## **Cedar Lane Ecosystems Study Group**

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Maryland Department of the Environment 1800 Washington Blvd. Baltimore, MD 21230

To whom it may concern,

The Ecosystems Study Group (ESG) has signed onto the Montgomery Climate Coalition comments, as the many ideas described in the Pathway report will certainly have some benefits. ESG especially appreciates that the Pathway report acknowledges that it is focused only on "actions the state can take to achieve Maryland's nation-leading greenhouse gas (GHG) emissions reduction goals" and that "there are many uncertainties and challenges around the full implementation of the federal and State policies modeled in the core scenarios." ESG's primary concerns, however, which we were not able to summarize in time for the Coalition submission and review process, is that the State needs to more fully acknowledge these and other uncertainties and challenges, including within the context of the several other planetary boundaries that humanity has exceeded beyond solely climate, as noted in numerous recent peer-reviewed papers (e.g., see a 2023 summary in Scientific American, Humans Have Crossed 6 of 9 'Planetary Boundaries',

https://www.scientificamerican.com/article/humans-have-crossed-6-of-9-planetary-boundaries/). Additionally, with regard to climate, the focus on GHG emissions alone is severely limited given the many other methods that can and need to be employed for cooling.

This acknowledgement is critical in helping the State to plan and prepare accordingly, and in order to fully inform, engage, and build trust with the public.

Please see ESG's comments that we submitted to Montgomery County on its draft climate action plan for more details,

https://docs.google.com/document/d/1iggORgHEPo4C2-eY2kSoqSWWLEJSuuZw/edit. These comments address many of the same concerns we have regarding the Pathway report. Many updates to the science have been published since then, including regarding both the planetary boundaries framework and the "unexpected" (though not unexpected to most reputable scientists) temperature spikes in recent months compared to prior years.

 More recent information includes Simon Michaux's work (and about a half dozen other similar analyses) regarding the metals and minerals limits in the way of achieving even the first generation build out of renewables and related infrastructure by 2050, https://docs.google.com/document/d/1KLRpTfG5dzADbkxwpLxTnBvHD9bu04TleifBoiubAi8/edit (Geological Survey of Finland)

- Mark P. Mills materials https://docs.google.com/document/d/1iZQ1h4WRCk337pKcB995HiTuTjBAARcKmPhRo
   9uFENY/edit (Manhattan Institute)
- Tom Murphy materials https://docs.google.com/document/d/1rFKt1aCt5DvE\_Kefxgg014\_Alj6-SfrDeJu\_1tGTD\_c/edit (Do the Math)
- Jason Makansi materials https://docs.google.com/document/d/1Q2fSwmoP5\_noQY1topRPA87xMyXrBL1g8RiT9u
   OAdzw/edit (Independent consultant to the electricity and energy industries)
- Guillaume Pitron materials https://docs.google.com/document/d/1UW oHXGjBEt0ecUHyf91Ar5AO8IAI27au1OLA

   RkMKI/edit (French journalist and writer who specializes in the geopolitics of raw materials)
- Pallasceres materials https://docs.google.com/document/d/1JRVIGSrSrbkd9J3RTyQc4at6SyXTDHq0GBSFJZ
   4mGL0/edit
   (by Megan Seibert, The REAL Green New Deal Project)
- Bright Green Lies summary, excerpts, and commentary -<a href="https://docs.google.com/document/d/1zSXGowAbio4YxS6Zox7txlrUKlgA2Ewyil7VkY2he">https://docs.google.com/document/d/1zSXGowAbio4YxS6Zox7txlrUKlgA2Ewyil7VkY2he</a>
   <a href="Ao/edit">Ao/edit</a> (Derrick Jensen, Lierre Keith, and Max Wilbert)

Thank you for your consideration.

Sincerely, Jim Laurenson ESG Co-chair