

**UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT**

August Term, 2019

Argued: January 14, 2020 Decided: April 1, 2020

Docket No. 19-2896

NATURAL RESOURCES DEFENSE COUNCIL, ENVIRONMENTAL DEFENSE FUND,

Plaintiffs-Appellants,

— v. —

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Defendant-Appellee.

Before:

KATZMANN, *Chief Judge*, LYNCH, *Circuit Judge*, and KAPLAN, *District Judge*.*

* Judge Lewis A. Kaplan of the United States District Court for the Southern District of New York, sitting by designation.

Plaintiffs-Appellants Natural Resources Defense Council and Environmental Defense Fund appeal from a judgment of the United States District Court for the Southern District of New York (Castel, J.). The district court held that the Environmental Protection Agency properly invoked the deliberative process privilege and Exemption 5 of the Freedom of Information Act (“FOIA”) to withhold a portion of its OMEGA computer program when responding to Plaintiffs-Appellants’ FOIA request. Because we agree with Plaintiffs-Appellants that the requested record is not deliberative, the judgment of the district court is **REVERSED** and the case **REMANDED**.

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GERARD E. LYNCH, *Circuit Judge*:

This appeal concerns a Freedom of Information Act (“FOIA”) request filed with the Environmental Protection Agency (“EPA”) by Plaintiffs-Appellants Natural Resources Defense Council and Environmental Defense Fund (collectively “NRDC”). NRDC requested release of the current version of the OMEGA model, an EPA computer program used to forecast the likely responses

of automakers to proposed EPA greenhouse gas emissions standards. In response to NRDC's request, EPA released several components of the computer program but withheld one component – the so-called “core model” – under FOIA Exemption 5, citing the deliberative process privilege. NRDC filed suit and the United States District Court for the Southern District of New York (P. Kevin Castel, *J.*) held that EPA properly invoked the deliberative process privilege and Exemption 5. For the reasons set forth below, we agree with NRDC that the core model is not deliberative and therefore does not fall within the scope of the privilege and FOIA Exemption 5. The judgment of the district court is REVERSED and the case is REMANDED with directions to enter judgment for NRDC on its motion for summary judgment and for further proceedings consistent with this opinion.

BACKGROUND

I. The OMEGA Model and EPA Rulemaking

The Clean Air Act requires EPA to regulate emissions from new motor vehicles if EPA determines that the vehicles “cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” 42 U.S.C. § 7521(a)(1). In 2009, EPA concluded that greenhouse gas (“GHG”)

emissions from motor vehicles contribute to air pollution and climate change and thereby “endanger[] the public welfare of both current and future generations.” Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,498-99 (Dec. 15, 2009). Per its Clean Air Act mandate, EPA began regulating GHG emissions from new motor vehicles in 2010. *See* Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 25,324 (May 7, 2010).

As EPA sets emissions standards under the Clean Air Act, the statute directs it to do so in consideration of the compliance costs and lead time required for automakers to meet the new standard. 42 U.S.C. § 7521(a)(2). Estimating these time and cost factors is no easy task because EPA does not prescribe the manner by which automakers meet a given GHG standard, instead leaving it to each manufacturer to select from the “almost infinite number of technology combinations that could produce a desired level of emissions reductions.” J. App’x 82 ¶9 (internal quotation marks omitted). And since each technology combination has its own price tag and lead time requirements, coming up with viable, industry-wide estimates for these statutory factors is a complex

undertaking. To sift through the multitude of ways in which each automaker *could* comply with a GHG standard to identify the most likely compliance decisions, EPA developed a computer program called the Optimization Model for Reducing Emissions of Greenhouse Gases from Automobiles (“OMEGA” or “the OMEGA model”). *See* 75 Fed. Reg. at 25,446.

The OMEGA model simulates how automakers will likely react to a hypothetical GHG standard. Based on scenario data loaded into the model, OMEGA forecasts “which emissions-reducing technologies manufacturers will use, when they will incorporate those technologies into each of their vehicles, and how much those technologies will cost to apply.” J. App’x 76 ¶18. With the OMEGA projections in hand, EPA is better able to set a GHG emissions standard that protects public health and welfare while remaining cognizant of the time and cost burdens imposed on automakers. As described in greater detail below, the OMEGA model consists of five key components. This appeal concerns only one of these components: the core model.

EPA has relied on the OMEGA model to inform its GHG standards since it started regulating emissions in 2010. *See* 75 Fed. Reg. at 25,446. Since then, EPA has publicly released then-current versions of OMEGA alongside technical

reports, proposed rules, and final rules, anticipating that the public would be most interested in using OMEGA at those times. In total, EPA has released five versions of the OMEGA model over the past decade. In addition to these public releases, EPA's historic practice was to freely share the most current version of OMEGA upon request.

In 2012, EPA set GHG emissions standards for vehicles with model years ("MY") 2017-2025. *See* 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62,624, 62,627 (Oct. 15, 2012). Recognizing the long time frame of the rule and the likelihood of intervening technological advancements, the 2012 rule required EPA to conduct a mid-term evaluation by April 2018 to ensure that the GHG standards set for MY 2022-2025 continued to be appropriate. *Id.* at 62,784. When EPA carried out the evaluation, it determined that the GHG standards set for MY 2022-2025 were based on overly optimistic assumptions and were therefore too stringent. *See* Mid-Term Evaluation of Greenhouse Gas Emissions

Standards for Model Year 2022-2025 Light-Duty Vehicles, 83 Fed. Reg. 16,077, 16,087 (Apr. 13, 2018).¹

In August 2018, EPA issued a notice of proposed rulemaking that recommended freezing the GHG emissions standards at MY 2020 levels for MY 2021-2026. *See* The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, 83 Fed. Reg. 42,986, 42,988 (Aug. 24, 2018). As with previous GHG emissions rules, the 2018 proposed rule was issued as a joint rulemaking between EPA and the National Highway Traffic Safety Administration (“NHTSA”). Unlike previous rules, however, EPA did not base its proposal on the OMEGA model’s projection of automaker compliance, instead relying on a NHTSA modeling program. *Id.* at 43,000.²

¹ The April 2018 evaluation was actually the second mid-term evaluation. In January 2017, EPA concluded that the existing GHG standards remained appropriate, but EPA announced its intention to reconsider that evaluation in March 2017. *See* 83 Fed. Reg. at 16,078.

² The record shows that approximately four months before the proposed rule was issued, EPA met with the Office of Management and Budget to express serious concerns about the results produced by the NHTSA model, including concerns that the model was consistently overestimating compliance costs and not prioritizing cost-effective technologies. Notwithstanding EPA’s initial concerns, the NHTSA model was ultimately used to inform the GHG standards in the 2018 proposed rule.

II. Procedural History

In August 2018, NRDC submitted a FOIA request to EPA, seeking several records related to OMEGA, including all unreleased versions of the model itself. EPA did not respond within the statutory deadline and NRDC filed suit.

While the litigation was pending, NRDC voluntarily narrowed its request to seek only four of the five components of the current version of the OMEGA model, version 1.4.59. EPA then released three of the components of OMEGA v.1.4.59. EPA withheld release of the fourth component, the core model for OMEGA v.1.4.59, on the grounds that it was protected by the deliberative process privilege and thus within the scope of FOIA Exemption 5.

NRDC and EPA filed cross-motions for summary judgment on the issue of whether EPA properly withheld the OMEGA core model. The district court granted summary judgment for EPA.

DISCUSSION

“We review a district court’s grant of summary judgment in FOIA litigation *de novo*.” *ACLU v. Nat’l Sec. Agency*, 925 F.3d 576, 588 (2d Cir. 2019). In enacting FOIA, Congress “intended to establish a general philosophy of full agency disclosure.” *Fed. Labor Relations Auth. v. U.S. Dep’t of Veterans Affairs*, 958

F.2d 503, 508 (2d Cir. 1992) (internal quotation marks omitted). FOIA thus requires an agency to “disclose records on request, unless they fall within one of nine exemptions.” *Milner v. Dep’t of the Navy*, 562 U.S. 562, 565 (2011). “[I]n a FOIA case, the defending agency has the burden of showing . . . that any withheld documents fall within an exemption to the FOIA.” *Carney v. U.S. Dep’t of Justice*, 19 F.3d 807, 812 (2d Cir. 1994).

Here, EPA has invoked Exemption 5, which provides that agencies need not release “inter-agency or intra-agency memorandums or letters that would not be available by law to a party other than an agency in litigation with the agency.” 5 U.S.C. § 552(b)(5). By this language, Congress incorporated civil discovery privileges into Exemption 5, allowing an agency to withhold records that would be privileged in litigation. *Dep’t of the Interior v. Klamath Water Users Protective Ass’n*, 532 U.S. 1, 8 (2001). The specific discovery privilege invoked by EPA to justify withholding the OMEGA core model is the deliberative process privilege. That privilege is designed “to enhance the quality of agency decisions by protecting open and frank discussion among those who make them within the Government.” *Id.* at 9 (internal quotation marks omitted). Accordingly, the

privilege covers certain agency records reflecting internal advisory opinions, recommendations, and deliberations.

In order for the privilege to apply, the agency record at issue must be (1) an inter-agency or intra-agency memorandum or letter; (2) pre-decisional; and (3) deliberative. *See Tigue v. U.S. Dep't of Justice*, 312 F.3d 70, 76 (2d Cir. 2002). NRDC argues that the OMEGA core model does not meet any of these three requirements, and that each offers an independent basis for reversing the district court. Because we agree that the OMEGA core model is not deliberative, we resolve this appeal on that ground alone.³

I. The Function and Context of the Core Model

“Whether [the core model] is exempt under (b)(5) depends not only on the intrinsic character of the [core model] itself, but also on the role it play[s] in the administrative process.” *Lead Indus. Ass’n, Inc. v. Occupational Safety and Health Admin.*, 610 F.2d 70, 80 (2d Cir. 1979). We thus begin by describing both the core model and its role within the broader OMEGA context. Both EPA and NRDC

³ We further decline to address NRDC’s additional arguments regarding the segregability of the OMEGA model machine code and the foreseeable harm requirement of 5 U.S.C. § 552(a)(8)(A)(i)(I) because resolving those issues is also not necessary to resolve this case.

submitted declarations detailing the workings of the OMEGA model, and these declarations are largely consistent in their depictions.⁴ While the NRDC declarations are somewhat more detailed, EPA did not dispute their accuracy before the district court and does not do so before us on appeal. We draw on this undisputed factual record to form our understanding of the core model and its context within OMEGA.

Each “run” of the OMEGA model involves five components or stages. In the first component, input data is loaded into the model. The inputs are Excel spreadsheets filled with raw data that establish the factors and constraints to be modeled in that run of OMEGA. These inputs include (1) market data, including the characteristics of the vehicles at issue and current emissions levels; (2) technology data, such as the available emissions-reduction options and their

⁴ EPA submitted declarations from William L. Wehrum, the then-assistant administrator for the EPA Office of Air and Radiation (“OAR”); and William Charmley, the director of the Assessment and Standards Division within the EPA Office of Transportation and Air Quality (“OTAQ”), which falls under OAR. NRDC submitted declarations from Margo Oge, the former director of OTAQ; Nicholas Lutsey, a program director at the International Council on Clean Transportation; and Dave Cooke, a senior vehicles analyst at the Union of Concerned Scientists.

costs; (3) scenario data, primarily the GHG standard being modeled; and (4) other data relevant to the projection, such as anticipated fuel prices.

Once the input files have been loaded, the second component takes over. A series of pre-processors take the raw input data and organize it into datasets to facilitate the modeling. For example, one pre-processor groups together technologies that might commonly be implemented together while another accounts for emissions-reduction technologies already in use to avoid double-counting.

The third component is the core model, which consists of a series of algorithms, written in the C# computer programming language. These algorithms “run thousands of calculations” on the processed input data to forecast the emissions-reduction technologies automakers would likely incorporate to meet the simulated GHG standard in the particular scenario created by the input data. J. App’x 131 ¶13. The core model begins by “determin[ing] the specific emission standard applicable for each manufacturer and its vehicle class (car or truck). Then the model determines the emission standard applicable to each manufacturer’s car and truck sales.” *Id.* at 87 ¶20. With the emissions goals identified from the input data, the core model

“considers the range of technology packages available to each automaker’s individual vehicles” and applies different combinations of the available technologies to an automaker’s fleet until it meets the simulated GHG standard in the most cost-effective way possible. *Id.* at 131 ¶11.

The core model results are turned into a series of output Excel files, the fourth component of OMEGA.⁵ The outputs detail the technologies automakers are projected to deploy as well as the costs of compliance. In the final component, the raw output data is put through a series of post-processors, which organize the results into a more user-friendly format and provide additional analysis. EPA can then review the results of the run to get a sense of the compliance time and costs likely to be associated with the simulated scenario.

II. The Core Model Is Not Deliberative

Upon our review of OMEGA in general and the core model in particular, we are persuaded that the core model is not deliberative. An agency record is “deliberative if it reflects the give-and-take of the consultative process.” *Brennan Ctr. for Justice at N.Y.U. Sch. of Law v. U.S. Dep’t of Justice*, 697 F.3d 184, 202 (2d

⁵ NRDC has not sought release of these raw data output files; the FOIA request at issue seeks only the other four components.

Cir. 2012) (internal quotation marks omitted). “[T]he privilege focus[es] on documents reflecting advisory opinions, recommendations and deliberations comprising part of a process by which governmental decisions and policies are formulated.” *Grand Cent. P’ship, Inc. v. Cuomo*, 166 F.3d 473, 482 (2d Cir. 1999) (internal quotation marks omitted).

Here, the record shows that to the extent the full OMEGA model reflects *any* subjective agency views, it does so in the input files, not the core model. *See* J. App’x 85 ¶13, 86 ¶¶15-16, 130 ¶10(a), 131 ¶12. It is the inputs that determine the constraints, predictions, and goals for each run of OMEGA. As one declarant explained, “[v]ery few numeric values are hard-coded in the pre- and post-processors or the [core model], as the model is meant to be built upon the input-file technology and cost data and the externally determined GHG-emission target.” *Id.* at 88 ¶22. Once the input files set the parameters of the simulation, the only task remaining for the core model is to run “thousands of calculations” on the given data so as to find the most cost-effective technology combinations for that particular scenario. *Id.* at 87 ¶20; *see id.* at 75 ¶16 (“[T]he OMEGA model and its outputs simply reflect the inputs fed into the model, and EPA uses different sets of inputs to reflect different scenarios.”). The core model is thus akin to a

specialized calculator, driven by the same algorithms to make the same calculations on every run of OMEGA. And the release of “materials relating to standard or routine computations or measurements over which the agency has no significant discretion[] is unlikely to diminish officials’ candor or otherwise injure the quality of agency decisions.” *Petroleum Info. Corp. v. U.S. Dep’t of the Interior*, 976 F.2d 1429, 1436 (D.C. Cir. 1992).

EPA argues that the deliberative process privilege may properly be applied to records that are ostensibly objective or fact-based insofar as such records might reveal the agency’s decisionmaking process. While the privilege generally does not extend to factual material, “[i]f the factual materials are inextricably intertwined with policy making recommendations so that their disclosure would compromise the confidentiality of deliberative information[, they are] entitled to protection under Exemption 5.” *Lead Indus. Ass’n*, 610 F.2d at 85 (internal quotation marks omitted). Specifically, EPA contends that release of the core model would reveal the agency’s decision to include or exclude various analytical tools, thus exposing agency thinking about the need for “a different or more substantial type of analysis in a certain area.” J. App’x 123 ¶12. As an example, EPA points to its deliberations about adding a “consumer choice sub-

model” to OMEGA, which would allow the model to account for anticipated consumer responses to changes in fuel economy and pricing. *Id.* at 124 ¶¶18-19. EPA claims that “[t]he mere fact of whether or not policy consideration was given to including such an analytical tool in the current version of the OMEGA model, and the outlines and parameters of any such hypothetical tool, would reveal EPA’s pre-decisional thinking about the role of consumer choice in the regulatory development process.” *Id.* at 124 ¶19.

EPA’s argument stretches the deliberative process privilege too far. The release of the core model could, at most, reveal the various analytical tools EPA has at its disposal. It would not explain the factors that prompted development of a tool, nor would it expose rationales cutting against or in favor of its use. “Even the most mundane material could be said to reflect the exercise of agency discretion in some sense To be protected under Exemption 5, the kind and scope of discretion involved must be of such significance that disclosure genuinely could be thought likely to diminish the candor of agency deliberations in the future.” *Petroleum Info. Corp.*, 976 F.2d at 1436 n.8.

The example of the consumer choice sub-model is particularly unhelpful to EPA’s argument, as the record shows that the last publicly released version of the

OMEGA core model contained the consumer choice sub-model notwithstanding the fact that EPA had not – and still has not – “turned on” the sub-model to actually use it in OMEGA’s analysis. *See* J. App’x 185 ¶¶10, 186 ¶¶14. Thus, not only does the inclusion of a new analytical tool in the core model fail to reveal the deliberations underlying the tool’s development but it may not even reveal whether EPA has decided to use that tool. Without more, the fact that the core model might reveal that EPA has developed a new analytical capacity for OMEGA – which the agency may or may not be using – does not make the core model deliberative.⁶

The core model is distinct from the computer programs at issue in two district court cases on which EPA relies. In *Cleary, Gottlieb, Steen & Hamilton v. Department of Health and Human Services*, 844 F. Supp. 770 (D.D.C. 1993), the district court held that computer programs used to conduct an epidemiological study were deliberative. *Id.* at 782-83. In that case, the author of the study testified

⁶ EPA’s argument that disclosure of the core model would reveal privileged deliberations is further undermined by record evidence showing that the deliberations EPA claims to protect have already been revealed in the input files released to NRDC. *See, e.g.*, J. App’x 185 ¶¶11-12, 186 ¶¶14 (explaining that the released input files contain data inputs for the consumer choice sub-model as well as the “on/off” switch to deploy the sub-model, which is set in the “off” position).

that she regularly modified her software over the course of the study to reflect her evolving hypotheses. The court found that the programs thus “reflect[ed] their creator’s mental processes” and revealed her “scientific deliberations and opinions.” *Id.* at 783. In contrast, the core model provides only highly abstract insights into EPA deliberations, which are too far removed from any policy judgments to render the core model deliberative. Moreover, the core model does not involve “culling and selection of relevant facts” in the same sense as the *Cleary* computer program. *Id.* And in *Goodrich Corp. v. U.S. EPA*, 593 F. Supp. 2d 184 (D.D.C. 2009), the district court held that an incomplete computer modeling program was deliberative because the model was “still in development,” *id.* at 187, and was thus akin to a “draft,” *id.* at 189. We take no position on whether the core model of OMEGA v. 1.4.59 may in some sense be considered a “draft” because, as explained above, any insight that could be gleaned by comparing the current core model to other versions is simply not the kind of “policy-oriented judgment” protected by the deliberative process privilege. *Nat’l Sec. Archive v.*

CIA, 752 F.3d 460, 465 (D.C. Cir. 2014) (emphasis and internal quotation marks omitted).⁷

The “key question” we keep in mind when assessing the application of the deliberative process privilege to an agency record is “whether disclosure would tend to diminish candor within an agency.” *Petroleum Info. Corp.*, 976 F.2d at 1435 (internal quotation marks omitted). The core model does not contain or expose the types of internal agency communications that courts typically recognize as posing a risk to the candor of agency discussion such as advice, opinions, or recommendations. *See Grand Cent. P’ship*, 166 F.3d at 482. Instead, it contains algorithms instructing the model on how to process the input data. While the core model may in some respects reflect internal agency deliberations, disclosure of its analytical tools cannot reasonably be anticipated to impair the quality of agency decisionmaking. *See Tigue*, 312 F.3d at 76. Here, like the D.C. Circuit in *Petroleum Information Corp.*, “[w]e do not see in the data elements, codes, and

⁷ Similarly, we in no way suggest that a computer program or set of algorithms may not, under particular circumstances, come within the deliberative process privilege. Algorithms underlying computer programs may well reflect policy judgments or assumptions about what data is relevant to a policy determination or factual projection. We hold only that on the record of this case, EPA has not presented sufficient evidence to permit a conclusion that the core model of OMEGA is deliberative.

format choices, to the extent they have been explained to us, the candid or personal decisions that, if revealed prematurely, would be likely to stifle honest and frank communication within the agency.” 976 F.2d at 1438-39 (internal quotation marks omitted).

Under FOIA, “[a]n agency must disclose agency records . . . unless they may be withheld pursuant to one of the nine enumerated exemptions.” *U.S. Dep’t of Justice v. Tax Analysts*, 492 U.S. 136, 150-51 (1989) (internal quotation marks omitted). Because the OMEGA core model is not deliberative, it does not fall within the scope of the deliberative process privilege. Accordingly, its withholding under Exemption 5 was improper.

CONCLUSION

For the reasons stated above, we find that the district court erred in granting summary judgment to EPA and in denying summary judgment to NRDC. The judgment of the district court is therefore **REVERSED** and the case is **REMANDED** with directions to enter judgment for NRDC on its motion for summary judgment and for further proceedings consistent with this opinion.