



TO: Members, House Economic Matters Committee
FROM: Mary Beth Tung – Director, MEA
SUBJECT: HB0008 – Maryland Strategic Energy Investment Fund - Regional Greenhouse Gas Initiative - Use of Proceeds for Maryland Healthy Soils Program
DATE: January 12, 2021

MEA POSITION: UNF

Introduction

The proposed legislation will have a significant impact on Strategic Energy Investment Fund (SEIF) programs operated by the Maryland Energy Administration (MEA). The bill requires an annual transfer of \$500,000 from the renewable and clean energy programs account within the SEIF in perpetuity for a program that (as discussed below) has not been proven to offer the same carbon reduction benefits when compared to existing MEA programs, meaning the effect of this legislation could be to reduce the overall efficacy of the SEIF. MEA also notes that there is a litany of existing federal programs that may serve a substantially similar purpose.

MEA FY20 programs will help garner over 43.9 million kWh of generated or avoided electricity, 159,000 therms of natural gas savings, 28,000 kW of new solar photovoltaic capacity, 1,100 tons of new ground source heat pump capacity, 14,000 gallons of gasoline saved and an additional 1,250 gallons of diesel saved.¹ More specifically, MEA utilized the renewable and clean energy programs account to reduce carbon emissions by an estimated 375,089 metric tonnes.²

Questionable Carbon Sequestration Benefits

“It is essential to recognize that [carbon] storage has not been nor will be the primary reason to adopt no-till, although this could be a misconception from articles that focus on this issue.”

¹ FY20 programs total estimated benefits.

² Lifetime for FY20 MTCO₂E using EPA GHG equivalency calculations page:

<https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>

A 2019 article in the *Scientific Reports* journal compiles the information found in several studies, and seriously questions the value of no-till management as a way of mitigating greenhouse gas emissions.³ This article notes that studies have found there is “no difference in the amount of [carbon] in soils with adoption of no-till management compared to full tillage, and that the differences in [soil organic carbon] from the surface to the subsoil below the plow layer are explained by compaction and redistribution of [soil organic carbon].”⁴

The article goes on to note that there are definite benefits in adopting no-till management, “such as “improving soil structure, reducing erosion, enhancing soil moisture, and [carbon] storage.” However, despite the promotion of carbon storage as a benefit, research suggests that no-till ~~on~~ “is not universally applicable for mitigation of greenhouse gas emissions”. Specifically, reductions in soil organic carbon at greater depths may be offset by an increase near the surface. The issue is quite complex, also being influenced by factors such as local climate and soil composition.

Legislation Unnecessary

According to the US Department of Agriculture (USDA), “[c]onservation tillage practices - particularly continuous no-till, save time and money compared to conventional tillage.”⁵ Cost savings is a combination of investments in both labor and fuel. A study on annual fuel usage contrasting conventional tillage and conservation tillage practices shows continuous no-till requires less than a third of the fuel per acre. For a 1,000 acre farm, that means an estimated savings of more than \$8,500 each year alone.⁶ This does not account for additional labor cost savings. In essence, these practices themselves are self-incentivising

Alternatives Available

The Natural Resources Conservation Service (NRCS) within USDA offers a Conservation Technical Assistance program (CTA). CTA provides technical assistance to land users and state and local governments in planning and implementing conservation systems.

³ Ogle, S.M., Alsaker, C., Baldock, J. et al. Climate and Soil Characteristics Determine Where No-Till Management Can Store Carbon in Soils and Mitigate Greenhouse Gas Emissions. *Sci Rep* 9, 11665 (2019). *Emphasis added*.
<https://doi.org/10.1038/s41598-019-47861-7>

⁴ *Id.*

⁵ <https://www.usda.gov/media/blog/2017/11/30/saving-money-time-and-soil-economics-no-till-farming>

⁶ *Id.*

“The Conservation Stewardship Program (CSP) helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resources concerns. Participants earn CSP payments for conservation performance—the higher the performance, the higher the payment.”⁷

Additionally, the Environmental Quality Incentives Program (EQIP) “provides financial and technical assistance to agricultural producers to address natural resource concerns and deliver environmental benefits such as improved water and air quality, conserved ground and surface water, increased soil health and reduced soil erosion and sedimentation, improved or created wildlife habitat, and mitigation against drought and increasing weather volatility.”⁸ Some other interesting program attributes include:

- Advance payments are available to help offset costs associated with EQIP for historically underserved participants.
- Beginning in 2018 expanded eligibility allows for water management entities, including State entities, to enter EQIP contracts. This may allow for partnership between MGA and MDE.

Finally, “[t]he Agricultural Management Assistance (AMA) helps agricultural producers manage financial risk through diversification, marketing or natural resource conservation practices. NRCS administers the conservation provisions while Agricultural Marketing Service and Risk Management Agency implement the production diversification and marketing provisions.”⁹

Conclusion

MEA believes strongly that the SEIF already funds targeted and proven programs producing greenhouse gas emission reductions, reliable energy supply, energy efficiency, and the infrastructure needed for economic development. MEA further believes that existing federal resources should be tapped prior to the permanent diversion of State funds. This is especially true in this time of significant financial constraint. The bar to supplant these programs should include convincing evidence that the diversion of funds will result in a greater benefit as it relates to the allowable uses of SEIF, and that cannot be demonstrated here. For the foregoing reasons MEA urges that the bill be given an **unfavorable report**.

⁷ <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/farbill/?cid=stelprdb1242382>

⁸ <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>

⁹ <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/farbill/?cid=stelprdb1242382>