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MENDING MEPA ANALYSIS: PROPERLY ADDRESSING CLIMATE CHANGE COSTS UNDER THE MINNESOTA ENVIRONMENTAL POLICY ACT

*Brent Murcia**

Climate change—the gradual warming of the atmosphere due to an accumulation of greenhouse gases—poses a growing threat to humans and the environment worldwide, including in Minnesota.¹ As scientific warnings grow increasingly dire, decision-makers at the federal, state, and local levels face escalating pressure to consider climate change in their actions.² In order for governments to adequately address climate change, they must have access to quality information about the consequences of their choices. Environmental review statutes, such as the National Environmental Policy Act (NEPA) and various state “little NEPAs,” provide one avenue for governments to get that kind of information.³ The Minnesota Environmental Policy Act (MEPA) is a state statute that requires governmental units to gather information about the environmental effects of their actions.⁴

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* J.D., 2021, University of Minnesota Law School; B.A. Environmental Studies, 2016, Carleton College. All views expressed are my own. Thank you to Professor Mitchell Zamoff for guiding me through the note-writing process; to Professor Alexandra Klass, Hudson Kingston, Kevin Reuther, and Amelia Vohs for their helpful comments on earlier drafts; to the staff and editors of the Minnesota Journal of Law, Science & Technology for their patience, hard work, and comments; and above all, to my family and friends who have supported me through this work and the last three years of law school.

1. See, e.g., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC), SUMMARY FOR POLICYMAKERS, SPECIAL REPORT: GLOBAL WARMING OF 1.5°C (Valérie Masson-Delmotte et al. eds., 2018).

2. See, e.g., Dana Ferguson, *Youth Climate Strike Draws Thousands Across Minnesota*, PIONEER PRESS (Sept. 21, 2019), <https://www.twincities.com/2019/09/20/youth-climate-strike-draws-thousands-across-minnesota/>.

3. See, e.g., 42 U.S.C. § 4332(C). The relationship between state and federal environmental review statutes is discussed in greater detail in Part I.A. of this Note.

4. MINN. STAT. §§ 116D.01–.11 (2020); see also MINN. R. 4410.0300–.7055 (2020).

State agencies and other units of government, such as local governments, must use MEPA documents as “guides in . . . carrying out [their] responsibilities . . . to avoid or minimize adverse environmental effects and to restore and enhance environmental quality.”⁵ The MEPA review process, therefore, is a critical piece of the climate change puzzle in Minnesota. How responsible governmental units interpret and implement MEPA has a direct impact on the climate information that decision-makers ultimately use.

This Note will advocate for changes to the way Minnesota addresses climate change in state-level environmental review under MEPA. Part I briefly describes the big picture of MEPA in the context of federal and other state environmental review. It explains the current lack of guidance in Minnesota for how to consider climate change under MEPA, and discusses some recently proposed new guidance for doing so. And it reviews the more robust guidance that exists at the federal level and in other states—as to both *when* agencies must consider climate impacts and *how* they must do so. Then, using these federal and state processes as a comparison, Part II discusses proposed changes in how Minnesota governmental units should address climate change impacts under MEPA.

I. BACKGROUND

Part I will discuss the history of NEPA and MEPA and will briefly review other state “little NEPAs.” It will discuss what MEPA requires—what actions require environmental review and what that review must contain. It will then discuss what MEPA requires in terms of review of greenhouse gas emissions, along with what NEPA and some of the other states require.

A. BIG PICTURE: NEPA, MEPA, AND OTHER STATE “LITTLE NEPAs”

MEPA is just one of several statutory schemes in the United States that require governmental units—federal or state agencies or local governments—to conduct environmental review of certain government or private actions or projects. Most notably, at the federal level, NEPA—enacted in 1970—requires federal agencies to analyze the environmental impacts of all “major Federal actions significantly affecting the quality of the human

5. MINN. R. 4410.0300, subp. 3 (2021).

environment.”⁶ A “[m]ajor federal action . . . means an activity or decision subject to Federal control and responsibility,” with some limitations described in regulations.⁷ This is an expansive category—encompassing, among other things, “adoption of . . . rules, regulations, and interpretations . . . , treaties . . . and formal plans . . . ”⁸ NEPA also affects private actions because it extends to federal agency “approval of specific projects”—which includes “actions approved by permit or other regulatory decision as well as federal and federally assisted activities.”⁹ Tens of thousands of federal agency actions every year require some level of NEPA analysis.¹⁰

The White House Council on Environmental Quality (CEQ), an agency created by NEPA,¹¹ promulgates regulations that interpret and elaborate on the procedural requirements of NEPA.¹² Currently, these regulations are in a state of flux: after more than 40 years with no substantive amendments, the Trump Administration’s CEQ issued a final rule in July 2020 dramatically overhauling their requirements (hereinafter “2020

6. 42 U.S.C. § 4332(C).

7. 40 C.F.R. § 1508.1(q) (2021). Prior to the extensive 2020 revisions of the Council on Environmental Quality (CEQ)’s NEPA regulations (discussed on the next page), major federal actions were defined as “actions with effects that may be major and which are potentially subject to Federal control and responsibility.” 40 C.F.R. § 1508.18 (2019). Because the 2020 NEPA Rule may soon be reversed by either a court or the new Biden Administration, this Note cites to both the new and old definitions where relevant.

8. 40 C.F.R. § 1508.1(q)(3) (2021) (formerly 40 C.F.R. § 1508.18 (2019)).

9. *Id.*

10. While the number of projects subject to NEPA analysis is huge, precise data on the numbers, types, and scale of those projects is hard to come by. See U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-14-369, NATIONAL ENVIRONMENTAL POLICY ACT: LITTLE INFORMATION EXISTS ON NEPA ANALYSES 6–9 (2014). According to one recent paper, the United States Forest Service alone took 33,976 actions that were covered by NEPA between 2005 and 2018; “[o]f these, 27,961 (82.3 percent) were processed as [Categorical Exclusions (CEs)], 5,377 (15.8 percent) as [Environmental Assessments (EAs)], and 638 (1.9 percent) as [Environmental Impact Statements (EISs)].” Forrest Fleischman et al., *US Forest Service Implementation of the National Environmental Policy Act: Fast, Variable, Rarely Litigated, and Declining*, 118 J. FORESTRY 403, 408 (2020).

11. 42 U.S.C. § 4342.

12. See 40 C.F.R. §§ 1500–1508 (2019). In addition, other federal agencies have their own NEPA regulations and/or guidance supplementing the CEQ’s regulations, establishing their procedures for complying with NEPA. See *Agency NEPA Implementing Procedures*, NEPA.GOV, https://ceq.doe.gov/laws-regulations/agency_implementing_procedures.html (last visited Mar. 23, 2021) (listing federal agency NEPA procedures).

NEPA Rule”).¹³ This new rule may significantly change the kinds of environmental impacts that NEPA documents must examine.¹⁴ However, at least four courts are currently hearing challenges to the final rule, although as of June 2021 none has yet enjoined it.¹⁵ Meanwhile, President Biden has ordered a review of the CEQ’s regulations;¹⁶ and his nominee to lead the CEQ was previously critical of these changes and may seek to reverse them.¹⁷

Still, the basic framework of NEPA remains the same. Some types of actions are exempt from NEPA analysis by statute¹⁸ or

13. Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, 85 Fed. Reg. 43304 (July 16, 2020); *see also* Kevin A. Ewing et al., *Trump Administration Publishes Final Revisions to NEPA Regulations*, NAT’L L. REV. (July 16, 2020), <https://www.natlawreview.com/article/trump-administration-publishes-final-revisions-to-nepa-regulations> (describing the final rule).

14. Ewing et al., *supra* note 13.

15. *Wild Virginia v. Council on Env’t Quality*, No. 3:20CV00045 (W.D. Va. filed Jul. 29, 2020); *Alaska Cmty. Action on Toxics v. Council on Env’t Quality*, No. 3:20-cv-05199-RS (N.D. Cal. filed July 29, 2020); *Env’t Justice Health Alliance v. Council on Env’t Quality*, Case No. 20-cv-6143 (S.D.N.Y. filed Aug. 6, 2020); *California v. Council on Env’t Quality*, Case No. 3:20-cv-06057 (N.D. Cal. filed Aug. 28, 2020); *see also* Elizabeth McCormick, *NEPA Litigation Update*, JD SUPRA (June 2, 2021), <https://www.jdsupra.com/legalnews/nepa-litigation-update-3665864/> (summarizing the current status of the lawsuits as of June 2021).

16. Exec. Order No. 13,990, 86 Fed. Reg. 7037 (Jan. 20, 2021) (“The heads of all agencies shall immediately review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (agency actions) promulgated, issued, or adopted between January 20, 2017, and January 20, 2021, that are or may be inconsistent with, or present obstacles to, the policy set forth in section 1 of this order [including ‘to listen to the science; to improve public health and protect our environment; . . . to reduce greenhouse gas emissions; to bolster resilience to the impacts of climate change . . .’]. For any such actions identified by the agencies, the heads of agencies shall, as appropriate and consistent with applicable law, consider suspending, revising, or rescinding the agency actions.”).

17. Kelsey Brugger, *Biden CEQ Pick Signals NEPA Changes*, E&E NEWS (Dec. 21, 2020), <https://www.eenews.net/stories/1063721221> (describing comments by Brenda Mallory, President Biden’s nominee for CEQ Chair). The Senate confirmed Mallory on April 14, 2021. *CEQ Welcomes Brenda Mallory as New Chair*, THE WHITE HOUSE (Apr. 14, 2021), <https://www.whitehouse.gov/ceq/news-updates/2021/04/14/ceq-welcomes-brenda-mallory-as-new-chair/>.

18. *See, e.g.*, 42 U.S.C. § 5159 (2018) (exempting an action “which has the effect of restoring a facility substantially to its condition prior to [a] disaster or emergency”).

agency regulation (“categorical exclusions”).¹⁹ The rest—about 50,000 per year—require an Environmental Assessment (EA), a brief document that allows an agency to determine whether an action will have significant environmental effects.²⁰ If the agency determines in its EA that an action does not have the potential for significant effects, it can issue a “Finding of No Significant Impact.”²¹ If the agency does identify the potential for significant impacts, it must complete a much more detailed Environmental Impact Statement (EIS), describing “the environmental impact of the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, [and] alternatives to the proposed action.”²² Federal agencies complete about 500 draft and final EISs per year.²³

From 1978 to 2020, CEQ regulations required an EIS to consider all environmental effects of a project, “whether direct, indirect, or cumulative.”²⁴ Direct effects “are caused by the action and occur at the same time and place.”²⁵ Indirect effects, on the other hand, “may include growth inducing effects and other effects related to induced change in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.”²⁶ A project’s “cumulative impact” refers to “the impact on the

19. 40 C.F.R. § 1508.1(d) (2021) (formerly 40 C.F.R. § 1508.4 (2019)).

20. 40 C.F.R. § 1508.1(h) (2021) (formerly 40 C.F.R. § 1508.9 (2019)) (defining “environmental assessment”); *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972) (requiring agencies to undertake this preliminary analysis); COUNCIL ON ENV’T QUALITY, EXEC. OFFICE OF THE PRESIDENT, THE NATIONAL ENVIRONMENTAL POLICY ACT: A STUDY OF ITS EFFECTIVENESS AFTER TWENTY-FIVE YEARS 19 (1997) (counting EAs).

21. 40 C.F.R. § 1508.1(l) (2021) (formerly 40 C.F.R. § 1508.13 (2019)).

22. 42 U.S.C. § 4332(C).

23. The National Association of Environmental Professionals (NAEP) counts the number of draft and final EISs published in the Federal Register each year. The total was between 404 and 548 every year between 2008 and 2012. U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-14-369, NATIONAL ENVIRONMENTAL POLICY ACT: LITTLE INFORMATION EXISTS ON NEPA ANALYSES 8–9 (2014). The Forest Service, Bureau of Land Management, Federal Highway Administration, and Army Corps of Engineers generally complete the most EISs. *Id.* at 9–10. The annual number of EISs may be decreasing: in 2016, NAEP counted 312 EISs, and in 2017, it counted only 241. NAT’L ASS’N OF ENV’T PROFESSIONALS, 2016 ANNUAL NEPA REPORT 6 (2017); NAT’L ASS’N OF ENV’T PROFESSIONALS, 2017 ANNUAL NEPA REPORT 6 (2018).

24. See 40 C.F.R. §§ 1508.7–8 (2019).

25. 40 C.F.R. § 1508.8(a) (2019).

26. 40 C.F.R. § 1508.8(b) (2019).

environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . . Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”²⁷ The 2020 NEPA Rule significantly altered these definitions, and no longer references “direct,” “indirect,” or “cumulative” effects in the definition.²⁸ Instead, the new rule defines “effects” as:

changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives, including those effects that occur at the same time and place as the proposed action or alternatives and may include effects that are later in time or farther removed in distance from the proposed action or alternatives.²⁹

Although these changes have raised concerns from many environmental advocates,³⁰ the concepts of direct, indirect, and cumulative effects still persist in CEQ guidance³¹ and in case law interpreting NEPA,³² so the exact effect of these rule changes (if they are not repealed or struck down) remains to be seen.

Along with NEPA, fifteen states, Puerto Rico, and the District of Columbia have enacted “little NEPAs”: state statutes

27. 40 C.F.R. § 1508.7 (2019).

28. The new rule also specifically repeals the former definition of “cumulative impact” from 40 C.F.R. § 1508.7 (2019). Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, 85 Fed. Reg. 43304, 43331, 43343–44, 43375, (July 16, 2020); *see also* Ewing et al., *supra* note 13 (discussing the implications of these changes).

29. 40 C.F.R. § 1508.1(g) (2021).

30. *See, e.g.*, Lisa Friedman, *Trump Weakens Major Conservation Law to Speed Construction Permits*, N.Y. TIMES (updated Aug. 4, 2020), <https://www.nytimes.com/2020/07/15/climate/trump-environment-nepa.html> (“‘This may be the single biggest giveaway to polluters in the past 40 years,’ said Brett Hartl, government affairs director at the Center for Biological Diversity, an environmental group.”).

31. *See, e.g.*, COUNCIL ON ENV’T QUALITY, CONSIDERING CUMULATIVE EFFECTS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (1997), https://ceq.doe.gov/publications/cumulative_effects.html; COUNCIL ON ENV’T QUALITY, GUIDANCE ON THE CONSIDERATION OF PAST ACTIONS IN CUMULATIVE EFFECTS ANALYSIS (June 24, 2005), https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/Guidance_on_CE.pdf. *See generally* Office of NEPA Policy and Compliance, *CEQ Guidance Documents*, ENERGY.GOV, <https://www.energy.gov/nepa/ceq-guidance-documents> (last visited Mar. 23, 2021) (compiling NEPA guidance documents).

32. *See, e.g.*, *Kleppe v. Sierra Club*, 427 U.S. 390, 413 (1976) (“Cumulative environmental impacts are, indeed, what require a comprehensive impact statement.”).

that require environmental review of government actions.³³ The “little NEPAs” generally share the same procedural structure as NEPA, requiring an EIS-like document for government actions that will have significant environmental effects.³⁴ However, they vary in several respects, including which governmental units and actions are covered and what an adequate EIS must contain.³⁵ Whereas the federal NEPA imposes only procedural requirements, some “little NEPAs,” such as Minnesota’s and California’s, impose substantive requirements for agency decisions.³⁶ MEPA is Minnesota’s “little NEPA.”

B. MEPA: ORIGINS, REQUIREMENTS, AND PROCEDURES

The Minnesota legislature enacted the Minnesota Environmental Policy Act (MEPA) in 1973 to:

encourage productive and enjoyable harmony between human beings and their environment, . . . promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of human beings; and . . . enrich the understanding of the ecological systems and natural resources important to the state and the nation.³⁷

Like NEPA, MEPA imposes a set of procedural requirements on state responsible governmental units,³⁸ or “RGUs,” for

33. Mark A. Chertok, “Little NEPAs” and Their Environmental Impact Assessment Processes, SY015 ALI COURSE OF STUDY MATERIALS (2017); see also Council on Environmental Quality, *States and Local Jurisdictions with NEPA-like Environmental Planning Requirements*, NEPA.GOV, <https://ceq.doe.gov/laws-regulations/states.html> (last visited Mar. 13, 2021) (compiling memoranda that compare the requirements of state and local environmental review processes with NEPA).

34. Chertok, *supra* note 33.

35. *Id.*

36. *Id.*

37. MINN. STAT. § 116D.01 (2020).

38. MINN. STAT. § 116D.04 subd. 1a(e) (2020) (“Governmental unit’ means any state agency and any general or special purpose unit of government in the state including, but not limited to, watershed districts organized under chapter 103D, counties, towns, cities, port authorities, housing authorities, and economic development authorities established under sections 469.090 to 469.108, but not including courts, school districts, the Department of Iron Range Resources and Rehabilitation, and regional development commissions other than the Metropolitan Council.”); see also MINN. R. 4410.0200 subp. 34 (2021) (similarly defining “governmental unit”); *id.* subp. 43 (defining “local governmental unit”); *id.* subp. 75 (“Responsible governmental unit’ means the governmental unit that is responsible for preparation and review of environmental documents.”); *id.* subp. 76 (“RGU’ means responsible governmental unit.”).

the environmental review of “major governmental action[s].”³⁹ First, RGUs must prepare an Environmental Assessment Worksheet (EAW), analogous to an EA under NEPA (but with a more rote question-and-answer format), to “set out the basic facts necessary to determine whether an [EIS] is required for a proposed action.”⁴⁰ If an RGU finds no significant effects, it may issue a Negative Declaration (analogous to a NEPA “Finding of No Significant Impact”).⁴¹ Otherwise, the RGU must complete an EIS that “analyzes . . . [the] significant environmental impacts [of the project], discusses appropriate alternatives to the proposed action and their impacts, and explores methods by which adverse environmental impacts of an action could be mitigated.”⁴² Notably, MEPA applies not only to agencies, but also to “any general or special purpose unit of government in the state . . . ” including local governments.⁴³

The Minnesota Environmental Quality Board (EQB), composed of nine state agency heads and eight citizen members, promulgates rules establishing what categories of actions automatically require EAWs and EISs (and what categories are excluded), procedures for creating environmental documents, and required contents.⁴⁴ In Minnesota, an EAW is a standardized form (“EAW Form”), which the project proposer supplies the data for and the RGU completes.⁴⁵ An EAW is required for a project

39. MINN. STAT. § 116D.04 subd. 2a (2019). Similar to NEPA, major governmental actions under MEPA include private “projects wholly or partially conducted, permitted, assisted, financed, regulated, or approved by units of government . . . ” MINN. STAT. § 116D.04 subd. 1a(d) (2020). For a side-by-side comparison of the procedural requirements of NEPA and MEPA with links to specific language, *see* COUNCIL ON ENV’T QUALITY, MEMORANDUM: INTRODUCING FEDERAL NATIONAL ENVIRONMENTAL POLICY ACT PRACTITIONERS TO THE MINNESOTA ENVIRONMENTAL POLICY ACT (2015), https://ceq.doe.gov/docs/laws-regulations/state_information/MN_NEPA_Comparison_23Nov2015.pdf.

40. MINN. STAT. § 116D.04 subd. 1c (2019).

41. MINN. STAT. § 116D.04 subd. 2b (2019).

42. MINN. STAT. § 116D.04 subd. 2a (2020).

43. MINN. R. 4410.0200 subp. 34 (2021).

44. MINN. STAT. § 116D.04 subd. 2a (2020); *see also* MINN. R. §§ 4410.0200–.7055 (2021); MINN. ENV’T QUALITY BD., <https://www.eqb.state.mn.us/> (last visited Apr. 5, 2021) (containing more information about the EQB).

45. MINN. ENV’T QUALITY BD., ENVIRONMENTAL ASSESSMENT WORKSHEET (2013), <https://www.eqb.state.mn.us/sites/default/files/documents/Finalized%20EAW%20Form%20July2013.pdf> [hereinafter 2013 EAW FORM]; *see also* MINN. ENV’T QUALITY BD., EAW GUIDELINES: PREPARING ENVIRONMENTAL ASSESSMENT WORKSHEETS 4–6 (2013),

when an EQB-established “mandatory category” requires it,⁴⁶ when the RGU or EQB believes that “the project may have the potential for significant environmental effects,”⁴⁷ or when the proposer wishes to initiate it.⁴⁸

Similarly, an RGU must prepare an EIS when a “mandatory category” requires it,⁴⁹ when the RGU believes that “the proposed project has the potential for significant environmental effects,”⁵⁰ or when the RGU and proposer agree on it.⁵¹ Per EQB regulations, an EIS under MEPA must include “a thorough but succinct discussion of potentially significant adverse or beneficial effects generated, be they direct, indirect, or cumulative.”⁵² MEPA and its implementing regulations do not define “direct” or “indirect” effects. But where MEPA and NEPA contain similar language, “Minnesota courts have in appropriate circumstances relied on federal caselaw applying NEPA.”⁵³ The EQB’s definition of “cumulative impact” under MEPA is nearly identical to the CEQ’s pre-2020 definition under NEPA, with only minimal differences in wording.⁵⁴ Minnesota regulations also define a similar term, “cumulative potential effects,” as “the effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant

<https://www.eqb.state.mn.us/sites/default/files/documents/EAW%20guidelines%202013%20revision.pdf> [hereinafter 2013 EAW GUIDELINES] (describing the process of completing an EAW).

46. MINN. R. 4410.1000 subp. 2 (2021).

47. MINN. R. 4410.1000, subp. 3(A)–(C) (2021). *See also* MINN. R. 4410.1100 (2021) (establishing a petition process wherein “any person” may make a request for an EAW, to be granted if the RGU finds that the evidence shows that “the project may have the potential for significant environmental effects”).

48. MINN. R. 4410.1000, subp. 3(D) (2021).

49. MINN. R. 4410.2000, subp. 2 (2021); *see also* MINN. R. 4410.4000 (2021) (listing mandatory categories).

50. MINN. R. 4410.2000, subp. 3(A) (2021); *see also* MINN. R. 4410.1700 (2021) (providing decision criteria for RGUs to evaluate the need for an EIS).

51. MINN. R. 4410.0300, subp. 3(B) (2021).

52. MINN. R. 4410.2300(H) (2021).

53. *In re Applications of Enbridge Energy*, 930 N.W.2d 12, 19 (Minn. Ct. App. 2019).

54. MINN. R. 4410.0200, subp. 11 (2021) (“‘Cumulative impact’ means the impact on the environment that results from incremental effects of the project in addition to other past, present, and reasonably foreseeable future projects regardless of what person undertakes the other projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”).

area that might reasonably be expected to affect the same environmental resources”⁵⁵

Notably, unlike NEPA, MEPA has a substantive requirement in addition to its procedural requirements:

*No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state’s paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct.*⁵⁶

This language mirrors language in a related Minnesota statute, the Minnesota Environmental Rights Act (MERA), which provides a civil remedy “to protect air, water, land and other natural resources located within the state from pollution, impairment, or destruction.”⁵⁷ Together, the substantive requirements of MEPA and MERA mean that RGUs must not only study the potentially significant environmental effects of their actions, but also avoid actions causing pollution, impairment or destruction when it is feasible and prudent to do so.⁵⁸

C. CLIMATE CHANGE AS A “SIGNIFICANT IMPACT” FOR ENVIRONMENTAL REVIEW

Many major governmental actions result in greenhouse gas emissions. Greenhouse gas emissions may be either “direct” or

55. MINN. R. 4410.0200, subp. 11 (2021).

56. MINN. STAT. § 116D.04, subd. 6 (2020) (emphasis added); *see also* Chertok, *supra* note 33 (“Unlike the federal NEPA, which governs only procedural matters, a number of Little NEPAs do affect the substantive determinations by state agencies of actions within the acts’ coverage.”).

57. MINN. STAT. 116B.01 *et seq.* (2020).

58. *See* *In re NorthMet Project Permit to Mine Application*, 940 N.W.2d 216, 226, 226 n.12 (Minn. Ct. App. 2020) (observing that MERA “precludes the DNR from authorizing” certain conduct, and that MEPA “contains a similar prohibition”), *aff’d in part, rev’d in part on other grounds*, __ N.W. 2d __, 2021 Minn. LEXIS 203 (Minn. Apr. 28, 2021); *see also* Kevin Reuther, *MEPA at 36: Perspectives on Minnesota’s Little NEPA*, 39 ENV’T L. REP. NEWS & ANALYSIS 10663, 10663 (2009) (“The intent of MEPA was to couple the substantive standard with the [EIS] mechanism to determine and explore feasible and prudent alternatives.”).

“indirect” effects of a project.⁵⁹ Consider, for example, the case of a proposed new crude oil pipeline. The construction and operation of such a project would lead to “direct” greenhouse gas emissions. Construction and maintenance vehicles would burn fuel as part of the project, and the clearing of thousands of trees for construction would release stored carbon into the atmosphere.⁶⁰ The project would also cause “indirect” emissions. Pump stations, which power a pipeline, run on electric power, which comes from utilities that may burn coal or natural gas; while the emissions from those power plants are further away in time and distance from the pipeline, they are nonetheless reasonably foreseeable consequences of the project, and therefore “indirect” effects.⁶¹ Another type of “indirect” greenhouse gas emission is the “life-cycle” emissions of a project. Often discussed in an energy context, “life-cycle” greenhouse gas emissions refers to “emissions from the production, transportation, processing, and end-use of fossil fuels that will be produced or transported as a result of the proposed action.”⁶² In the case of a crude oil pipeline, for example, “life-cycle” greenhouse gas emissions encompass the emissions from the extraction, transport, refining, and ultimate consumption of the oil that would flow through the pipeline—again, “indirect” but foreseeable effects associated with a project.⁶³

Greenhouse gases, such as CO₂ and methane, impact the environment by contributing to global climate change.⁶⁴ One way that RGUs can attempt to quantify the climate change damages of a project’s emissions is through the “social cost of carbon.”⁶⁵

59. Michael Burger & Jessica Wentz, *Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review*, 41 HARV. L. REV. 110, 122 (2017); see also *Sierra Club v. FERC*, 867 F.3d 1357, 1371–72 (D.C. Cir. 2017) (explaining that NEPA requires consideration of reasonably foreseeable indirect effects, such as greenhouse gas emissions from the downstream burning of natural gas transported through a pipeline).

60. See, e.g., MINN. DEP’T OF COMMERCE, SECOND REVISED FINAL ENVIRONMENTAL IMPACT STATEMENT FOR LINE 3 PIPELINE, 5-456–5-460 (2019).

61. See, e.g., *id.* at 5-460–5-461; see also 40 C.F.R. § 1508.8(b) (2019) (definition of “indirect” effect under NEPA).

62. Burger & Wentz, *supra* note 59, at 116. Life-cycle emissions are sometimes divided into “upstream” and “downstream” emissions. *Id.* at 110.

63. See, e.g., MINN. DEP’T OF COMMERCE, SECOND REVISED FINAL ENVIRONMENTAL IMPACT STATEMENT FOR LINE 3 PIPELINE 5-462–5-466 (2019).

64. IPCC, *supra* note 1.

65. See, e.g., *Zero Zone, Inc. v. United States DOE*, 832 F.3d 654, 679 (7th Cir. 2016) (finding that federal agency usage of the social cost of carbon was not

Scientists use “integrated assessment models” to calculate the amount of climate change damages attributable to a given quantity of greenhouse gas emissions.⁶⁶ This allows them to calculate a “social cost of carbon . . . which tries to add up all the quantifiable costs and benefits of emitting one additional tonne of CO₂, in monetary terms.”⁶⁷ The social cost of carbon is “the most robust and widely used modeling protocol to forecast the future costs of climate change for human societies writ large.”⁶⁸ Numerous varying estimates of the social cost of carbon exist and have been used by courts and government agencies.⁶⁹ From 2009 to 2017, the U.S. Interagency Working Group on the Social Cost of Greenhouse Gases (IWG) published a widely respected social cost of carbon estimate used by federal agencies in regulatory analysis.⁷⁰ In 2017, President Trump disbanded the IWG and disavowed its social cost of carbon via executive order.⁷¹ But in 2021, President Biden reconvened the IWG,⁷² which has temporarily reset the social cost of carbon to its pre-2017 value, adjusted for inflation, pending further scientific review.⁷³

arbitrary or capricious, despite the metric’s limitations). Courts have also deferred to federal agency choices to *not* use the social cost of carbon; see *EarthReports, Inc. v. FERC*, 828 F.3d 949, 956 (D.C. Cir. 2016).

66. Q&A: *The Social Cost of Carbon*, CARBONBRIEF (Feb. 14, 2017), <https://www.carbonbrief.org/qa-social-cost-carbon>.

67. *Id.*

68. Doyle Elizabeth Canning, *Zeroing Out Climate Change: A ‘Hard Look’ at Trump’s Social Cost of Carbon*, 40 ENV’T L. REV. 10479, 10480 (2018). However, the social cost of carbon, while thorough, is not all-inclusive. See PETER HOWARD, OMITTED DAMAGES: WHAT’S MISSING FROM THE SOCIAL COST OF CARBON, THE COST OF CARBON PROJECT (Mar. 13, 2014), https://policyintegrity.org/files/publications/Omitted_Damages_Whats_Missing_From_the_Social_Cost_of_Carbon.pdf.

69. Iliana Paul, Peter Howard, & Jason A. Schwartz, *The Social Cost of Greenhouse Gases and State Policy: A Frequently Asked Questions Guide*, CENTER FOR POLICY INTEGRITY (2017), https://policyintegrity.org/files/publications/SCC_State_Guidance.pdf.

70. INTERAGENCY WORKING GRP. ON SOCIAL COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: TECHNICAL UPDATE OF THE SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866, 3 (2016).

71. Exec. Order No. 13,783, 82 Fed. Reg. 16093 (Mar. 28, 2017).

72. Exec. Order No. 13,990, 86 Fed. Reg. 7037 (Jan. 20, 2021).

73. INTERAGENCY WORKING GRP. ON SOCIAL COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON, METHANE, AND NITROUS OXIDE INTERIM ESTIMATES UNDER EXECUTIVE ORDER 13990 3 (2021); see also Heather Boushey, *A Return to Science: Evidence-Based Estimates of the Benefits of Reducing Climate Pollution*, THE WHITE HOUSE BRIEFING ROOM

Throughout these changes, the IWG calculations have remained widely used by multiple state units of government, including, in Minnesota, the Minnesota Department of Commerce in preparing MEPA documents for large energy infrastructure projects.⁷⁴ The social cost of carbon is practically useful, because unlike raw emissions numbers (which may seem abstract to decision-makers), it helps contextualize the magnitude of climate impacts.⁷⁵ Further, it can help emphasize that while one project's emissions may be just a tiny fraction of sector-wide, state-wide, or global emissions, that does not render those effects less significant.⁷⁶

D. CLIMATE CHANGE UNDER MEPA: 1973–2021

For environmental review purposes, RGUs need to decide two things: what quantity of greenhouse gas emissions triggers an environmental review, and how should the RGU consider and quantify the climate impacts of a project in that review?⁷⁷ If the threshold for triggering review is set too high, significant environmental effects may slip through the cracks and escape RGU notice.⁷⁸ Similarly, the calculation of climate costs has the potential to tip the scales of government decision-making; it is

BLOG (Feb. 26, 2021), <https://www.whitehouse.gov/briefing-room/blog/2021/02/26/a-return-to-science-evidence-based-estimates-of-the-benefits-of-reducing-climate-pollution/> (describing the IWG's restoration of the prior estimates and its plans to further revise the social cost of carbon).

74. Paul, Howard, & Schwartz, *supra* note 69, at 8–11, 15 (generally); MINN. DEP'T OF COMMERCE, SECOND REVISED FINAL ENVIRONMENTAL IMPACT STATEMENT FOR LINE 3 PIPELINE 5-461 (2019) (Minnesota example).

75. Paul, Howard, & Schwartz, *supra* note 69, at 7 (“Monetization tools like the social cost of carbon (and the social cost of other greenhouse gases) are designed to solve this problem: by translating long-term costs into present values, concretizing the harms of climate change, and giving due weight to the potential of lower-probability but catastrophic harms.”).

76. See COUNCIL ON ENV'T QUALITY, FINAL GUIDANCE FOR FEDERAL DEPARTMENTS AND AGENCIES ON CONSIDERATION OF GREENHOUSE GAS EMISSIONS AND THE EFFECTS OF CLIMATE CHANGE IN NATIONAL ENVIRONMENTAL POLICY ACT REVIEW 11 (Aug. 1, 2016) [hereinafter 2016 CEQ GUIDANCE] (“When considering GHG emissions and their significance, agencies should use appropriate tools and methodologies for quantifying GHG emissions and comparing GHG quantities across alternative scenarios.”).

77. Madeline June Kass, *Little NEPAs Take on Climate Goliath*, 23 NAT. RES. & ENV'T. 40, 40 (2008).

78. Madeline June Kass, *A NEPA-Climate Paradox: Taking Greenhouse Gases into Account in Threshold Significance Determinations*, 42 IND. L. R. 47, 55–72 (2009) (discussing the potential for different significance thresholds to under- and over-include projects). Alternatively, setting the threshold too low may also have costly impacts. *Id.*

important to get the number right so that RGUs have a “clear understanding of how [their] decisions impact . . . overall climate goals.”⁷⁹ Further, it is also important for RGUs to consider the impact of climate change on other potential effects of the project—for example, changing rainfall patterns may alter a project’s stormwater impacts. The statutory text of MEPA does not provide any explicit instruction on how RGUs should analyze greenhouse gas emissions or climate change. However, case law and regulations provide some insight.

Prior to 2021, there was only one mandatory MEPA review category related to greenhouse gas emissions. Namely, in 2010, the EQB created an EAW mandatory category for:

“[C]onstruction of a stationary source facility that generates a combined 100,000 tons or more per year or modification of a stationary source facility that increases generation by a combined 100,000 tons or more per year of greenhouse gas emissions, after installation of air pollution control equipment, expressed as carbon dioxide equivalents . . .”⁸⁰

The 100,000-ton threshold is a high one: in 2010, the Minnesota Pollution Control Agency (MPCA) reported that only 100 existing sources in Minnesota emit that much CO₂.⁸¹ Examples of stationary sources likely to emit that many greenhouse gases include power plants, oil refineries, and cement plants.⁸² Further, this category only includes stationary source facilities requiring an air permit, so a government action creating more than 100,000 tons of greenhouse gas emissions from, e.g., draining and mining a peat wetland, would not be subject to this requirement. However, while projects with fewer emissions or different permitting requirements may not require an EAW under this provision, the EQB has noted that many of them will likely still require an EAW through other mandatory categories (such as those for specific source types or other air pollutants).⁸³

79. Burger & Wentz, *supra* note 59, at 113.

80. MINN. R. 4410.4300 subp. 15(B) (2020).

81. MINN. ENV'T QUALITY BD., STATEMENT OF NEED AND REASONABLENESS FOR AMENDMENT OF PART 4410.4300, SUBPART 15, MANDATORY EAW CATEGORY REGARDING AIR POLLUTION, WITH RESPECT TO GREENHOUSE GAS EMISSIONS, 1, 3 (2010).

82. *Id.*

83. *Id.* EQB regulations require an EAW for a stationary source that will generate 250 tons per year of “any single air pollutant” other than greenhouse gases. Minn. R. 4410.4300 subp. 15(A) (2021). The rules also require mandatory EAWs for specific project categories, such as transmission lines (subp. 6),

For all projects going through MEPA review, the current EAW form requires project proposers to “describe the type, sources, quantities, and compositions of any emissions from stationary sources . . . [i]nclud[ing] any hazardous air pollutants, criteria pollutants, and any greenhouse gases.”⁸⁴ It does not specify the categories (e.g., direct, indirect, or life-cycle), sources (e.g., fuel, electricity use), or types (e.g., carbon dioxide, methane) of greenhouse emissions to include. The existing (pre-2021) EAW Guidelines—the EQB’s primary guidance document for completing EAWs—do not provide any additional information or any tools for calculating greenhouse gas emissions.⁸⁵ The Guidelines merely reaffirm that “[a]ny hazardous or criteria air pollutants as well as greenhouse gases must be specifically addressed.”⁸⁶ They also advise project proposers to “contact the MPCA Air Quality staff to determine which specific air pollutants need to be included as part of the EAW.”⁸⁷ Finally, the Guidelines suggest significant discretion for proposers and RGUs, saying that “[j]udgment must be exercised in determining the level of information needed for the pollutants carbon dioxide, methane and nitrous oxide from the project in question.”⁸⁸

A trio of cases since 2009 further outline the broad contours of climate change analysis under MEPA, although many questions remain unanswered. In *Minnesota Center for Environmental Advocacy v. Holsten*, a 2009 unpublished decision, the Minnesota Court of Appeals first implied that MEPA requires consideration of a project’s greenhouse gas emissions.⁸⁹ The Minnesota Center for Environmental Advocacy (MCEA) challenged the adequacy of an EIS for a taconite mine on the grounds that it failed to account for greenhouse gas emissions or climate change.⁹⁰ The court upheld the EIS, but not on the grounds that such consideration was not required. Instead, the court held that the RGU did not fail to consider these impacts and that the EIS

storage facilities (subp. 10), metallic mineral mining and processing (subp. 11), and dozens of others.

84. 2013 EAW FORM, *supra* note 45, at 7; *see also* 2013 EAW GUIDELINES, *supra* note 45, at 38.

85. 2013 EAW GUIDELINES, *supra* note 45, at 38.

86. *Id.*

87. *Id.*

88. *Id.*

89. *Minn. Ctr. for Env’t. Advocacy v. Holsten*, No. A08-2171, 2009 Minn. App. Unpub. LEXIS 1078 (Sept. 22, 2009).

90. *Id.* at *1.

complied with MEPA.⁹¹ In particular, the court found that the EIS discussed both the project's emissions and the impacts of climate changes on the project's environmental effects.⁹² And it held that the RGU reasonably determined both "that it is not within the current state of the art to provide an analysis of the impact that project-related greenhouse-gas emissions will have on the environment," and that "assessment of likely climate change on the project's environmental effects is beyond the state of the art."⁹³ Thus, although the court gave significant deference to *how* the RGU considered climate impacts, it did not hold that an EIS need not address them. The court did state in a footnote that, "[b]ecause the [RGU] clearly considered the environmental impacts of the project's greenhouse-gas emissions, we need not address whether the [RGU] was required to consider these impacts."⁹⁴ Still, at least one commentator has interpreted the *Holsten* opinion to imply that climate impacts are relevant effects under MEPA.⁹⁵

Next, in two 2019 cases, the court of appeals examined the specific contours of *how* and *when* RGUs must analyze greenhouse gas emissions. First, in *In re Applications of Enbridge Energy*, the court looked at the "how" question.⁹⁶ Multiple tribal nations and environmental organizations challenged the adequacy of the EIS for a proposed crude oil pipeline.⁹⁷ In particular, one relator argued that the EIS should have included a market analysis to specifically determine the pipeline's impact on upstream

91. *Id.* at *6–13.

92. *Id.* at *3, *6–9, *16–*17.

93. *Id.* at *9, *22. Somewhat similarly, in a 2010 unpublished decision, the court of appeals upheld another RGU's Negative Declaration on the grounds that "its findings pertaining to GHG emissions [were] supported by substantial evidence" and that it was reasonable not to order an EIS to study certain indirect emissions from ethanol-related land use changes where "it would likely be decades before reliable data on the subject would be available." *Olmsted Cty. Concerned Citizens v. Minn. Pollution Control Agency*, No. A10-539, 2010 Minn. App. Unpub. LEXIS 1170, at *26–*28 (Dec. 7, 2010).

94. *Holsten*, 2009 Minn. App. Unpub. LEXIS 1078, at *9 n.5.

95. Thaddeus R. Lightfoot, *Environmental Law: Climate Change and Environmental Review: Addressing the Impact of Greenhouse Gas Emissions under the Minnesota Environmental Policy Act*, 36 WM. MITCHELL L. REV. 1068, 1093–94 (2010) ("[T]he court implies that greenhouse gas emissions are a type of environmental effect to be considered in environmental review under the statute.").

96. *In re Applications of Enbridge Energy*, 930 N.W.2d 12, 29 (Minn. Ct. App. 2019).

97. *Id.* at 19.

greenhouse gas emissions.⁹⁸ Citing NEPA caselaw, the court acknowledged that “[r]ecent federal decisions have held that an EIS must address impacts of GHG emissions, including indirect impacts from upstream and downstream emissions.”⁹⁹ However, the court held that this EIS was adequate when it identified a *range* of potential life-cycle emissions for the project without settling on a specific number based on a market analysis.¹⁰⁰ Notably, the court’s reasoning and reference to NEPA caselaw reaffirm *Holsten*’s implication that climate impacts are relevant effects under MEPA.

Just a few months later, the court of appeals addressed the “when” question in *Daley Farms*, an unpublished decision involving an animal feedlot.¹⁰¹ MCEA (the same plaintiff from *Holsten*) challenged an RGU’s decision that a proposed feedlot expansion in southern Minnesota did not require an EIS, on the grounds that the RGU did not consider the project’s greenhouse gas emissions.¹⁰² The court of appeals was thus faced with the question of whether an EAW for an animal feedlot must do so.¹⁰³ The court refused to rely on *Holsten* as requiring an RGU to evaluate greenhouse gas emissions, in part because it was an unpublished opinion.¹⁰⁴ But the court nonetheless held that the RGU “failed to take a ‘hard look’ at potentially significant environmental effects” by failing to address greenhouse gas emissions.¹⁰⁵ The court rejected the RGU’s argument that, because the existing EAW form did not require evaluation of greenhouse gases, it did not have to consider those emissions.¹⁰⁶ Instead, the

98. *Id.* at 29–30.

99. *Id.* at 29.

100. *Id.* at 30 (“[T]he FEIS goes on to estimate the range of impacts to upstream GHG emissions that the project could have. Thus, this case is distinguishable from the federal caselaw on which [Relator] relies . . .”).

101. In the Matter of the Decision on the Need for an Environmental Impact Statement for the Proposed Daley Farms of Lewiston, LLP – 2018 Dairy Expansion Utica Township, Winona County, Minnesota, No. A19-0209, 2019 Minn. App. Unpub. LEXIS 976, at *20 (Oct. 14, 2019) [hereinafter *Daley Farms*].

102. *Id.* at *16, *20.

103. The MPCA uses a special EAW form for animal feedlots, different from the standard EAW form discussed elsewhere in this Note. *Feedlot Environmental Review*, MINN. POLLUTION CONTROL AGENCY, <https://www.pca.state.mn.us/water/feedlot-environmental-review> (last visited Mar. 26, 2021).

104. *Daley Farms*, 2019 Minn. App. Unpub. LEXIS 976, at *16–*17.

105. *Id.* at *20.

106. *Id.* at *17.

court said, the RGU's analysis should not have been limited to the feedlot EAW form's set of questions because the RGU's job under MEPA was to evaluate the project's "potential for significant environmental effects."¹⁰⁷ Thus, the court reversed the RGU's Negative Declaration and remanded the case for consideration of the potential for environmental impacts from the feedlot's greenhouse gas emissions.¹⁰⁸

Before the Minnesota Court of Appeals first implied in *Holsten* that MEPA requires a climate change analysis, one article by a Minnesota environmental attorney questioned whether MEPA is "up to the task" of considering climate change impacts.¹⁰⁹ In response, another article argued that MEPA as written is enough to deal with climate change impacts, but that additional EQB guidance on the subject "would be useful."¹¹⁰ The court of appeals decisions in *Holsten*, *In re Applications of Enbridge Energy*, and *Daley Farms* have likely clarified that MEPA does envision climate analysis in environmental review and that relevant federal caselaw may be informative. But until recently, detailed EQB guidance on the subject had not materialized. As a result of this sparse guidance, "[c]limate change is an important environmental impact currently not consistently considered in environmental documents."¹¹¹

107. *Id.* (quoting MINN. STAT. § 116D.04, subd. 2a(a)).

108. *Id.* at *20. In 2021, shortly before the publication of this note, the court of appeals reversed another Negative Declaration on similar grounds. In a nonprecedential opinion, the court held that a local government "fail[ed] to respond to the 'substantive and timely comments' from the DNR and the county on climate change" and that "its determination that the project had no significant cumulative effects" was therefore arbitrary and capricious. *In re Determination of the Need for an Env't Impact Statement for the Mankato Motorsports Park*, No. A20-0952, 2021 Minn. App. Unpub. LEXIS 413, at *27-30 (Apr. 26, 2021).

109. Reuther, *supra* note 58, at 10665.

110. Lightfoot, *supra* note 95, at 1104 ("Nevertheless, the EQB may wish to develop a general guidance discussing the manner in which RGUs other than the MPCA should address the issue of climate change.").

111. EQB-MEMBER ENV'T REVIEW INTERAGENCY CLIMATE TECH. TEAM, DRAFT RECOMMENDATIONS: INTEGRATING CLIMATE INFORMATION INTO MEPA PROGRAM REQUIREMENTS (Dec. 2020), https://www.eqb.state.mn.us/sites/default/files/documents/DRAFT%20Recommendations%20-%20Integrating%20Climate%20Information%20into%20MEPA%20Program%20Requirements_0.pdf [hereinafter TECH. TEAM DRAFT RECOMMENDATIONS].

E. CLIMATE CHANGE UNDER MEPA—THE ROAD AHEAD

Change, however, is on the horizon at the EQB. On September 18, 2019, the EQB established an Environmental Review Implementation Subcommittee “for the purpose of providing a forum for transparent deliberation and public input on important issues related to the State Environmental Review Program and making recommendations for improving effectiveness.”¹¹² In October 2019, this subcommittee held its first meeting, on the topic of “Climate Change and Environmental Review.”¹¹³ At the meeting, the subcommittee sought public input “on how the Minnesota Environmental Review Program could be effectively used to consider potential climate impacts.”¹¹⁴ The EQB has authority to promulgate rules “reasonably necessary to carry out the requirements” of MEPA, based on recommendations from its subcommittees.¹¹⁵ It is also required to “assist governmental units and interested persons in understanding and implementing the rules,” which it may do through non-binding guidance.¹¹⁶

The EQB subcommittee convened an Environmental Review Climate Technical Team (“Technical Team”), composed of staff from six EQB member agencies and the Metropolitan Council, to advise it on potential changes to MEPA guidance and rules

112. *Environmental Review Implementation Subcommittee*, MINN. ENV'T QUALITY BD., <https://www.eqb.state.mn.us/content/environmental-review-implementation-subcommittee-eris#> (last visited Apr. 27, 2021). Generally, the EQB “may establish . . . subcommittees to aid in performing its duties.” Minn. R. § 4405.0800.

113. MINN. ENV'T QUALITY BD., MEETING PACKET: ENVIRONMENTAL REVIEW IMPLEMENTATION SUBCOMMITTEE (Oct. 16, 2019), <https://www.eqb.state.mn.us/sites/default/files/documents/October%2016%2C%202019%20ERIS%20Packet.pdf>.

114. *Id.* at 3.

115. MINN. STAT. § 116D.04 subd. 5a (stating that the EQB can promulgate rules); MINN. R. 4405.0800 (stating that board subcommittees may make recommendations to the board); *see also* MINN. R. 4410.0400 (“The EQB shall monitor the effectiveness of [its rules] and shall take appropriate measures to modify and improve their effectiveness . . .”).

116. MINN. R. 4410.0400 (“The EQB shall assist governmental units and interested persons in understanding and implementing the rules.”); *see also Guidance For Practitioners and Proposers*, MINN. ENV'T QUALITY BD., <https://www.eqb.state.mn.us/content/environmental-review-guidance-practitioners-and-proposers> (last visited Apr. 27, 2021) (compiling guidance documents); *see also, e.g.*, 2013 EAW GUIDELINES, *supra* note 45 (providing guidance to RGUs and project proposers on completing the EAW Form).

around climate change.¹¹⁷ In January 2020, the Technical Team presented several potential options to the subcommittee, including new guidance, changes to the EAW worksheet, or changes to the MEPA rules under Minn. R. ch. 4410.¹¹⁸ After receiving feedback from the EQB and the public at various stages, the Technical Team returned in December 2020 with a set of draft recommendations for integrating climate information into MEPA program requirements.¹¹⁹

The Technical Team's Draft Recommendations fall roughly into three categories. First, the Technical Team suggested draft revisions to the EAW form.¹²⁰ These revisions would require all EAWs to quantify greenhouse gas emissions.¹²¹ For proposed projects emitting 25,000 tons per year or less of CO₂ equivalent (CO₂e),¹²² the EAW worksheet would require a "qualitative

117. MINN. ENV'T QUALITY BD., MEETING PACKET: ENVIRONMENTAL REVIEW IMPLEMENTATION SUBCOMMITTEE 17 (Jan. 22, 2020), <https://www.eqb.state.mn.us/sites/default/files/January%202020%20ER%20Implementation%20Subcommittee%20Packet.pdf>.

Governor Tim Walz's Executive Order 19-37 on climate also helped spur the creation of the Technical Team. *See id.* at 17 ("In response to Executive Order 19-37 and support of the Fiscal Year 2020-2021 Environmental Quality Board (EQB) Workplan, the Environmental Review Implementation Subcommittee (ERIS) convened an Environmental Review Climate Technical Team to advise them on Environmental Review (ER) Program changes."); Establishing the Climate Change Subcabinet and the Governor's Advisory Council on Climate Change to Promote Coordinated Climate Change Mitigation and Resilience Strategies in the State of Minnesota, Minn. Exec. Order No. 19-37 (Dec. 2, 2019), https://mn.gov/governor/assets/2019_12_2_EO_19-37_Climate_tcm1055-412094.pdf (directing state government to "work across the enterprise in a coordinated approach to develop equitable strategies that will mitigate climate change and achieve greater resilience").

118. MINN. ENV'T QUALITY BD., MEETING PACKET: 2020 ENVIRONMENTAL REVIEW IMPLEMENTATION SUBCOMMITTEE (Jan. 22, 2020), <https://www.eqb.state.mn.us/sites/default/files/January%202020%20ER%20Implementation%20Subcommittee%20Packet.pdf>.

119. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111; *see also* MINN. ENV'T QUALITY BD., MEETING PACKET: ENVIRONMENTAL IMPLEMENTATION SUBCOMMITTEE (Dec. 16, 2020), <https://www.eqb.state.mn.us/sites/default/files/December%2016%20ERIS%20Meeting%20Packet.pdf>.

120. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 4 tbl.2 (discussing draft recommendations CA 1–CA 4), 14–23 (appendix containing draft revisions to the EAW Form).

121. *Id.* at 4 tbl.2 (discussing draft recommendation CA 1).

122. Most individual facilities in the electric power sector emit more than 25,000 tons per year; most farms, commercial buildings, and individual facilities in the manufacturing sector emit less. FREYR SVERRISSON, DUKE NICHOLAS INST. FOR ENV'T POLICY SOLUTIONS, SIZE THRESHOLDS FOR GREENHOUSE GAS REGULATION: WHO WOULD BE AFFECTED BY A 25,000-TON CO₂ EMISSIONS

discussion of mitigation for [the] proposed project.”¹²³ For projects emitting more than 25,000 tons, the worksheet would require more detailed “quantification, assessment, mitigation alternatives, and long-term [greenhouse gas] reduction planning.”¹²⁴ For all projects, the EAW would require information about the interactions between climate change and a project’s other environmental effects.¹²⁵

Second, the Technical Team drafted proposed guidance to aid RGUs and proposers in completing these new EAW requirements.¹²⁶ This draft guidance includes information on, for example, “[h]ow to identify and describe types of [greenhouse gases] emitted” and “[h]ow to identify and describe sources of [greenhouse gas] emissions.”¹²⁷ The guidance also clarifies that greenhouse gas emissions should include both direct and indirect emissions, as well as sinks, although it does not mention life-cycle emissions.¹²⁸ It contains numerous tools and equations for quantifying emissions for different types of facilities and pollutants.¹²⁹ Finally, it contains a section on “[c]limate adaptation and resilience,” which provides information on evaluating how “the project’s proposed activities will interact with [local] climate trends.”¹³⁰ The draft guidance does not include information on tools like the social cost of carbon that can help RGUs quantify the climate change damages of a project’s emissions.

Third, the Technical Team addressed the kinds of projects for which environmental review documents—EAWs and EISs—are required. In its draft, the Technical Team recommended no new mandatory EAW categories for greenhouse gas emissions, arguing that “it is not prudent to change the existing [stationary source] GHG threshold until a more robust regulatory

RULE? 5–6 (2009), <https://nicholasinstitute.duke.edu/sites/default/files/publications/size-thresholds-for-greenhouse-gas-regulation-who-would-be-affected-by-a-25-000-ton-co2-emissions-rule-1-paper.pdf>.

123. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 4 tbl.2 (discussing draft recommendation CA 2).

124. *Id.* (discussing draft recommendation CA 3).

125. *Id.* (discussing draft recommendation CA 4).

126. *Id.* (guidelines corresponding to draft recommendation CA 5).

127. *Id.* at 24; *see generally id.*, app. at 24–47 (appendix containing detailed guidance on “developing a carbon footprint” through emissions assessments).

128. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, app. at 27–28.

129. *Id.* app. at 30–47.

130. *Id.* app. at 48–60.

framework for GHG pollution is established.”¹³¹ The Technical Team also recommended no changes to the decision criteria that RGUs use in determining whether an EIS is needed—in other words, whether the project has the potential for significant environmental effects—for a similar reason: the Team “supports RGU discretion on a case-by-case basis, until a more robust regulatory framework is promulgated for GHG pollution across all relevant GHG emissions sources.”¹³² However, the Technical Team did propose recommending a new mandatory EIS category, for sources (with a few exceptions) that would emit more than 100,000 tons per year of greenhouse gases (the same number as the stationary source EAW category) and would not require review for other reasons.¹³³

The Technical Team is currently revising its recommendations in response to public input, and plans to present final recommendations to the EQB later in 2021.¹³⁴ Its current draft proposals, if adopted by the EQB, would bring some long-awaited clarity to analysis of potential climate change impacts under MEPA. Project proposers and RGUs would have a clearer roadmap for when and how to evaluate greenhouse gas emissions, along with some useful tools for doing so. However, ambiguities will still remain regarding how a project’s emissions should be contextualized, and whether they are “significant” and thus require an EIS. The Technical Team seemed to recognize this, as its final draft recommendation “encourage[d] State leadership to consider developing a statewide program to regulate GHG pollution.”¹³⁵

F. CLIMATE CHANGE UNDER NEPA AND OTHER STATE “LITTLE NEPAS”

While the requirements of climate change analysis under MEPA are still evolving, the federal requirements under NEPA are much more developed. Courts have frequently confirmed that NEPA requires federal agencies to consider greenhouse gas emissions in environmental review.¹³⁶ This includes both

131. *Id.* at 4 tbl.2, 12 (discussing draft recommendation MR 1).

132. *Id.* at 4 tbl.2, 10 (discussing draft recommendation number DC 1).

133. *Id.* at 4 tbl.2, 13 (discussing draft recommendation MR 2).

134. *Id.* at 7.

135. *Id.* at 4 tbl.2 (discussing draft recommendation number GR 1).

136. *See, e.g.,* *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008) (“The impact of greenhouse gas

indirect and direct greenhouse gas emissions.¹³⁷ In recent years, courts have begun to address more specific questions, such as the scope of *what* indirect emissions agencies must consider, and *how* agencies must describe the costs of these emissions.¹³⁸ In 2016, the CEQ under President Obama issued final guidance for analyzing greenhouse gas emissions in NEPA review that addressed some of these questions, drawing from “longstanding NEPA principles” and clarifying agency responsibilities as established by federal courts.¹³⁹ President Trump undid this action via executive order in 2017,¹⁴⁰ but President Biden revoked that order in January 2021.¹⁴¹ CEQ is currently reviewing and revising the 2016 guidance, and in the meantime “agencies should consider all available tools and resources in assessing GHG emissions and climate change effects of their proposed actions, including, as appropriate and relevant, the 2016 GHG Guidance.”¹⁴²

emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.”)

137. *Id.*; see also, e.g., *Sierra Club v. FERC*, 867 F.3d 1357, 1371 (D.C. Cir. 2017) (“An agency conducting a NEPA review must consider not only the direct effects, but also the *indirect* environmental effects, of the project under consideration.”).

138. Compare *Sierra Club v. FERC*, 867 F.3d at 1371 (holding that environmental review of a pipeline should have analyzed upstream and downstream emissions), with *EarthReports, Inc. v. FERC*, 828 F.3d 949, 956 (D.C. Cir. 2016) (holding that environmental review of a liquified natural gas export facility did not need to analyze upstream and downstream emissions because the agency actions “are not the legally relevant cause of the[se] indirect effects” (citation omitted)).

139. 2016 CEQ GUIDANCE, *supra* note 76, at 2; see also Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51866 (Aug. 5, 2016) (issuing guidance); Nicole Rushovich, *Climate Change and Environmental Policy: An Analysis of the Final Guidance on Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*, 27 B.U. PUB. INT. L.J. 328, 352–55 (2018) (arguing that “the CEQ fulfilled its intent to assist Federal agencies in their consideration of the effects of greenhouse gas (GHG) emissions and climate change . . .” (internal quotation omitted)).

140. Exec. Order No. 13,783, 82 Fed. Reg. 16093 (Mar. 28, 2017). The CEQ thereafter published draft replacement guidance, *Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions*, 84 Fed. Reg. 30097 (June 26, 2019).

141. Exec. Order No. 13,990, 86 Fed. Reg. 7042 (Jan. 20, 2021). This same order also rescinded the CEQ’s 2019 draft replacement guidance. *Id.*

142. *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions*, 86 Fed. Reg. 10252 (Feb. 19, 2021).

Courts have increasingly required agencies to analyze impacts of upstream and downstream greenhouse gas emissions as an indirect impact under NEPA.¹⁴³ As the D.C. Circuit explained in 2017 decision regarding a natural gas pipeline project: “It’s not just the journey, though, it’s also the destination [A]t a minimum, FERC should have estimated the amount of power-plant carbon emissions that the pipelines will make possible.”¹⁴⁴ Agencies must also take a “hard look” at the *cost* of greenhouse gas emissions.¹⁴⁵ A federal court in Montana explained that an EIS may—but is not required to—use the social cost of carbon to quantify the costs of emissions.¹⁴⁶ However, if an EIS quantifies a project’s benefits as part of a cost-benefit analysis, then courts have required agencies to also quantify that project’s climate change costs.¹⁴⁷

Notably, the new 2020 NEPA Rule eliminated mention of “cumulative effects” from NEPA regulations and limited the definition of “effects” to those that are “reasonably foreseeable and have a reasonably close causal relationship”¹⁴⁸ These changes could significantly alter the landscape of climate analysis under NEPA, as climate change impacts are a textbook cumulative effect. However, as discussed above, the 2020 NEPA Rule may soon be repealed, changed, or struck down in court;¹⁴⁹ and, in the meantime, the argument for considering cumulative

143. See Burger & Wentz *supra* note 59, at 113 (listing cases) (“There are now at least seven decisions holding that agencies are required to consider upstream and/or downstream emissions in the context of certain types of proposals, such as the approval of coal-leasing plans and railways intended to transport coal from mines to power plants.”).

144. *Sierra Club v. FERC*, 867 F.3d 1357, 1371 (D.C. Cir. 2017).

145. *WildEarth Guardians v. Zinke*, No. CV 17-80-BLG-SPW-TJC, 2019 U.S. Dist. LEXIS 30357, at *26–33 (D. Mont. Feb. 11, 2019); *Mont. Env’t Info. Ctr. v. United States Office of Surface Mining*, 274 F. Supp. 3d 1074, 1094 (D. Mont. 2017); *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1189–93 (D. Colo. 2014); see also Canning, *supra* note 68, at 10482–83 (explaining that “NEPA’s ‘Hard Look’ Includes Climate Costs”).

146. *WildEarth Guardians*, 2019 U.S. Dist. LEXIS 30357, at *28.

147. *Id.* at *29–*30.

148. Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, 85 Fed. Reg. 43304 (Jul. 16, 2020).

149. See *supra* notes 13–15.

effects persists in federal case law interpreting NEPA,¹⁵⁰ CEQ Guidance,¹⁵¹ and the statutory text itself.¹⁵²

In addition, some of the regulations pursuant to other state “little NEPAs” provide substantially more guidance than Minnesota’s with respect to evaluating climate change impacts. While the variation among state “little NEPAs” makes direct comparisons challenging, guidance from these other states may nonetheless be useful in informing Minnesota RGU actions under MEPA.¹⁵³ At least four other states—Massachusetts, New York, California, and Washington—have required some level of greenhouse gas emission assessment in state environmental review.¹⁵⁴

Unlike Minnesota’s MEPA, the Massachusetts Environmental Policy Act (“the Massachusetts Act”) explicitly references greenhouse gas emissions as within the scope of environmental review; in 2008, the Massachusetts legislature amended the Act to require state agencies to “consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions, and effects, such as predicted sea level rise.”¹⁵⁵ Massachusetts regulations, in turn, confirm that such impacts are “within the subject matter of any required Agency Action.”¹⁵⁶ Additionally, Massachusetts includes greenhouse gas emissions within the regulatory definition of “damage to the environment” (the

150. See *supra* note 32; see also Zachary D. Knaub, *Trump Administration Proposes Significant Streamlining of National Environmental Policy Act*, NAT’L L. REV. (Jan. 14, 2020), <https://www.natlawreview.com/article/trump-administration-proposes-significant-streamlining-national-environmental-policy> (discussing the question of whether the requirement to consider cumulative effects came from the text of NEPA or solely from the CEQ regulations).

151. See note 31, *supra*; see also 2016 CEQ GUIDANCE, *supra* note 76 (providing guidance on considering climate change impacts).

152. See 42 U.S.C. § 4332 (C)(i) (requiring consideration of “the *environmental impact of the proposed action*” (emphasis added)); see also *id.* at (ii) (requiring consideration of “*any* adverse environmental effects which cannot be avoided should the proposal be implemented” (emphasis added)).

153. The Minnesota Technical Team agreed, and summarized other state and federal examples to the EQB in a January 2020 presentation. MINN. ENV’T QUALITY BD., PRESENTATION FROM ENVIRONMENTAL REVIEW CLIMATE TECHNICAL TEAM, 2020 ENVIRONMENTAL REVIEW IMPLEMENTATION SUBCOMMITTEE 10–13 (Jan. 22, 2020), https://www.eqb.state.mn.us/sites/default/files/documents/ERIS_Meeting_Jan_2020%20_final.pdf.

154. See generally Chertok, *supra* note 33 (discussing climate change under various state “little NEPAs”).

155. MASS. ANN. LAWS. Ch. 30, § 61 (LexisNexis 2020).

156. MASS. CODE. REGS. § 11.01(2)(a)(3) (2020).

Massachusetts equivalent of “significant environmental effects”).¹⁵⁷ Massachusetts also has a mandatory EIR (comparable to an EIS) category for new stationary sources emitting 100,000 tons per year of CO₂e and modifications of stationary sources resulting in 75,000 tons per year of CO₂e.¹⁵⁸ Finally, the Massachusetts Executive Office of Energy and Environmental Affairs has issued a “Greenhouse Gas Emissions Policy and Protocol,” which guides agencies in quantifying emissions and identifying mitigation measures.¹⁵⁹ This Policy and Protocol affirms that the Massachusetts Act requires analysis of both indirect and direct emissions.¹⁶⁰ It does not, however, speak to what level of greenhouse gas emissions is “significant” beyond existing mandatory review thresholds.¹⁶¹

The New York State Environmental Quality Review Act (SEQRA) is a closer analog to MEPA. Like MEPA, it does not explicitly mention greenhouse gas emissions and focuses instead on “significant effect[s] on the environment;”¹⁶² yet, like MEPA, the language of SEQRA suggests that governmental units should consider climate change impacts in that context.¹⁶³ In 2018, the New York Department of Environmental Conservation (NYDEC) updated its regulations, requiring EISs to discuss “measures to avoid or reduce both an action’s impacts on climate change and associated impacts due to the effects of climate change such as sea level rise and flooding.”¹⁶⁴ The New York Environmental Assessment Form (EAF)—equivalent to a MEPA EAW—asks about greenhouse gas emissions, similar to the Minnesota form; however, New York regulations do not contain an explicit significance threshold for climate change impacts.¹⁶⁵ The NYDEC also has a policy that it uses for analyzing emissions

157. MASS. CODE. REGS. § 11.02(2) (2020).

158. MASS. CODE. REGS. § 11.03(8)(a) (2020).

159. MASS. EXEC. OFFICE OF ENERGY & ENV’T AFFAIRS, MEPA GREENHOUSE GAS EMISSIONS POLICY AND PROTOCOL (2010), <http://eeaonline.eea.state.ma.us/eea/emepa/pdffiles/misc/GHG%20Policy%20FINAL.pdf>.

160. *Id.* at 3.

161. Chertok, *supra* note 33.

162. N.Y. ENV’T CONSERV. L. § 8-0109(2) (LexisNexis 2020).

163. 2 ENVIRONMENTAL IMPACT REVIEW IN NEW YORK § 5.12 (2019) (“DEC would seem to have ample authority to require consideration of climate change in EISs.”).

164. *Id.*; N.Y. COMP. CODES R. & REGS. tit. 6, § 617.9(b)(5)(iii)(i).

165. N.Y. COMP. CODES R. & REGS. tit. 6, §§ 617.20, 617.7.

and climate change impacts when preparing an EIS; while not binding, it guides NYDEC's work and may be persuasive to other state and local agencies.¹⁶⁶ NYDEC has built climate considerations into SEQRA regulations in another unique way: in 2019, it exempted certain solar arrays, green infrastructure upgrades, and other climate-friendly projects from further environmental review.¹⁶⁷

Like New York, California's regulations under the California Environmental Quality Act (CEQA) also directly address greenhouse gas emissions.¹⁶⁸ An updated CEQA regulation promulgated in 2019 requires state and local agencies to analyze "the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change."¹⁶⁹ Unlike Minnesota's mandatory EAW category for certain stationary sources, California does not assign any specific numerical thresholds at which environmental review is required, although it allows agencies to create such thresholds.¹⁷⁰ Instead, California gives agencies discretion in determining significance, considering, among other factors, "consistency with the State's long-term climate goals or strategies."¹⁷¹ Another California regulation requires agencies completing EIRs (similar to EISs) to "consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions."¹⁷² The Governor's Office of Planning and Research (OPR) provides a "CEQA and Climate

166. N.Y. STATE DEPT OF ENV'T CONSERVATION, ASSESSING ENERGY USE AND GREENHOUSE GAS EMISSIONS IN ENVIRONMENTAL IMPACT STATEMENTS: DEC POLICY (2009). According to one treatise, other agencies often follow this policy, as "application of the DEC guidelines is the best way to survive judicial attack." 2 ENVIRONMENTAL IMPACT REVIEW IN NEW YORK § 5.12 (2019).

167. N.Y. STATE DEPT OF ENV'T CONSERVATION, PRESS RELEASE: DEC ADOPTS FIRST MAJOR UPDATE TO STATE'S ENVIRONMENTAL QUALITY REVIEW REGULATIONS IN 20 YEARS (June 28, 2018), <https://www.dec.ny.gov/press/114048.html>; N.Y. COMP. CODES R. & REGS. tit. 6, § 617.5.

168. 14 C.C.R. 15064.4 (2019).

169. *Id.*

170. *Id.*

171. 14 C.C.R. 15064.4(b)(3) (2019); *see also* *Ctr. for Biological Diversity v. Dep't of Fish & Wildlife*, 361 P.3d 342, 345 (Cal. 2015) (holding that consistency with statewide greenhouse gas emissions reduction goals was a permissible significance criterion); *but c.f.* *Cleveland Nat'l Forest Found. v. San Diego Ass'n of Gov'ts*, 397 P.3d 989, 1002 (Cal. 2017) (holding that a governmental unit did not abuse its discretion by not using a particular Executive Order on greenhouse gas emissions as a significance criterion).

172. 14 C.C.R. 15126.4(c) (2019).

Change Advisory,” with suggestions for agencies on how to select a significance threshold and develop a consistent approach for analyzing climate change impacts under CEQA.¹⁷³

As of the writing of this note, Washington’s greenhouse gas review requirements under the Washington State Environmental Policy Act (SEPA) are in a state of flux. The Washington Department of Ecology’s “climate change and SEPA” page leads to a 404 error,¹⁷⁴ and a relevant treatise notes, “the Department of Ecology, apparently without formal announcement, has withdrawn its ‘Guidance for Ecology Including Greenhouse Gas Emissions in SEPA Reviews and Related Materials.’”¹⁷⁵ However, since April 30, 2020, the Department of Ecology has been engaged in a new rulemaking for assessing greenhouse gases in environmental review.¹⁷⁶ The final rule was originally expected in September 2021.¹⁷⁷ However, in March 2021 that deadline was extended to December.¹⁷⁸ The framework for the rule, which recently went through an informal comment period as part of the development of a draft rule, would apply to fossil fuel and industrial facilities that could emit approximately 10,000 metric tons or more of carbon dioxide equivalent per year.¹⁷⁹ It would require

173. GOVERNOR’S OFFICE OF PLANNING AND RESEARCH, DISCUSSION DRAFT: CEQA AND CLIMATE CHANGE ADVISORY 7 (2018). This is a draft update to the previous iteration of this guidance: GOVERNOR’S OFFICE OF PLANNING AND RESEARCH, TECHNICAL ADVISORY: CEQA AND CLIMATE CHANGE: ADDRESSING CLIMATE CHANGE THROUGH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REVIEW (2008).

174. <https://ecology.wa.gov/climatechange/sepa.htm> (last visited Apr. 18, 2021).

175. 1 WASHINGTON STATE ENVIRONMENTAL POLICY ACT § 5.01 (2019).

176. *Chapter 173-445 WAC*, WASH. DEP’T OF ECOLOGY, <https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-445> (last visited Apr. 5, 2021).

177. Ankur K. Tohan, *Washington Department of Ecology Preparing New Rule to Assess Greenhouse Gas Emissions*, NAT’L L. REV. (Feb. 17, 2021), <https://www.natlawreview.com/article/washington-department-ecology-preparing-new-rule-to-assess-greenhouse-gas-emissions>.

178. WASHINGTON OFFICE OF THE GOVERNOR, DIRECTIVE OF THE GOVERNOR 19-18.1 (Mar. 3, 2021), https://www.governor.wa.gov/sites/default/files/directive/dir_19-18.1.pdf.

179. WASH. DEP’T OF ECOLOGY, FOCUS ON: FRAMEWORK FOR CONSISTENT GREENHOUSE GAS ASSESSMENTS, No. 21-02-008 (Mar. 2021), <https://apps.ecology.wa.gov/publications/documents/2102008.pdf> (providing a general overview of the rule framework); *see also* WASH. DEP’T OF ECOLOGY, GREENHOUSE GAS ASSESSMENT FOR PROJECTS (GAP) RULE: WASHINGTON ADMINISTRATIVE CODE (WAC) 173-445: DRAFT GAP RULE CONCEPTUAL FRAMEWORK FOR INFORMAL REVIEW (Mar. 2021), <https://ecology.wa.gov/DOE/files/36/36bdb605-225d-4a74->

a life-cycle emissions analysis as well as a mitigation plan to reduce the impact of a project's emissions.¹⁸⁰ Additionally, the Washington Department of Transportation adheres to guidance consistent with the 2016 CEQ NEPA guidance.¹⁸¹ And the City of Seattle requires all City departments to “evaluate climate impacts” in SEPA review.¹⁸²

G. FINDING A WAY FORWARD IN MINNESOTA

Existing case law and regulatory guidance leave significant questions regarding how Minnesota RGUs should address climate change in MEPA review. As the EQB continues to examine its climate change guidance, the federal and other state rules and precedents discussed above may therefore prove persuasive and useful. Using the lessons that Minnesota can draw from NEPA and other state “little NEPAs,” Part II identifies remaining questions about MEPA and climate, assesses whether the current proposed EQB changes (as of December 2020) address those questions, and makes recommendations for the future of climate change analysis under MEPA.

II: ANALYSIS

Over the last ten years, Minnesota courts have clarified some of the contours of MEPA's greenhouse gas analysis requirements. The draft proposals currently before the EQB may add additional clarity. However, questions remain. MEPA requires RGUs to evaluate “significant impacts” of proposed governmental actions—including climate change—but ambiguity remains as to what emissions to consider and how to evaluate their significance. Part II uses Minnesota case law and federal and other state examples to suggest a way forward.

9edd-8bc600714977.pdf (discussing in more detail the rule's potential applicability and the analysis and mitigation plan to be required). The exact applicability of this potential rule and the analysis that it requires may change soon after the publication of this note as the rulemaking process continues.

180. *Id.*

181. WASH. STATE DEP'T OF TRANSP., GUIDANCE FOR NEPA AND SEPA PROJECT-LEVEL CLIMATE CHANGE EVALUATIONS (2017), <https://wsdot.wa.gov/sites/default/files/2017/11/15/ENV-Climate-ClimateGuidance.pdf>.

182. Seattle, Wash., Ordinance 122574 (Dec. 10, 2007).

A. *HOLSTEN, ENBRIDGE ENERGY, AND DALEY FARMS HAVE CLARIFIED SOME OF THE INITIAL UNCERTAINTIES AROUND MEPA AND CLIMATE, BUT LEAVE OTHERS*

As recently as ten years ago, doubt remained as to whether MEPA required any analysis whatsoever of climate change impacts. The district court in *Minnesota Center for Environmental Advocacy v. Holsten* suggested that “MEPA, as now written, does not seem to be up to the task of analyzing how greenhouse gas emissions from projects . . . should be accounted for on the local, regional, state, national and even global scale.”¹⁸³ At the time, this led MCEA—an environmental nonprofit and the plaintiff in *Holsten*—to advocate for legislative changes to MEPA, which would have explicitly required such analysis.¹⁸⁴ However, the Minnesota Court of Appeals subsequently clarified the matter—without any legislative changes taking place. In an unpublished opinion, the court of appeals upheld the EIS in *Holsten* on the grounds that it *did* adequately analyze greenhouse gas emissions—thus implying that those emissions were rightly considered.¹⁸⁵ In a subsequent law review article, Thaddeus Lightfoot (who represented the taconite mine at issue in *Holsten*) argued that “[i]f the environmental impacts of the greenhouse gas emissions from a proposed project constitute a direct or indirect effect, as the court of appeals suggests, MEPA requires an evaluation of such impacts and need not be amended to address the issue of climate change.”¹⁸⁶

As an unpublished opinion, *Holsten* is not binding precedent in Minnesota.¹⁸⁷ And in the 2019 *Daley Farms* case (another

183. Minn. Ctr. For Env’t Advocacy v. Holsten, No. 31-CV-07-3338, 15 (9th D. Minn. Oct. 15, 2008), *aff’d*, No. A08-2171, 2009 Minn. App. Unpub. LEXIS 1078 (Sept. 22, 2009).

184. Reuther, *supra* note 58, at 10665. Cf. MASS. ANN. LAWS. Ch. 30, § 61 (LexisNexis 2020) (requiring governmental units to “consider reasonably foreseeable climate change impacts”).

185. Minn. Ctr. for Env’t Advocacy v. Holsten, No. A08-2171, 2009 Minn. App. Unpub. LEXIS 1078, at *6 (Sept. 22, 2009).

186. Lightfoot, *supra* note 95, at 1093–94.

187. See *Daley Farms*, No. A19-0209, 2019 Minn. App. Unpub. LEXIS 976, at *15 (“MCEA’s reliance on [*Holsten*] is misplaced because our unpublished decisions are not precedential.”). Until 2020, Minnesota law distinguished between “published” and “unpublished” opinions and provided that the latter were not precedential See MINN. STAT. § 480A.08 subd. 3(b)(5) (2019) (“Unpublished opinions of the court of appeals are not precedential.”). In 2020, however, the legislature removed that provision of the statute, and the Minnesota Supreme Court amended the Rules of Civil Appellate Procedure to create a new

unpublished opinion), the court of appeals explicitly said that *Holsten* does not require an RGU “specifically to evaluate greenhouse-gas emissions.”¹⁸⁸ But in *Daley Farms* itself, the court of appeals held that an RGU wrongly failed to consider greenhouse gas emissions.¹⁸⁹ And in *In re Applications of Enbridge Energy*, a published 2019 decision, the court of appeals discussed the adequacy of emissions analysis under MEPA, citing relevant federal NEPA caselaw, without questioning whether such analysis was required.¹⁹⁰ Thus, as a practical matter, Minnesota RGUs should be on notice that courts expect some level of emissions accounting, provided those emissions are indirect, direct, or cumulative effects of a project.

Still, unanswered questions remain. MEPA does not require RGUs to include “information about potentially significant environmental effects” if “the means to obtain the information are beyond the state of the art,” as long as the RGU explains the omission.¹⁹¹ The court in *Daley Farms* cited Lightfoot’s article for the notion that “certain analyses relevant to climate change, such as determining the impacts of a project’s discrete greenhouse gas emissions or how changes in the climate may affect models used to forecast a project’s environmental effects, are beyond the state of the art.”¹⁹² And in *Holsten* itself, the court held that the EIS at issue was adequate even though it lacked “an evaluation of the project’s greenhouse-gas emissions on regional or global climate,” because the DNR asserted that “a reliable

distinction between “precedential” and “nonprecedential” opinions. See MINN. STAT. § 480A.08 (2020); Order Promulgating Amendments to the Rules of Civil Appellate Procedure, No. ADM09-8006 (Minn. July 20, 2020); Minn. R. Civ. App. P. 136.01. Under the new rule, “[n]onprecedential opinions are not binding authority except as law of the case, res judicata, or collateral estoppel, but nonprecedential opinions may be cited as persuasive authority.” Minn. R. Civ. App. P. 136.01, subd. 1(c).

188. *Daley Farms*, 2019 Minn. App. Unpub. LEXIS 976, at *15.

189. *Id.* at *17; see also *In re Determination of the Need for an Env’t Impact Statement for the Mankato Motorsports Park*, No. A20-0952, 2021 Minn. App. Unpub. LEXIS 413, at *27–*30 (Apr. 26, 2021) (reversing Negative Declaration because the RGU “fail[ed] to respond to the ‘substantive and timely comments’ . . . on climate change”).

190. *In re Applications of Enbridge Energy*, 930 N.W.2d 12, 29 (Minn. Ct. App. 2019).

191. MINN. R. 4410.2500 (2020).

192. *Daley Farms*, 2019 Minn. App. Unpub. LEXIS 976 at *20.

model does not exist.”¹⁹³ *Holsten* was decided nearly ten years ago, and scientists’ ability to model the impact of emissions has improved significantly in that time.¹⁹⁴ But because the court in *Daley Farms* did not reach that specific issue, it remains unclear exactly what analysis today a court would find is within “the state of the art.”

Until 2021, Minnesota agencies have provided sparse answers on these questions. The EQB currently has no comprehensive guidance comparable to that in California, New York, or Massachusetts; the EQB’s EAW Guidelines that are currently in effect have one sentence, stating only that “[a]ny hazardous or criteria air pollutants as well as greenhouse gases must be specifically addressed.”¹⁹⁵ The Minnesota Pollution Control Agency has a three-page guidance document titled *Discussing Greenhouse Gas Emissions in Environmental Review*, which provides instructions on how to fill out the EAW form, and lists “examples of the types of information that *might be* in an EIS” (including direct, indirect, and life-cycle emissions).¹⁹⁶ However, in *Daley Farms*, the court of appeals noted that this guidance document “only applies if a project requires an EAW or EIS, as well an air-emissions permit.”¹⁹⁷ In short, prior to 2021, other than one narrow mandatory EAW category (for stationary sources that would emit more than 100,000 tons per year of greenhouse gases and require an air-emissions permit) and a brief mention in the EAW Guidelines, Minnesota RGUs have lacked uniform guidance on how to analyze the effects of greenhouse gas emissions.

193. *Minn. Ctr. for Env’t Advocacy v. Holsten*, No. A08-2171, 2009 Minn. App. Unpub. LEXIS 1078, at *11 (Sept. 22, 2009); *see also* *Olmsted Cty. Concerned Citizens v. Minn. Pollution Control Agency*, No. A10-539, 2010 Minn. App. Unpub. LEXIS 1170, at *26–*28 (Dec. 7, 2010) (upholding Negative Declaration in part because “it would likely be decades before reliable data on [certain indirect greenhouse gas emissions] would be available”).

194. *See, e.g.*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC), GLOBAL WARMING OF 1.5°C 76 (Valérie Masson-Delmotte et al. eds., 2018) (describing the models and methods used in the “[d]etection and attribution of change in climate”).

195. 2013 EAW GUIDELINES, *supra* note 45, at 38 (2013), <http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm>.

196. MINN. POLLUTION CONTROL AGENCY, DISCUSSING GREENHOUSE GAS EMISSIONS IN ENVIRONMENTAL REVIEW (2011), <https://www.pca.state.mn.us/sites/default/files/p-ear1-07.pdf>.

197. *Daley Farms*, 2019 Minn. App. Unpub. LEXIS 976, at *15 (emphasis omitted).

B. THE CURRENT DRAFT RECOMMENDATIONS BEFORE THE EQB WOULD PROVIDE NEEDED CLARITY REGARDING THE SCOPE AND METHODOLOGY OF CLIMATE ANALYSIS IN ENVIRONMENTAL REVIEW

With its current Environmental Review Implementation Subcommittee, the EQB has an opportunity to clarify how to address greenhouse gas emissions under MEPA. Although *Holsten, Daley Farms*, and *Enbridge Energy* have not explicitly held that MEPA requires analysis of the climate effects of greenhouse gas emissions for all projects, they have all implied that at the very least, MEPA requires *consideration* of the potential for impacts from greenhouse gas emissions.¹⁹⁸ But the pre-2021 state of affairs leaves numerous questions unanswered under MEPA. These include: 1) what types of greenhouse gas emissions (e.g., direct, indirect, life-cycle) should be included in environmental review?; 2) what methodology should project proposers and RGUs use to quantify those emissions?; 3) how should RGUs qualitatively or quantitatively consider the *impact* of those emissions (e.g., via a metric such as the social cost of carbon)?; and 4) how should RGUs determine when these emissions are a significant environmental impact requiring further review in an EIS? These questions are a good starting point for analyzing the sufficiency of the potential revisions before the EQB in 2021.¹⁹⁹

Considering this context, the current Draft Recommendations before the EQB are a big step in the right direction, although they still fall short in some ways. First, the proposed changes to the EAW form will ensure that all environmental review documents contain information about greenhouse gas emissions. And the proposed guidance clarifies that this includes both direct and indirect emissions.²⁰⁰ This is a step forward, although the proposed changes do not address when life-cycle (upstream and downstream) emissions should be considered, despite a growing body of federal NEPA case law suggesting that

198. See *supra*, Part II.A.

199. As noted above, the Technical Team will revise its Draft Recommendations later this year in response to public input before presenting final recommendations to the EQB. This Note discusses the December 2020 Draft Recommendations throughout. To the extent any major revisions in future iterations of the recommendations (or in the EQB's final action) significantly affect the analysis in this Note, these questions remain a suitable framework for analyzing their sufficiency.

200. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 21, 27–28.

it is appropriate in certain situations.²⁰¹ It is also not quite as far as some other states. California, for example, updated its CEQA regulations to clarify that agencies must consider “the incremental contribution of the project’s emissions to the effects of climate change.”²⁰² Massachusetts has gone a step further, and included greenhouse gas emissions within the regulatory definition of “damage to the environment” (roughly equivalent to “significant environmental effects” under MEPA).²⁰³ Still, the proposed EAW form and guidance, combined with *Holsten*, *Daley Farms*, *Enbridge Energy*, federal case law, and the plain text of MEPA, are likely more than enough to make it clear that MEPA requires a climate analysis for all projects that includes direct and indirect emissions.

Second, the proposed new EAW guidance will assist project proposers and RGUs in identifying emissions sources and quantifying emissions. This guidance will make it easier for RGUs and project proposers to provide meaningful climate assessments in environmental review documents. It also brings Minnesota closer to California, Massachusetts, New York, and the 2016 CEQ Guidance, all of which provide similar tools.²⁰⁴ The draft guidance also provides examples of mitigation strategies for greenhouse gas emissions, which is a critical component that could potentially use more detail, as these mitigation strategies can help avert greenhouse gas emissions that would otherwise be significant environmental effects requiring an EIS.²⁰⁵

The new EAW guidance, if approved, will also help avoid future situations like *Holsten*, where the court accepted the RGU’s explanation that, as one commentator characterized it, “certain

201. See Burger & Wentz, *supra* note 59, at 113 n.12 (listing cases).

202. CAL. CODE REGS. tit. 14, § 15064.4(b) (2019).

203. See MASS. CODE. REGS. § 11.02(2) (2020) (including greenhouse gas emissions within the definition of “damage to the environment”).

204. See *supra* Part I.F (discussing other state guidance); 2016 CEQ GUIDANCE, *supra* note 76, at 12.

205. The Massachusetts guidance is one example of a somewhat more detailed list of mitigation measures. MASS. EXEC. OFFICE OF ENERGY AND ENV’T AFFAIRS, MEPA GREENHOUSE GAS EMISSIONS POLICY AND PROTOCOL 9–10 (2010), <http://eeaonline.eea.state.ma.us/eea/emepa/pdffiles/misc/GHG%20Policy%20FINAL.pdf>. Washington appears poised to provide another detailed list. WASH. DEPT OF ECOLOGY, GREENHOUSE GAS ASSESSMENT FOR PROJECTS (GAP) RULE: WASHINGTON ADMINISTRATIVE CODE (WAC) 173-445: DRAFT GAP RULE CONCEPTUAL FRAMEWORK FOR INFORMAL REVIEW 27–30 (Mar. 2021), <https://ecology.wa.gov/DOE/files/36/36bdb605-225d-4a74-9edd-8bc600714977.pdf>.

analyses relevant to climate change, such as determining the impacts of a project's discrete greenhouse gas emissions or how changes in the climate may affect models used to forecast a project's environmental effects, are beyond the state of the art."²⁰⁶ The draft guidance provides numerous calculators and methodologies to analyze greenhouse gas emissions in a wide range of circumstances. However, it is important to remember that scientific understanding of emissions and their costs—the “state of the art”—is rapidly evolving. Therefore, for this benefit to continue, it will be important for the EQB or the Technical Team to keep this list of calculators up-to-date in order to avoid future ambiguity and legal challenges.

C. THE PROPOSED DRAFT GUIDANCE DOES NOT RESOLVE QUESTIONS ABOUT SIGNIFICANCE; THE EQB SHOULD REQUIRE RGUS TO CONSIDER CONSISTENCY WITH STATE AND FEDERAL EMISSIONS REDUCTIONS AND CLIMATE ADAPTATION GOALS, AND ADOPT CONSISTENCY AS A SIGNIFICANCE THRESHOLD FOR PROJECTS

Although the EQB Technical Team's current draft proposals are a big step forward for Minnesota RGUs in identifying and quantifying greenhouse gas emissions, they do far less to clarify an important question: how should RGUs evaluate the *significance* of a project's greenhouse gas emissions? The purposes of environmental review include informing decision-makers as well as the public about the impact of proposed projects.²⁰⁷ This can help project proposers and RGUs mitigate or avoid those impacts, in service of RGUs' “responsibilities . . . to avoid or minimize adverse environmental effects and to restore and enhance environmental quality.”²⁰⁸ The EAW process exists for RGUs to identify significant environmental effects for further analysis in EISs. The Technical Team's proposed mandatory EIS category—projects emitting more than 100,000 tons per year of greenhouse

206. Lightfoot, *supra* note 95, at 1094 (discussing *Holsten*); Minn. Ctr. for Env't Advocacy v. *Holsten*, No. A08-2171, 2009 Minn. App. Unpub. LEXIS 1078, at *7, *22 (Sept. 22, 2009); *see also* Daley Farms, No. A19-0209, 2019 Minn. App. Unpub. LEXIS 976, *19–*20 (quoting Lightfoot's discussion of *Holsten*).

207. *See* MINN. R. 4410.0300, subp. 4(A) (noting that objectives of the environmental process include “provid[ing] usable information to the project proposer, governmental decision makers and the public concerning the primary environmental effects of a proposed project”).

208. MINN. R. 4410.0300, subp. 3.

gases—only covers facilities that would be among the state’s 100 largest emitters.²⁰⁹ This leaves RGUs with a large amount of discretion to determine whether a project’s greenhouse gas emissions are potentially “significant.” Without more clarity and guidance for RGUs, it is possible that projects with potentially significant climate change impacts will continue to fall through the cracks in the environmental review process and not be assessed under EAWs or EISs despite the potential for significant impacts.

The Technical Team’s Draft Recommendations explain why it did not provide more guidance along these lines. In short: the recommendations appear to await “a statewide program to regulate GHG pollution.”²¹⁰ Although the Technical Team acknowledged that “[t]he unique nature of GHG emissions were not considered when existing decision criteria were developed for potential environmental effects,” it nonetheless “support[ed] RGU discretion on a case-by-case basis, until a more robust regulatory framework is promulgated for GHG pollution across all relevant GHG emissions sources.”²¹¹ This approach, it argued, treats greenhouse gas emissions “in a similar manner to other types of potential effects that are minimally regulated.”²¹² In the meantime, the Draft Recommendations urge RGUs to consider “[t]he reductions in GHG emissions from proposed mitigation(s),” and “[w]hether a GHG reduction or offset plan has been developed to demonstrate alignment with Next Generation Energy Act reduction goals and/or other GHG reduction goals over the life of the project, either on a project- or emissions sector-level.”²¹³

However, while many Minnesotans hope that statewide comprehensive greenhouse gas regulation is on the way,²¹⁴ the

209. See MINN. ENV’T QUALITY BD., STATEMENT OF NEED AND REASONABLENESS FOR AMENDMENT OF PART 4410.4300, SUBPART 15, MANDATORY EAW CATEGORY REGARDING AIR POLLUTION, WITH RESPECT TO GREENHOUSE GAS EMISSIONS, 1, 3 (2010).

210. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 4.

211. *Id.* at 10.

212. *Id.*

213. *Id.*

214. See, e.g., *Setting MN’s Climate Standards Using the Best Science*, MINN. CTR. FOR ENV’T ADVOCACY, <https://www.mncenter.org/setting-mns-climate-standards-using-best-science> (last visited Apr. 24, 2021) (discussing a proposed bill to update the Next Generation Energy Act, which would increase emissions

EQB does not need to wait for future legislation to act. Minnesota *already* has a comprehensive greenhouse gas policy, although many advocates would like to strengthen it. Under the Next Generation Energy Act, “[i]t is the goal of the state to reduce statewide greenhouse gas emissions across all sectors producing those emissions” by 30% of 2005 levels by 2025 and 80% by 2050.²¹⁵ The EQB could also design flexible significance criteria and guidance that account for potential future legislative changes. Accordingly, this note offers two proposals for how the EQB could assist RGUs in evaluating the significance of a project’s climate impacts.

First, the EQB could provide guidance for RGUs on calculating climate costs. While emissions data is a critical piece of the puzzle, it does not tell the full story. The harmful impact of greenhouse gas emissions comes not from their mere presence in the air, but from their contribution to climate change. Because the significance of pure numbers in tons (e.g., 25,000 tons per year, 100,000 tons per year) may seem abstract to those without technical backgrounds, quantitative or qualitative context about the impact of emissions is desirable—even below any thresholds. One solution would be to add a question to the EAW form asking for a discussion of the impact of the project’s emissions on climate change. The EQB could supplement that discussion with guidance for project proposers on calculating the social cost of carbon (which can be done with a simple formula—the social cost of carbon is measured in dollars per ton). It may not always be practical or desirable to quantify the costs associated with climate impacts through a metric such as the social cost of carbon, as the 2016 CEQ climate change guidance recognized.²¹⁶ Further, MEPA, like NEPA, does not require a cost-benefit analysis.²¹⁷ Nonetheless, some sort of qualitative or quantitative

reduction targets and require that “[g]overnmental actions must be consistent with the statewide greenhouse gas emissions reductions targets”).

215. MINN. STAT. § 216H.02 (2020).

216. 2016 CEQ GUIDANCE, *supra* note 76, at 32–33.

217. *Id.* Although MEPA does not require a cost-benefit analysis, it does require an EIS to “analyze those economic, employment, and sociological effects that cannot be avoided should the action be implemented.” MINN. STAT. § 116D.04, subd. 2(a) (2020). As noted earlier, MEPA mandates that “[e]conomic considerations alone shall not justify” . . . “state action significantly affecting the quality of the environment” . . . “so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state’s paramount concern for the protection of its

assessment of climate costs would help make information about the climate impact of a project's emissions accessible and useable both for RGUs and the public, and may also incentivize project proposers to pursue additional mitigation strategies.²¹⁸ This approach would also align with federal caselaw regarding EISs, which requires federal agencies to take a "hard look" at the impacts of climate change from a project's emissions, providing at a minimum a qualitative assessment of their magnitude.²¹⁹

Second, the EQB could clarify further—either through guidance or a regulatory change to the EIS decision criteria—that RGUs should evaluate the significance of greenhouse gas emissions in the context of broader statutory and policy goals. This context is important because of the cumulative nature of climate change; standing alone, a bare number of several thousand (or million) tons of CO₂ emissions may not mean much to a decision-maker. The current Minnesota EAW form asks for project emissions, but provides no accompanying information for courts or policymakers to assess the meaning of those numbers.²²⁰ As mentioned, Minnesota has a number of greenhouse gas

air, water, land and other natural resources from pollution, impairment, or destruction." *Id.*, subd. 6 (2020).

218. The Minnesota Public Utilities Commission (MPUC) is one RGU that is explicitly required to consider climate costs in certain decisions. Under Minnesota law, the MPUC must "to the extent practicable, quantify and establish a range of environmental costs associated with each method of electricity generation." MINN. STAT. § 216B.2422 subd. 3(a) (2020). The agency is required to use these values in contexts such as resource planning and certificate of need proceedings, where it must weigh them alongside other factors such as socioeconomic costs. *Id.* The MPUC updated its environmental cost values in 2018, adopting a modified version of the federal Social Cost of Carbon to quantify climate costs. Order Updating Environmental Cost Values, Further Investigation into Environmental and Socioeconomic Costs Under Minnesota Statutes Section 216B.2422, Subdivision 3, No. E-999/CI-14-643, 9–32 (Minn. Pub. Util. Comm'n. Jan. 3, 2018); see also Gavin Bade, *Minnesota Regulators Finalize Carbon Cost Rules for Utility Procurements* (Jan. 5, 2018), UTLITYDIVE, <https://www.utilitydive.com/news/minnesota-regulators-finalize-carbon-cost-rules-for-utility-procurements/514189/> (discussing Minnesota's adoption of these values).

219. See, e.g., *WildEarth Guardians v. Zinke*, No. CV 17-80-BLG-SPW-TJC, 2019 U.S. Dist. LEXIS 30357, at *26–*33 (D. Mont. Feb. 11, 2019). Similarly, if a MEPA EIS quantifies a project's benefits in economic terms, RGUs should also quantify climate change costs using the social cost of carbon or a similar metric to avoid an unbalanced comparison.

220. MINN. ENV'T QUALITY BD., ENVIRONMENTAL ASSESSMENT WORKSHEET (July 2013), <https://www.eqb.state.mn.us/sites/default/files/documents/Finalized%20EAW%20Form%20July2013.pdf>.

reduction policies—most notably, the Next Generation Energy Act, which mandates statewide emissions reductions of 30% below 2005 levels by 2025 and 80% by 2050.²²¹ Improved EQB rules or guidance could require review documents to put project emissions in the context of statewide emissions reduction goals.

Currently, RGUs must *already* consider the cumulative significance of a project’s greenhouse gas emissions. Under the Minnesota standard for deciding on the need for an EIS, RGUs must consider a project’s cumulative potential effects, including:

whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project . . .²²²

As discussed previously, climate change is a textbook example of a cumulative effect. Thus, RGUs must look at, among other things, “approved [climate] mitigation measures” when evaluating the significance of a project’s emissions.²²³ The EQB could supplement this requirement, either with guidance advising RGUs to fully analyze a project’s impacts on statewide emissions goals, or with a regulatory change requiring RGUs to consider such goals when evaluating a project’s cumulative significance.

This requirement has a clear precedent in other states. California’s “CEQA Guidelines”—binding regulations interpreting the California Environmental Quality Act—specify that if a project complies with previously approved “regulations . . . for the reduction of greenhouse gas emissions,” an agency may determine that that project’s emissions are not cumulatively significant.²²⁴ Further, if a project is consistent with a “plan[] for the reduction of greenhouse gas emissions” in a land use planning document that was subject to sufficient environmental review, no further assessment of the cumulative impacts of those emissions is required.²²⁵ Similarly, the federal 2016 CEQ Guidance stresses the importance of both “mak[ing] clear whether a project’s GHG emissions are consistent with [federal, regional,

221. MINN. STAT. § 216H.02, subd. 1 (2020).

222. MINN. R. 4410.1700, subp. 7(b).

223. *Id.*

224. CAL. CODE REGS. tit. 14, § 15064(b)(3) (2019).

225. CAL. CODE REGS. tit. 14, § 15130(d) (2019).

state, tribal, or local plans, policies, or laws for GHG emissions reductions or climate adaptation],” and incorporating by reference climate analysis from larger-scale environmental reviews.²²⁶ A context requirement would serve the purposes of MEPA, which requires that an EIS be an “analytical rather than an encyclopedic document” that allows policymakers to make informed decisions.²²⁷ And allowing compliance with statewide goals to suffice has the potential to both streamline the environmental review process and encourage project proponents to design their proposals with larger emissions reduction programs in mind.

The EQB need not adopt a consistency requirement as the only “significance threshold” for determining whether a project requires further environmental review. California, for example, allows agencies to exercise significant discretion in choosing the best “threshold of significance” for a project.²²⁸ This flexible approach has benefits—different projects have different qualities, and the best applicable standard may vary. However, policy consistency should be on RGUs’ list of significance factors to evaluate, ensuring that environmental review gives decision-makers the information they need to contextualize their project with statewide goals. This approach is also feasible within the Technical Team’s current approach. The current draft recommended changes to the EAW form already ask the project proposer to discuss how a project’s lifetime “emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.”²²⁹ And a regulation or guideline telling RGUs to consider consistency with state emissions goals could be written flexibly, accounting for likely changes in Minnesota’s climate laws over the coming years.

226. See 2016 CEQ GUIDANCE, *supra* note 76, at 28–30.

227. MINN. STAT. § 116D.04, subd. 2a(a) (2020).

228. CAL. CODE REGS. tit. 14, § 15064(a)–(b) (2019); see also CAL. CODE REGS. tit. 14, § 15064.7 (discussing “thresholds of significance” generally).

229. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 22.

D. THE PROPOSED DRAFT GUIDANCE STILL LETS TOO MANY PROJECTS FALL THROUGH THE ENVIRONMENTAL REVIEW CRACKS

Ultimately, however, the above recommendation highlights a conundrum. Unlike California’s rules-based, “comprehensive, multi-year program to reduce greenhouse gas emissions,”²³⁰ Minnesota has a goals-based system²³¹—and we are falling behind. According to the Minnesota Pollution Control Agency’s latest biennial greenhouse gas emissions report, Minnesota emissions have decreased by only 8% since 2005—well short of the Next Generation Energy Act’s 30%-by-2025 target.²³² The only sector in which Minnesota is on-track to meet its goals is the electricity generation sector; in all other sectors—transportation, agriculture, industrial, residential, commercial, and waste—Minnesota is falling short.²³³ Within this context, it is hard to conceive of *any* project that would create additional greenhouse gas emissions and still be consistent with Minnesota’s statewide emissions goals—because every increase in emissions is another step away from the NGEA’s statutory targets. In other words, viewed in a cumulative significance context, it is arguable that *any* increase in greenhouse gas emissions is a “potentially significant environmental effect” requiring environmental review.

This may have informed why the Technical Team recommended waiting for “a statewide program to regulate GHG pollution” before making further changes to mandatory categories or the EIS need rule²³⁴—the intent may have been to avoid a vast increase in the number of projects requiring EAWs or EISs. But

230. See CALIFORNIA AIR RESOURCES BOARD, AB32 CLIMATE CHANGE SCOPING PLAN (2017), <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan>. Among other things, the state has a firm state-wide emissions limit, a cap-and-trade program, and other economic incentives and regulations.

231. MINN. STAT. § 216H.02 (2020).

232. Kristi Marohn, *Minnesota May Miss Greenhouse Gas Emission Goals*, MPR NEWS (Jan. 14, 2021, 5:15 pm), <https://www.mprnews.org/story/2021/01/14/minnesota-may-miss-greenhouse-gas-emission-goals>; MINNESOTA POLLUTION CONTROL AGENCY, 2021 BIENNIAL GREENHOUSE GAS EMISSIONS REDUCTIONS REPORT 3 (Mar. 2021), <https://www.pca.state.mn.us/sites/default/files/lraq-1sy21.pdf>.

233. MINNESOTA POLLUTION CONTROL AGENCY, 2021 BIENNIAL GREENHOUSE GAS EMISSIONS REDUCTIONS REPORT 4 (Mar. 2021).

234. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 4.

a failure to grapple with Minnesota's emissions dilemma does not erase the current situation; nor does it make greenhouse emissions less significant under the plain language of MEPA. Environmental review alone cannot turn the tide in Minnesota's climate policy, but it *can*—and was meant to—provide decision-makers with complete information about the environmental context and consequences of their actions. If greenhouse gas emissions are indeed significant, the solution is not to disregard their significance under MEPA in the name of regulatory convenience. Instead, the solution is to gather the required information about these effects, and for RGUs to provide more guidance and support for mitigation—even for projects with relatively small quantities of emissions. As the 2016 CEQ Guidance explained:

[T]he totality of climate change impacts is not attributable to any single action, but are exacerbated by a series of actions including actions taken pursuant to decisions of [governmental units]. Therefore, a statement that emissions from a proposed [governmental] action represent only a small fraction of global emissions is essentially a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether or to what extent to consider climate change impacts under NEPA. Moreover, these comparisons are also not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations because this approach does not reveal anything beyond the nature of the climate change challenge itself: the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large impact. When considering GHG emissions and their significance, agencies should use appropriate tools and methodologies for quantifying GHG emissions and comparing GHG quantities across alternative scenarios. [Governmental units] should not limit themselves to calculating a proposed action's emissions as a percentage of sector, nationwide, or global emissions in deciding whether or to what extent to consider climate change impacts under NEPA.²³⁵

What this situation calls for, then, is three things. First: the Draft Recommendations' so-called "de minimis" threshold of 25,000 tons per year for requiring additional climate and mitigation discussion is far too high.²³⁶ With this threshold, EAWs for projects emitting fewer than 25,000 tons per year of greenhouse gases would not have to contain more detailed mitigation information or discuss consistency with state emissions reduction goals.²³⁷ The Draft Recommendations argue that this

235. 2016 CEQ GUIDANCE, *supra* note 76, at 11.

236. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 9.

237. *Id.*

threshold aligns with Minnesota’s statutory emissions reporting requirements, as well as a mandatory federal emissions reporting threshold.²³⁸ The threshold is not, however, connected to the purpose of the EAW process—namely, to determine whether a project has the “potential for significant environmental effects” and requires an EIS.²³⁹ Calling 25,000 tons per year a “de minimis” threshold—and requiring less analysis for smaller projects—creates a risk of inaccurately implying that smaller quantities of greenhouse gas emissions may not be significant under MEPA. In fact, a majority of commercial buildings, manufacturing facilities, and farm facilities emit less than 25,000 tons-per-year of greenhouse gases individually,²⁴⁰ and yet cumulatively these sectors are far behind Minnesota’s statutory emissions goals. That is essentially the textbook definition of a cumulative effect and requires more examination under MEPA—which more detailed discussion in the EAW could help accomplish.

Nor is setting a lower number impossible or impractical. Washington’s forthcoming proposed rule, for example, would require life-cycle greenhouse gas emissions assessments and detailed mitigation planning for facilities with more than 10,000 tons-per-year of emissions.²⁴¹ The 2016 CEQ Guidance has *no* minimum threshold for recommending a quantitative emissions assessment, even though a 25,000 ton-per-year threshold appeared in a 2014 draft.²⁴² To gather the most relevant

238. *Id.*

239. See MINN. STAT. § 116D.04 subd. 2(a) (2020) (“Where there is potential for significant environmental effects resulting from any major governmental action, the action must be preceded by a detailed environmental impact statement prepared by the responsible governmental unit.”); see also *id.*, subd. 1(a)(c).

240. SVERRISSON, *supra* note 122, at 5–6.

241. WASH. DEP’T OF ECOLOGY, FOCUS ON: FRAMEWORK FOR CONSISTENT GREENHOUSE GAS ASSESSMENTS, No. 21-02-008 (Mar. 2021), <https://apps.ecology.wa.gov/publications/documents/2102008.pdf>.

242. The CEQ discussed this issue in the Federal Register when it promulgated its 2014 Draft Guidance. It acknowledged receiving comments urging that “agencies should not equate individual project greenhouse gas emissions at or above 25,000 metric tons per year as a ‘significant effect’ warranting the preparation of an environmental impact statement. According to these commenters, some groups may treat the guidance limit [on quantifying emissions] as a threshold of ‘significance,’ rather than just a reporting or ‘meaningful analysis’ standard. This increases the uncertainties and the different understandings that various groups will attach to the draft guidance.” Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, 79 Fed. Reg. 77801, 77809–10 (Dec. 24, 2014). CEQ reaffirmed that the previous “draft

information about climate impacts and best inform significance determinations, Minnesota RGUs should be required to include more detailed context and mitigation discussion in *all* EAWs, regardless of a project's total emissions. This would comply with MEPA's requirement that an EAW "set out the basic facts necessary to determine whether an environmental impact statement is required for a proposed action."²⁴³

Second, the EQB should consider a much broader mandatory EAW category, or else provide more guidance as to what level of emissions should require a discretionary EAW. In its Draft Recommendations, the Technical Team argued that "lowering the existing [stationary source] threshold [to 25,000 tons per year] would not meaningfully change the facilities requiring mandatory EAWs."²⁴⁴ Further, the Technical Team argued against a category encompassing additional project types, even while acknowledging that "there may be projects that have the potential for significant climate effects that would not otherwise exceed a mandatory category threshold."²⁴⁵ But, rather than suggest inaction, these conclusions imply a need to study additional projects. For one thing, according to the EPA, facilities reporting more than 25,000 metric tons-per-year of emissions encompass only 50% of U.S. emissions,²⁴⁶ suggesting a need to consider an even lower stationary source threshold. For another, Appendix C of the Draft Recommendations lists facilities in every emissions reporting sector not currently considered in an EAW or EIS category—including certain feedlots, forest harvests, and refinery facilities.²⁴⁷ While additional data on the overall scale of emissions from these missing facilities would be helpful, the "cumulative potential effect" of all of these facilities is significant,

guidance did not intend the disclosure threshold to be equivalent to or substitute for a determination of significance," and that instead CEQ regulations require "consideration of both context and intensity." *Id.* Nonetheless, it excluded a minimum threshold for quantifying climate impacts from its final 2016 guidance.

243. MINN. STAT. § 116D.04, subd. 1a(c) (2020).

244. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 12.

245. *Id.*

246. United States Environmental Protection Agency, *Greenhouse Gas Reporting Program: Key Facts and Figures*, EPA.GOV (last updated Nov. 9, 2020) <https://www.epa.gov/ghgreporting/key-facts-and-figures>.

247. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, app. at 61–70.

given Minnesota's current greenhouse gas emissions situation.²⁴⁸

Additional EAWs based on greenhouse gas emissions should serve as a tool for RGUs to consider that cumulative significance in deciding whether an individual project “has the potential for significant environmental effects.”²⁴⁹ To ensure that RGUs get the information they need to make a significance determination, the EQB should create a new mandatory EAW category encompassing all project types, and set a lower quantitative threshold than the current stationary source category—for example, a new category for all actions causing more than 10,000 tons-per-year of emissions.²⁵⁰ At a minimum, the EQB should clarify in guidance what the existing MEPA rules already support (and what a court may well hold)—that *many* facilities not within the currently existing mandatory EAW category may still have potentially significant climate effects requiring an EAW or EIS.

Third, this situation calls for an increased focus on mitigation. If RGUs are to properly recognize the cumulative significance of numerous smaller-emitting facilities and additional project types, they would benefit from tools that allow them to approve those facilities without undertaking an impossible number of EISs.²⁵¹ The Draft Recommendations' Table 7, listing mitigation options, is an important starting point for those tools.²⁵² But the EQB could go a step further, following other states that have provided more detailed lists of mitigation options as part of

248. See MINN. R. 4410.1700, subp. 7 (explaining how RGUs must consider cumulative potential effects when determining “whether a project has the potential for significant environmental effects”).

249. *Id.*

250. Cf. WASHINGTON DEPARTMENT OF ECOLOGY, FOCUS ON: FRAMEWORK FOR CONSISTENT GREENHOUSE GAS ASSESSMENTS 2, No. 21-02-008 (Mar. 2021), <https://apps.ecology.wa.gov/publications/documents/2102008.pdf> (proposing to require climate analysis for all industrial and fossil fuel projects that would emit more than 10,000 tons per year of carbon dioxide equivalent).

251. See Kass, *supra* note 78, at 70–72 (discussing the potential “no-project-left-behind” problem of determining the significance of climate impacts under NEPA); see also *id.* at 72–96 (discussing various solutions to over- and under-inclusion of projects in environmental review). That said, some number of additional EISs may not be a bad thing. See Reuther, *supra* note 58, at 10664 (arguing that “[t]he failure of Minnesota’s state and local agencies to require EISs significantly undermines the purpose and efficacy of MEPA”).

252. TECH. TEAM DRAFT RECOMMENDATIONS, *supra* note 111, at 32.

requiring more discussion.²⁵³ Providing additional mitigation guidance would help project proposers plan to mitigate greenhouse gas emissions at the EAW stage, reducing the potential for significant climate effects. This process would incentivize project proposers to adopt climate mitigation measures early, in order to avoid a significance determination and resulting lengthier EIS process.²⁵⁴ In the end, additional mitigation guidance and discussion would help RGUs fulfill their responsibilities to “avoid or minimize adverse environmental effects and to restore and enhance environmental quality.”²⁵⁵

Overall, by providing more guidance on calculating climate costs, recommending consistency with state emissions goals as a threshold of “significance,” eliminating the “de minimis” threshold for additional analysis in EAWs, and providing guidance that leads to more EAWs, more EISs, and more mitigation, the EQB can sharpen MEPA as a tool for understanding and mitigating the climate implications of governmental decisions.

CONCLUSION

More than ten years since the Minnesota Court of Appeals’ decision in *Holsten*, it appears that MEPA is very much “up to the task” of dealing with climate change. A growing number of federal courts have required robust climate change reviews under NEPA, and the statutory language of MEPA is similar enough that the same should be required in Minnesota. Rather than passively allowing courts to set minimum requirements

253. See, e.g., WASH. DEP’T OF ECOLOGY, GREENHOUSE GAS ASSESSMENT FOR PROJECTS (GAP) RULE: WASHINGTON ADMINISTRATIVE CODE (WAC) 173-445: DRAFT GAP RULE CONCEPTUAL FRAMEWORK FOR INFORMAL REVIEW 27–31 (Mar. 2021), <https://ecology.wa.gov/DOE/files/36/36bdb605-225d-4a74-9edd-8bc600714977.pdf>.

254. See Kass, *supra* note 78, at 84 (discussing NEPA and noting that the option of mitigating climate impacts to avoid an EIS “encourages proponents of federal actions to incorporate global warming mitigation measures into their proposals and to think about climate change mitigation early on during project design”).

255. See MINN. R. 4410.0300, subp. 3 (2021); see also MINN. STAT. § 116D.01 (2020) (“The purposes of [MEPA] are . . . to promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of human beings . . .”); MINN. STAT. § 116D.04 (2020) (“No state action significantly affecting the quality of the environment shall be allowed . . . where such action or permit has caused or is likely to cause pollution, impairment, or destruction . . . so long as there is a feasible and prudent alternative . . .”).

through litigation, Minnesota's RGUs should take a more proactive approach to analyzing climate impacts. While some RGUs do have their own internal practices, all RGUs look to the EQB for guidance around MEPA. The EQB Technical Team's current draft proposals would provide long overdue MEPA guidance, setting standards for a hard look at the climate impacts of emissions from a given project in all environmental reviews. Still, significant questions and gaps remain, and the EQB should further guide RGUs in assessing the context and significance of a project's greenhouse gas emissions.
