimates often capture those trends
  – That is what we are doing

• Again, it appears that we will be meeting or exceeding the 2020 goal
  – At a minimum, we will be very, very close
So What Do We Do …

… about the GGRA 2020 Goal?

• Declare Victory !!!
  – At least a modest victory

• But also use the Commission process and the October 2015 GGRA report to
  – Identify additional enhancements that can create jobs and strengthen Maryland’s efforts on economic development
  – While also helping further our GHG efforts

• Remember, the 25 by 20 in the GGRA was a target …
  – If more can be achieved in a way that creates jobs and fosters economic prosperity - we should do that
What About Post 2020 Goals?

- The science is clearly pushing for deep reductions
  - Something like 70% to 80% reduction … world-wide by 2050 … or earlier
  - Not terribly different from where we were when the GGRA was adopted in 2009

- The GGRA and other leadership states moved forward with a “first step” towards those deep goals in 2050
  - GGRA … 25% reduction by 2020
  - Other states and nations adopted very similar “progress” steps

- What should the next step in that progress be?
40% by 2030?

- Maybe 45% if from a 2006 base
- Generally consistent with other states
  - Red and Blue leadership states
- Consistent with international discussions
- An aggressive goal … but one that you can identify a feasible path forward to get to
  - Federal vehicle and fuel efficiency standards provide deeper and deeper reductions as time marches on and the older fleet turns over
- U.S. target - 28% by 2025 from 2005
2030 Target - Goal, Mandate or Aspiration?

- Use the current GGRA policy as a model
  - Set 40 by 30 as a goal …
  - But have the General Assembly confirm, strengthen or otherwise adjust the goal during a mid-course check-in

- Getting to the goal should continue to be tied - strongly tied - to improving the States economy and creating new jobs
  - Having this linkage be even stronger than the current law may be a smart concept in 2016

- Timing
  - Can logically build from the current GGRA schedule
Potential Timing

- October 2015 - MDE submits GGRA report to Governor and General Assembly
  - Includes a recommendation on a path forward
- General Assembly takes action in 2016
- How it might work:
  - 2019 - MDE (with the Commission’s guidance) develops and submits a 40 by 30 Plan to the Governor and General Assembly
    - Major focus on jobs and the economy
    - Also includes a status report on 25 by 20
  - 2020 - Implementation of the 40 by 30 Plan begins
  - 2025 - MDE owes a status report to the Governor and the General Assembly on progress in reducing GHG emissions and how the plan is fostering economic development opportunities and creating new green jobs
  - 2026 - General Assembly (just like the 2016 process) must confirm or adjust the 2030 target to keep the requirements of the law in place … if no action … the law sunsets !!
What Else Have We Learned?

• We have been doing this work now for over 10 years

• We have learned a lot about what makes both technical and policy sense

• Four key areas where it may be good to massage our current process a bit
  – Drive the Plan more, much more, by economic development and jobs
  – Consider an initiative to look at “faster acting” GHGs
  – Push “Green Financing on Steroids”
  – Regional Approaches and Partnerships
    • Acknowledge and build from the concept that deeper reductions in Maryland will be enhanced significantly (and maybe only possible) if supported by national, regional and local partnerships
The Economic Development …

... and Greenhouse Gas Emission Reduction Act of 2016?

• Why not?

• Economic development and jobs are absolute priorities

• Why can’t the next GHG Plan look as much like an element of the State’s economic development plan as an environmental plan

• There are huge economic development and job opportunities linked to the significant changes taking place in the energy world and in the transportation sector

• Maryland should tap into these opportunities and use them as a way to find win-win-win solutions

• A prime time role for DBED?
Faster Acting Climate Changers

• Or “Short Lived Climate Pollutants” (SLCPs)
  – Methane, black carbon, fluorinated gases
  – Lifetimes of a few days to a few decades

• Most of our work to date has focused on reducing CO2 …
  – Largest GHG emission, but very long lifetime (approximately 100 years)

• SLCPs are responsible for about 40% of global warming experienced to date

• The message from the scientific community is to move more quickly … on all fronts … if possible
  – Reducing SLCP emissions can make immediate impact on mitigating climate change
  – Mitigation of SLCPs is complementary to long-lived pollutants (e.g. CO2) mitigation
Green Financing on Steroids

• Most, if not all climate strategies suffer from one key roadblock:
  – Up front costs get in the way of long term economic benefits and savings

• The financial world is now very tuned in to climate change … and worried
  – Take a look at coastal insurance rates
  – There is also an evolving philanthropic or … “we’re all in this together” movement

• The need for creative, innovative, smart, profitable financing is a critical game-changer in the GHG reduction world

• Strongly suggest a financing focused group be made an extremely high priority
Regional Approaches and Partnerships

How far can we get … going it alone?

• Clearly not as far as we can get if linked to regional or national efforts

• In-state efforts are great, but the next phase of the GHG effort will need a new emphasis on regional partnerships

• It is also clear that implementation works best through local partnerships

• These realities are being seen almost everywhere GHG reduction efforts are being discussed … Power Plants … Transportation … Everywhere
  – A bit chaotic right now, but the recognition of the need for partnerships is clear

• This would not be “waiting” for others to do regional or local efforts …
  – Would be building regional & local partnership concepts into our state action plan
In Summary

• Declare victory on the 2020 plan to achieve 25 by 20?
  • Identify economic development and job creation opportunities to enhance the 2020 plan?

• Establish a 40 by 30 goal for the state?
  • More aspirational and more explicitly linked to economic prosperity and new jobs?

• Should we add a few new bells and whistles to reflect current thinking?
  • More economics, fast acting climate changers, creative financing and regional and local partnerships?

Key Discussion Items

1. The 2009 GGRA legislation was based upon a facilitated stakeholder discussion that generated a consensus on the law. It worked extremely well. The law passed with bipartisan support. Should a similar process be considered in advance of the 2016 Session?

2. Key Issues:
  • 40 by 30 or something different?
  • Aspirational goal, mandatory limit or something in between?
  • Increased focus on jobs and the economy?
  • Same path as 2009 law?
    • MDE Plan, implement, mid-course check-in by the General Assembly?
  • Add new “lessons learned” from past 10 years?
In Summary

- We should declare victory on the 2020 plan to achieve 25 by 20
  - We should identify economic development and job creation opportunities to enhance the 2020 plan

- We should establish a 40 by 30 goal for the state
  - More aspirational and more explicitly linked to economic prosperity and new jobs

- We should add a few new bells and whistles to reflect current thinking
  - More economics, fast acting climate changers and regional programs