WRITTEN TESTIMONY

Maryland House Bill 1199 (Maryland Climate Crisis Equity Act)

Study on Greenhouse Gas Emissions—Economy-Wide Cap-and-Invest Program

Committee: House Environment and Transportation Committee
Hearing date: Wednesday, March 4, 2026, 1:00 p.m.
Position: INFORMATIONAL
File: HB1199_IndependentExpert_OttoStarzmann_INFO.pdf

Submitted by:
Otto Starzmann
ESG Strategy & Corporate Data Ethics Authority
New York, New York, United States of America
otto@ottostarzmann.com
www.linkedin.com/in/ottostarzmann

INTRODUCTION AND QUALIFICATIONS

I respectfully submit this testimony in an informational capacity in support of the study mandate established by House Bill 1199. I am an independent expert whose professional experience spans more than three decades at the intersection of corporate sustainability strategy, climate data governance, multi-jurisdictional regulatory design, AI governance, and the architecture of emissions accountability systems. This includes fourteen years managing environmental and social risk frameworks for major development finance projects at the World Bank and the Inter-American Development Bank across Latin America and the Caribbean—work in which the design of measurement, reporting, and verification systems for environmental commitments was an operational responsibility with direct financial, legal, and community consequences. I have provided written expert testimony to the California Air Resources Board on mandatory climate disclosure implementation, including *Scope 3* measurement methodology, emissions data verification standards, and the integration of compliance data with corporate disclosure obligations. I have no commercial interest in any particular design outcome for Maryland's cap-and-invest program.

My observations are offered to assist the committee and the Maryland Department of the Environment (MDE) in ensuring that the study mandated by HB 1199 is scoped with the operational rigor that Maryland's statutory climate obligations—and the communities most affected by this program—deserve.

THE URGENCY OF THIS STUDY

Maryland's *Climate Solutions Now Act* of 2022 established legally binding targets: a 60% reduction in greenhouse gas emissions below 2006 levels by 2031, and net-zero by 2045. These are not aspirational benchmarks. They are statutory obligations.

The January 2026 modelling from the University of Maryland *Center for Global Sustainability* presents findings that should inform every aspect of how this committee considers HB 1199. Under current state and federal policy, Maryland is projected to achieve approximately 42% emissions reduction by 2031—not 50% as the same team projected in 2023, and critically not the 60% the law requires.

The gap has widened materially and for identifiable reasons: (1) Slower-than-projected electric vehicle adoption; (2) Delayed offshore wind development; (3) Unanticipated energy demand from data centers; (4) The Shores coal plant remaining open until 2029 rather than 2025 as planned; and (5) Federal policy rollbacks—including the suspension of *Advanced Clean Cars II* and *Advanced Clean Trucks*—accounting for an additional three percentage points of projected shortfall.

Maryland is not slightly off track. It is significantly off track, and the gap is growing. MDE's own *Climate Pollution Reduction Plan* identified an economy-wide cap-and-invest program as a critical strategy to close this gap. Maryland's eighteen-year participation in the *Regional Greenhouse Gas Initiative*—which has generated more than $1.7 billion since 2008 reinvested in the state economy—demonstrates that Maryland has the institutional capacity, the administrative infrastructure, and the operational experience to design and run a cap-and-invest program at scale.

Therefore, the question before the committee is not whether such a program is feasible. The question is whether the study MDE is directed to conduct will be rigorous enough to produce a design that is durable, credible, equitable, and enforceable.

The federal policy reversals also reveal a structural design imperative that the study must address explicitly. HB 1199 Section (c)(3)(iv) directs the study to analyze *"the potential impact of existing and anticipated changes to federal funding and regulatory programs."* The committee should understand that this is not merely a fiscal coordination question—it is a program design resilience requirement. Maryland's cap-and-invest program must be architected with explicit structural independence from federal co-regulatory assumptions.

That means: (a) the cap trajectory cannot rely on federal vehicle standards delivering a portion of the reduction it is designed to complement; (b) the *Measurement, Reporting and Verification* (MRV) baseline for buildings and transportation sectors must be built on Maryland-specific verified data rather than EPA national emission factors; and (c) the program's cost containment and price stability mechanisms must account for the scenario where federal clean energy investment programs are withdrawn mid-program. Designing for federal policy resilience is not a partisan argument—it is operational prudence, and the study's design work must stress-test (i) the cap trajectory, (ii) MRV baseline, and (iii) revenue modeling against a scenario of continued federal program reduction.

I offer five specific observations toward that end.

OBSERVATION 1: OVERBURDENED COMMUNITIES—FACILITY-SPECIFIC LIMITS REQUIRE AN EVIDENCE BASE THAT MUST BE BUILT NOW

The bill directs the study to evaluate the treatment of covered facilities located near overburdened communities—including the potential for facility-specific emissions limits more stringent than the program-wide cap. This is the most environmentally just and the most operationally complex element of the bill, and it deserves the most careful study design.

Maryland's *Climate Solutions Now Act* provides statutory definitions of "overburdened" and "underserved" communities that are among the most precise in the country. Applying those definitions to cap-and-invest program design requires a specific and currently incomplete evidence base: (1) Facility-by-facility data linking emissions profiles; (2) Pollution burden indices; (3) Proximity to defined overburdened communities; and (4) The health outcome data that demonstrates cumulative impact. Without this data architecture, facility-specific limits cannot be fairly designed, legally defended, or equitably enforced. A covered facility near an overburdened community that faces a tighter limit than a comparable facility in a less affected area must understand—and must be able to challenge—the specific evidence basis for that differential treatment.

The study should therefore include—*as a foundational component*—a systematic mapping of Maryland's covered facility universe against the overburdened community definitions in the *Climate Solutions Now Act.* This mapping should be conducted at the census tract level, using MDE's existing cumulative impact screening tools, and should produce a facility classification that is transparent, contestable, and defensible. The facility-specific limit framework cannot be fairly designed without it.

I would also draw the committee's attention to an operational lesson from development finance practice that is directly applicable here. In multilateral development bank project finance, the design of differential environmental standards for communities bearing disproportionate pollution burdens—what the World Bank calls "enhanced mitigation requirements" for projects affecting vulnerable populations—is governed by a structured community engagement protocol that produces documented community consent before differential standards are applied.

Maryland's program design should consider an analogous mechanism: Requiring that the overburdened communities whose proximity triggers facility-specific limits have meaningful input into how those limits are designed and what timelines govern their implementation. This is not simply good governance practice. It is the design choice that will determine whether facility-specific limits are seen as protective by the communities they serve, or as administratively imposed without their voice.

HB 1199 specifically names the *Commission on Environmental Justice and Sustainable Communities* (CEJSC) as a coordination partner for this study. That coordination requirement should be designed to give the CEJSC—and through the CEJSC, the affected communities it

represents—genuine decision-making authority in the design of facility-specific limit proposals, not merely a consultation notification role. The study should specify the community engagement process by which facility-specific limit proposals will be developed—including the documentation required to demonstrate that affected communities have been genuinely consulted, not merely notified—and should establish the CEJSC as the institutional vehicle through which that engagement is structured and documented.
Beyond the design of facility-specific limits, the study should evaluate the framework for *ongoing cumulative impact monitoring* after the program is operational. Facility-specific limits set at program launch will reflect the emissions and health burden data available at that time. That data will change as the program operates, as industrial activity in affected areas shifts, and as health outcomes in overburdened communities evolve. A program that sets facility-specific limits without a mechanism for monitoring whether those limits are actually reducing cumulative pollution burden—and without a defined protocol for tightening limits if monitoring shows they are not achieving their protective purpose—treats environmental justice as a design feature rather than an outcome obligation.

In development finance practice, enhanced mitigation requirements for communities bearing disproportionate environmental burdens are always paired with Environmental and Social Monitoring Plans. These typically involve structured, time-bound frameworks that specify: (1) The indicators to be tracked; (2) The frequency of measurement; (3) The threshold at which adaptive management is triggered; and (4) The community reporting mechanism through which affected residents can access and contest monitoring results. Maryland's program study should design an analogous framework for overburdened communities subject to facility-specific limits—ensuring that the protective intent of the limit-setting mechanism is matched by the accountability infrastructure needed to verify that protection is being delivered.

OBSERVATION 2: REVENUE INVESTMENT ACCOUNTABILITY—THE ARCHITECTURE MUST BE DESIGNED BEFORE THE REVENUE FLOWS

The bill directs the study to evaluate how auction revenues will be invested across a broad set of priorities: (1) Low- and moderate-income household rebates; (2) Weatherization; (3) Clean energy and efficiency programs; (4) Transportation investments; (5) Carbon removal; (6) Ecosystem resilience—including the Chesapeake Bay; (7) Community climate resilience; and (8) Workforce development.

These are the right investment priorities. But the study should also design the *accountability architecture* that ensures revenues actually reach these destinations in the amounts committed, through mechanisms that are transparent to the communities receiving them and verifiable by independent oversight. Revenue investment accountability is not a secondary administrative concern—it is the mechanism by which the program's equity commitments become real rather than nominal.

The design challenge here is specific and underappreciated. Cap-and-invest auction revenues are not like dedicated tax revenues. That's because they fluctuate with allowance prices, which in turn fluctuate due to the manner in which three variables interact: (1) Economic conditions; (2) Emissions trends; and (3) Permit market dynamics. A program that commits to investing a fixed proportion of revenue in overburdened community priorities must design for revenue variability—including automatic response mechanisms when revenue falls below commitment thresholds, and transparent reporting when investment targets are not met.

Maryland's own RGGI experience provides both a model and a cautionary note. As stated earlier, the state's RGGI *Strategic Energy Investment Fund* (SEIF) performed impressively—generating over $1.7 billion in cumulative auction proceeds invested across energy efficiency, clean energy, direct bill assistance, and climate programs. This outstanding record demonstrates both the revenue potential of a well-structured cap-and-invest mechanism and the administrative infrastructure Maryland has built to deploy it. However, that record is accompanied by a documented diversion history: In fiscal year 2026 alone, the Governor was authorized to transfer $259 million from the SEIF to the General Fund, and similar redirections have recurred in the past under successive administrations when state budget conditions deteriorated.

HB 1199 Section (c)(2)(ii) explicitly directs the study to evaluate *"the implications of some or all of the revenue generated through a program being temporarily diverted to other non-climate-related expenditures."* This provision confirms that the revenue diversion risk is a live and recognized concern—not a hypothetical critique—and that the study is specifically mandated to address it. The accountability architecture I recommend—stronger ring-fencing, more granular investment tracking, and more accessible public reporting than the current RGGI framework provides—is the design mechanism by which the diversion risk identified in Section (c)(2)(ii) is structurally addressed rather than merely studied.

The study should also address the low-income household affordability dimension that HB 1199 Section (c)(3)(iii) explicitly names: *"strategies to ensure that low-income households do not experience a net increase in costs resulting from a program."* The revenue investment accountability framework must be designed in conjunction with this affordability modelling requirement—ensuring that revenue commitments to low- and moderate-income households are both ring-fenced against diversion and sufficient in magnitude to offset program costs for those households. An accountability architecture that protects revenue from diversion but allows it to be allocated below the level needed to achieve net-zero cost for affected households is incomplete.

The study should evaluate: (1) The governance structure for investment decisions—including the degree to which affected communities have decision-making authority rather than merely advisory roles; (2) The reporting and verification requirements that document investment outcomes, not just expenditures; and (3) The enforcement mechanism when investment commitments are not met. A program whose revenue commitments are unverifiable is a program whose equity promises are unenforceable. The study must address this before the program is designed.

One final observation on study design governance. HB 1199 Section (e) specifies that study funding shall come from the *Maryland Strategic Energy Investment Fund,* with reimbursement from program revenues if the program is implemented on or before June 30, 2030. This creates a subtle but real structural dynamic: MDE has a financial incentive—the prospect of cost recovery—to design a study that confirms program viability rather than rigorously interrogating it. The accountability principle I have applied to revenue investment architecture—"a program whose revenue commitments are unverifiable is a program whose equity promises are unenforceable"—applies equally to study design. A study that is funded against the expectation of a program to follow should be evaluated by independent peer review before its design recommendations are submitted to the General Assembly. This parallels standard practice in major infrastructure project feasibility studies, where the design consultant and the reviewing authority are not the same entity. The committee should consider whether the study's design recommendations warrant independent technical evaluation before they become the basis for program legislation.

Two additional study design elements in HB 1199 bear directly on the revenue accountability architecture this observation addresses, and the study should treat them in conjunction rather than in isolation. Section (c)(1)(iv) directs the study to evaluate no-cost allowance allocations to gas and electric utilities—a design choice that determines how much of the compliance cost is absorbed at the utility level versus passed through to ratepayers. This is not merely a utility cost question: The magnitude and structure of no-cost allocations directly determines how much auction revenue is available to fund the low-income household affordability mechanisms that Section (c)(3)(iii) requires the study to design. A study that optimizes no-cost allocation levels without simultaneously modeling their effect on the revenue available for household rebates and weatherization programs will produce recommendations that are internally inconsistent—the allocation decision and the affordability modeling are the same calculation, not sequential ones.

Section (c)(1)(v) directs the study to evaluate auction design, including automatic market response mechanisms. These mechanisms are principally price floors and cost containment reserves that release additional allowances when market prices spike. And they are the primary instruments by which the program protects covered entities and households from allowance price volatility. But they are also the primary instruments through which allowance price trajectories, and therefore auction revenues, are managed. The revenue investment accountability architecture that this observation recommends—including ring-fencing commitments and automatic response mechanisms when revenues fall below commitment thresholds—must be calibrated against the price range assumptions built into the auction design. Designing revenue accountability in the abstract, without anchoring it to the program's price containment structure, would create a budget around a revenue figure that the program's own mechanics may not reliably produce.

OBSERVATION 3: THE DATA GOVERNANCE ARCHITECTURE OF A LINKED PROGRAM

The bill directs the study to evaluate whether Maryland's program should link to the California-Quebec cap-and-trade system and/or to Washington State's *Climate Commitment Act* program.

The benefits of linkage are well-documented: larger, more liquid allowance markets reduce compliance costs, stabilize allowance prices, and improve the program's resilience to economic volatility. These benefits are real and the study should take them seriously.

However, there is one significant development that occurred after HB 1199 was drafted and that the study must explicitly address. Washington State's *Climate Commitment Act* (CCA)—which the bill's own preamble cites as a program that has "successfully implemented" cap-and-invest—survived a voter initiative to repeal it in November 2024: More than 62% of Washington voters rejected *Initiative 2117,* and the program remains operational. That outcome does not, however, resolve the question of the CCA's long-term structural durability. The program faces continued legislative scrutiny in the 2025–26 Washington session, and its trajectory through the period of Maryland's study and program launch cannot be treated as settled.

For this reason, the study should evaluate the linkage question under two scenarios with equal analytical rigor: ***first,*** the scenario in which Washington's program is available as a linkage partner at the time of Maryland's program launch; and ***second,*** the scenario in which it is not. Considering the second scenario as a real possibility, the study should assess whether California-Quebec linkage alone provides sufficient market liquidity and price stability to meet Maryland's program objectives—and should identify what additional design modifications would be required if Washington linkage is unavailable at launch but becomes available in later program years. Building this dual-scenario structure into the study design ensures that Maryland's program is architected for linkage resilience, not linkage dependency.

Important to note is that linkage always creates a transboundary *data governance* challenge that the existing cap-and-invest literature has systematically underexamined, and that the study must address explicitly. Here's why:

When linked programs allow covered entities to use allowances from any linked jurisdiction to satisfy compliance obligations in any other, the environmental integrity of the linked system depends entirely on the comparability of the emissions data produced by each jurisdiction's measurement, reporting, and verification framework. An allowance generated in California and surrendered for compliance in Maryland is an equivalent unit only if the tonne of CO_2 it represents was measured, reported, and verified to equivalent standards in both jurisdictions. Where MRV standards diverge—in how facility emissions are calculated, what monitoring equipment is required, how data gaps are filled, and how third-party verifiers are accredited—the allowances traded between systems do not represent equivalent climate outcomes. Linkage produces price efficiency at the cost of environmental accounting integrity.

The current MRV landscape for a Maryland linkage evaluation is specifically complex. Maryland's covered facilities currently report under RGGI's MRV protocols, which were designed for electricity generating units and are not directly applicable to the transportation, buildings, and industrial sectors that an economy-wide program would newly cover. California's MRV requirements for these sectors are more developed and more prescriptive than RGGI's—

but they were designed for California's specific facility universe, regulatory authority, and enforcement infrastructure.

Washington's CCA program had been operating for only approximately three years at the time of the 2024 repeal initiative, and its MRV framework—while preserved along with the program—remains the least developed of the three prospective linkage jurisdictions. The ongoing legislative uncertainty surrounding the CCA in the 2025–26 session compounds this design consideration: Maryland's study should not assume that Washington's MRV standards will converge with California-Quebec's more established protocols on any particular timeline, and should specify what minimum verification maturity standards Maryland would require of any linkage partner before an agreement is executed.

The study should specifically evaluate: ***first,*** the current areas of divergence between RGGI protocols, California-Quebec MRV requirements, and Washington's verification standards (if the CCA survives the 2026–27 session) for the sectors Maryland would newly cover; ***second,*** the governance mechanism by which compliance disputes involving cross-jurisdictional allowances would be adjudicated—including what data authority governs when Maryland's and a linked partner's MRV systems produce different emissions figures for the same covered entity; and ***third,*** the minimum data quality and independent verification standards that Maryland should require of covered facilities as a precondition for linkage eligibility.

This is not a design detail to be resolved after the program is established. The data governance architecture of a linked program must be designed before the linkage agreement is executed—because once allowances are flowing across jurisdictions, retrofitting MRV harmonization requirements is administratively and legally extremely difficult. Maryland has the opportunity in this study to define the data standards it will insist upon, rather than simply accepting the design choices of its prospective link partners.

A parallel data governance challenge concerns the treatment of *electricity generation* under the new program. HB 1199 Section (c)(1)(i)(3) and (4) direct the study to evaluate the benefits and drawbacks of covering electricity generation under the new program in addition to its existing RGGI coverage, and the benefits and drawbacks of covering electricity generated in and imported from states that do not participate in RGGI. This is not merely a regulatory coordination question—it is fundamentally an emissions accounting integrity problem.

If electricity generators already surrender RGGI allowances for their power sector emissions, and the new program also covers those same facilities, the MRV architecture must prevent double-counting of the same tonne of CO_2 as a compliance event under two separate programs. The study must define the MRV boundary rule that determines which program's allowance obligation applies to which portion of a covered generator's emissions—and must specify how that boundary is maintained when the same entity operates both RGGI-covered units and non-RGGI industrial facilities that would be newly covered by the economy-wide program.

The imported electricity question presents a distinct data governance challenge. How do you measure, attribute, and assign compliance obligations for emissions that physically occur in non-RGGI states but whose electrons enter Maryland's grid? The study must specify a measurement and attribution methodology before coverage is extended to imported electricity—including: (1) Whether attribution will be based on resource-specific tracking, system average emission factors, or a hybrid approach; (2) What verification standard Maryland will require from out-of-state generators whose emissions would be newly covered; and (3) How compliance disputes will be adjudicated when imported electricity comes from jurisdictions that do not operate comparable MRV systems.

These are not questions that can be deferred to implementing regulations. The choice between covering electricity within the new program versus leaving it solely within RGGI determines the program's administrative complexity, its interaction with regional power markets, and the data governance infrastructure it must build. The study should address both options explicitly, with the MRV boundary and attribution methodology specified for each.

A related data governance question that the study should address concerns the treatment of *emissions-intensive, trade-exposed industries.* The bill directs MDE to evaluate how EITI sectors are treated in program design—a question with significant competitive implications for Maryland's manufacturing, chemical, and industrial base. HB 1199 Section (c)(1)(iii) specifically requires this evaluation to occur *"while accounting for facility proximity to overburdened communities"*—a formulation that links the competitive protection question directly to environmental justice geography. The evidence base for determining which industries qualify for EITI treatment, and at what protection level, is itself a data quality and verification question that deserves explicit study scope. EITI classifications are frequently made using sector-wide economic and emissions proxies rather than facility-specific verified data—a methodology that can both over-protect industries that are less exposed than their sector averages suggest and under-protect facilities that are more exposed. Maryland's study should specify (1) that EITI eligibility determinations be grounded in *facility-level* verified emissions and economic data, (2) that the methodology be transparent and publicly documented, and (3) that eligibility be subject to periodic reassessment as market conditions and emissions profiles change. We must recognize that an EITI framework built merely on sector proxies is an EITI framework that serves industrial lobbying interests rather than the competitive protection rationale that justifies it.

A final data governance dimension concerns *the use of offset credits.* HB 1199 Section (c)(1)(vi) directs the study to evaluate *"the use of offset credits, including whether to allow offsets for a portion of compliance and evaluating the assumption that annual allowance budgets would be reduced to account for the offsets."* An economy-wide program that allows covered entities to satisfy a portion of their compliance obligation through offsets must ensure that each offset credit represents a real, additional, permanent, and verifiable emissions reduction. If offset quality standards are weak, then the cap is functionally looser than it appears, and the program's emissions reduction claims are overstated.

The same analytical framework I have applied to linked allowances—equivalence depends on the comparability of the underlying MRV standards—applies equally to offsets. An offset generated from a forestry project or methane capture operation is an equivalent climate unit *only if* the methodology used to measure and verify the sequestration or avoided emissions meets the same rigor as the direct facility emissions data it is meant to offset. California's cap-and-trade program has faced extensive documented criticism over offset quality, permanence failures, and third-party verification inadequacies—criticism that spans peer-reviewed academic analysis of the state's *Forest Protocol,* California's own 2025 official policy review of environmental justice outcomes in the cap-and-trade program, and a growing body of systematic research on compliance market governance weaknesses.

The study should therefore specify minimum offset protocol standards as a precondition for offset eligibility—not leave this to MDE's regulatory discretion after the program is launched. That includes: (1) The permanence monitoring and reversal liability framework for nature-based offsets; (2) The additionality demonstration requirements that ensure credited reductions would not have occurred in the absence of the offset incentive; (3) The third-party verification standards that govern offset quantification; and (4) The data documentation requirements that make offset calculations independently auditable. The annual allowance budget reduction assumption referenced in Section (c)(1)(vi) must also be grounded in verified offset volume data—not projected offset supply. A program that sets its cap under the assumption that a certain volume of offsets will be available, and then finds that high-quality offsets are scarcer or more expensive than modeled, is a program whose emissions outcome will certainly exceed its design intent.

OBSERVATION 4: AI-ASSISTED EMISSIONS MEASUREMENT—GOVERNANCE REQUIREMENTS FOR MODERN MRV SYSTEMS

Modern cap-and-invest MRV systems increasingly rely on computational tools to generate the compliance data on which allowance obligations are determined. These include: (1) Continuous emissions monitoring systems; (2) AI-assisted calculation engines; (3) Satellite-based remote sensing for methane and CO_2 detection; (4) Machine-learning models for facility-level emissions estimation; and (5) Algorithmic gap-fill methodologies when monitoring equipment malfunctions or when data is missing. These technological approaches improve emissions monitoring coverage, reduce reporting burden, and can detect emissions that self-reporting would miss. The study should evaluate their incorporation into Maryland's MRV framework as a design priority.

However, these same tools introduce a governance challenge that the study must also address in parallel: When a covered facility's compliance obligation is determined in whole or in part by an AI-assisted or algorithmically-derived emissions calculation, the facility must be able to understand, verify, and—where it has grounds—challenge that calculation.

If the pathway from raw sensor data, satellite observation, or modelled estimate to a final compliance-determining emissions figure is not transparently documented *and independently*

auditable, the compliance determination rests on an evidentiary foundation that cannot be examined by the regulated entity, its counsel, or MDE's own enforcement staff.

This is not a theoretical risk. AI-assisted monitoring systems incorporate data processing steps, imputation methodologies, and model-generated estimates whose internal logic may be opaque to everyone except the system's developer. In the context of a cap-and-invest program, where a facility's compliance determination directly affects its financial obligations—and where non-compliance carries legal and financial penalties—the inability to audit an AI-generated compliance figure is a due process problem, not merely an administrative one.

The study should evaluate and recommend: (1) What algorithmic transparency and technical documentation requirements Maryland should impose on MRV systems used by covered facilities or third-party verifiers; (2) What right a covered facility should have to receive a human-readable, step-by-step explanation of any AI-generated or algorithmically-derived compliance determination; (3) What independent audit pathway MDE should maintain to verify AI-generated emissions calculations without relying solely on the verifier's assertion; and (4) What standards should govern the use of AI-generated gap-fill estimates when primary monitoring data is unavailable, including maximum allowable gap durations and mandatory disclosure thresholds.

These requirements are not novel. The right to meaningful challenge of a compliance determination is a foundational principle of American administrative law, and AI-generated compliance figures should be no exception. Even the EU's *AI Act*—entering, in August 2026, its high-risk compliance phase for AI systems used in consequential regulatory determinations—provides a directly applicable governance model for transparency, technical documentation, human oversight, and audit rights in exactly this category of AI application.

Maryland need not wait for federal AI governance standards to incorporate these protections into its program design. Embedding them at the design stage is both administratively simpler and legally more defensible than retrofitting them after compliance disputes arise.

OBSERVATION 5: INTEGRATION WITH CORPORATE CLIMATE DISCLOSURE OBLIGATIONS—DESIGNING FOR THE WHOLE INFORMATION ARCHITECTURE

Maryland's covered entities under an economy-wide cap-and-invest program—its largest industrial emitters, utilities, fuel suppliers, and commercial buildings operators—are the same organizations that are simultaneously subject to a growing body of mandatory climate disclosure obligations: (1) *International Sustainability Standards Board – ISSB*-aligned sustainability reporting standards now operative or formally adopted in the European Union, United Kingdom, Australia, Japan, and Canada; (2) The EU's *Corporate Sustainability Reporting Directive* (CSRD) and its associated *European Sustainability Reporting Standards* (ESRS) for the many Maryland-based corporations with European operations or supply chain relationships; and (3)

The disclosure expectations of international institutional investors and lenders for whom climate-aligned reporting is increasingly a condition of capital access.

These parallel obligations all require facility-level, verified emissions data. The MRV framework Maryland designs for its cap-and-invest compliance system will generate precisely this data—for every covered facility, every year, verified by an accredited third party. The question the study should address is whether that compliance data can be designed to serve both purposes simultaneously: cap-and-invest compliance and corporate disclosure, without duplicate measurement, duplicate verification, and duplicate reporting at the facility level.

The integration case is strongest—and most consequential—for *Scope 3* emissions accounting. Many of Maryland's largest covered facilities are upstream suppliers, fuel distributors, or industrial producers whose direct facility emissions appear simultaneously as their own *Scope 1* compliance obligations and as the *Scope 3* upstream emissions of their corporate customers and business partners. A cap-and-invest MRV system that produces facility-level verified emissions data in a structured, interoperable format can become the data foundation for accurate *Scope 3* accounting across Maryland supply chains—reducing the measurement inconsistency and verification gap that currently makes *Scope 3* figures the least reliable element of corporate climate disclosure.

This integration does not require redesigning the cap-and-invest program. It requires designing the MRV data architecture from the outset with disclosure compatibility in mind. That would mean: (1) Standardized data formats; (2) Structured reporting templates; and (3) Public accessibility of verified facility-level emissions data. California's Air Resources Board has moved in this direction with its *Mandatory Greenhouse Gas Reporting* regulation, which produces a publicly accessible facility-level emissions database that is used both for compliance purposes and as the primary data source for *Scope 3* accounting by California-linked supply chains. Maryland's program design should evaluate this model explicitly and consider how it can be improved upon.

The study should specifically address: (1) The data format and accessibility standards that would make Maryland's MRV data interoperable with the disclosure frameworks most relevant to Maryland's covered entities—principally the *European Sustainability Reporting Standards* (ESRS) under the EU's *Corporate Sustainability Reporting Directive* (CSRD) and the ISSB S1/S2 standards, both of which are operative and carry direct compliance obligations for the many Maryland-headquartered corporations with European operations, international supply chains, or institutional investor relationships governed by those frameworks; (2) The governance framework for public access to verified facility-level emissions data; and (3) The potential for Maryland to establish itself as a leader in integrated climate data infrastructure—producing compliance data that simultaneously serves regulatory, investor, and supply chain accountability purposes.

On the question of federal disclosure standards: The SEC's climate disclosure rule—adopted in March 2024 and immediately stayed by the Commission itself pending litigation—remains in

legal and regulatory limbo under the current federal administration, and cannot be treated as a stable interoperability anchor for program design purposes. This is precisely why Maryland's study should design its MRV data architecture against the international frameworks that are operative and enforceable, rather than against domestic federal standards whose trajectory is uncertain. An MRV data architecture designed for ESRS and ISSB interoperability will satisfy any future domestic disclosure standard that achieves comparable rigor—but the reverse is not guaranteed. Maryland's program design should build upward from the highest-quality operative standard, not sideways from a contested one.

CONCLUSION

House Bill 1199 creates the legislative foundation for a study that is genuinely consequential for Maryland's legal obligations, economic future, and the communities that bear the greatest burden of its industrial emissions. The five design dimensions I have addressed—(1) overburdened community evidence architecture and engagement, (2) revenue investment accountability, (3) transboundary data governance for a linked program, (4) AI-assisted MRV governance, and (5) integration with corporate disclosure obligations—are not arguments for or against the program itself. They are specific operational design questions where investing rigor during the study phase will produce a more credible, more equitable, more durable, and more legally defensible program when it is ultimately implemented.

Maryland's emissions gap is real, legally mandated to close, and growing under current policy conditions. The cap-and-invest study is the right mechanism to design the most powerful tool available to close it. The committee's support for this bill—and its direction to MDE to conduct the study with the operational depth these design questions require—will determine whether Maryland's program becomes a national model for equitable, data-driven, administratively rigorous climate policy, or an instrument whose ambition exceeds its accountability architecture.

I am available to provide supplementary analysis or respond to questions from committee members or MDE staff on any aspect of these observations.

Respectfully submitted,
Otto Starzmann
ESG Strategy & Corporate Data Ethics Authority
New York, New York, United States of America
otto@ottostarzmann.com
www.linkedin.com/in/ottostarzmann

March 2, 2026