

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NATURAL RESOURCES DEFENSE COUNCIL
and ENVIRONMENTAL DEFENSE FUND,

Plaintiffs,

-v-

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY,

Defendant.

18 Civ. 11227 (PKC) (DCF)

DECLARATION OF WILLIAM CHARMLEY

I, William Charmley, declare pursuant to 28 U.S.C. § 1746 that the following statements are true and correct to the best of my knowledge and belief, that they are based upon information acquired by me in the course of performing my duties, information contained in the records of the United States Environmental Protection Agency (EPA or Agency), and information supplied to me by current and former EPA employees including employees under my direction.

1. I am the Director for the Assessment and Standards Division (ASD), part of the EPA Office of Transportation and Air Quality (OTAQ) within the Office of Air and Radiation (OAR). I have held this position since 2013. I have worked at the EPA for over 27 years.

2. I am familiar with the Freedom of Information Act (FOIA) request EPA-HQ-2018-010465 submitted by the Natural Resources Defense Council (NRDC) that is at issue in the above-captioned matter. This declaration is submitted in support of EPA's motion for summary judgment and opposition to Plaintiffs' motion for summary judgment.

3. OTAQ is responsible for protecting public health and the environment by addressing issues related to air pollution and greenhouse gas emissions from motor vehicles,

engines, and the fuels used to operate them, and by encouraging business practices and travel choices that minimize emissions.

4. I have read and am personally familiar with Plaintiffs' pending FOIA request at issue, designated EPA-HQ-2018-010465 ("Plaintiffs' FOIA Request"). In my current capacity as Division Director, I oversee staff in responding to certain FOIA requests assigned to OTAQ, including this FOIA request.

A. Plaintiffs' FOIA Request

5. On August 10, 2018, Natural Resources Defense Council electronically submitted its FOIA Request through EPA's FOIAOnline system. A true copy of the request, excluding attachments, is attached hereto as Exhibit A. The request was a letter dated July 25, 2018 with attachments. EPA's National FOIA office assigned the request to OTAQ.

6. Plaintiffs' FOIA Request originally sought the following records:

A. Any and all versions of the Optimization Model for Emissions of Greenhouse Gases from Automobiles (OMEGA models), not previously made public, including but not limited to any OMEGA models used to inform EPA's Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles (the MTE), 83 FR 16077 (Apr. 13, 2018); and/or EPA and the National Highway Traffic Safety Administration's (NHTSA) expected joint notice of proposed rulemaking to revise model year 2021-26 light-duty vehicle (LDV) greenhouse gas (GHG) and augural Corporate Average Fuel Economy (CAFE) standards (the MY2021-26 Proposal), including any and all source code for the various OMEGA models' components and any and all documentation describing the logical flow and relationship between those components;

B. The "decision trees" utilized by the most recent version of the OMEGA models referred to in #[A], above;

C. Any and all input files for all OMEGA models referred to in #[A], above;

D. Any and all data and analysis supporting the development of baseline vehicles and the OMEGA models' baseline fleet(s) of LDV;

E. Any and all data and analysis supporting cost estimates and/or cost projections for any and all technologies identified by EPA as having the potential to decrease GHG emissions in LDV;

F. Any and all data and analysis supporting estimates and/or projections regarding the actual or potential effectiveness in decreasing GHG emissions of all technologies described in #[E], above;

G. Any and all data and analysis supporting the development of estimates and/or projections regarding maximum feasible penetrations of the technologies described in #[E], above, across the U.S. fleet including all data and analysis related to the development of constraints to market penetration below what would otherwise be dictated by market economics;

H. Any and all data and analysis regarding the cadence, timing, and duration of product redesign and refresh cycles assumed for vehicles in the baseline fleet;

I. The methodology and results of all Advanced Light-Duty Powertrain and Hybrid Analysis (ALPHA) modeling used to develop the estimates for the effectiveness of all technologies described in #[E], above;

J. Any and all documents, instructions, and data methodology (computer programs and/or computer files, as appropriate) used to convert the vehicle data, technology costs, effectiveness estimates, and any other relevant information described in #[D] through #[I] into inputs to the OMEGA models;

K. Any and all models and/or components, as well as all data and analysis, regarding impacts on vehicle sales, including sale prices (including both Manufacturer's Suggested Retail Prices and prices actually paid by consumers), consumer demand, consumer willingness to pay, consumer choice, consumer preference, vehicle mix across the US fleet, vehicle performance, scrappage rates, fleet size, fleet mix, vehicle miles traveled, safety, and/or fleet turnover rates used to inform the MTE or the MY 2021-26 Proposal; and

L. Any data and/or analysis pertaining to the impact of vehicle fuel economy and/or vehicle price on the amount of driving done by vehicle operators.

Exhibit A at 1-3.

7. On August 21, 2018, EPA's National FOIA Office granted Plaintiffs' request for a fee waiver and denied Plaintiffs' expedited processing request.

B. Background on the OMEGA Model

8. In 2009, EPA found that vehicle emissions of six greenhouse gases (GHGs) taken in combination endanger public health and welfare, which triggered a Clean Air Act duty to establish federal standards for such emissions. 74 Fed. Reg. 66,496 (Dec. 15, 2009). EPA developed the OMEGA model to assist decision makers in the process of establishing those federal standards.

9. The OMEGA model was designed to help predict how automakers could combine and apply emissions-reduction technologies in the most cost-effective way to achieve those standards. EPA has released five versions of the OMEGA model. EPA's website contains background information on the OMEGA model and the model releases. See

<https://www.epa.gov/regulations-emissions-vehicles-and-engines/optimization-model-reducing-emissions-greenhouse-gases>.

10. The OMEGA model generally contains five main components:

a. Inputs: Microsoft Excel spreadsheets and text files containing factual data.

The inputs compatible with OMEGA v.1.4.59 have been released in full to Plaintiffs.

b. Pre-processors: Spreadsheets and some Visual Basic, Python, and MATLAB code that helps translate the inputs into the necessary form to be input into the core model. The pre-processors compatible with OMEGA v.1.4.59 have been released in full to Plaintiffs.

c. Core model: The core C# code at the center of the modeling process, discussed in more detail below. The core model for OMEGA v.1.4.59 has been withheld in full pursuant to 5 U.S.C. § 552(b)(5).

d. Post-processors: Spreadsheets, Visual Basic, and Python code required to generate a benefit-cost analysis based on the core model outputs. The post-processors compatible with OMEGA v.1.4.59 have been released in full to Plaintiffs.

e. Outputs: The raw data generated by the model, generally in spreadsheet form. Plaintiffs are not seeking model outputs.

11. The core model is designed to consider the fleets for each individual automaker and determine their GHG program compliance targets for a relevant set of years. It then considers the range of technology packages available to each automaker's individual vehicles and determines the most cost-effective path toward achieving the compliance target.

12. The inputs and pre-processors generate the universe of possible technology packages that could be applied to each vehicle model in an automaker's fleet. The core model considers which of those packages an individual automaker could apply given a set of constraints, most notably the potential compliance targets set by the agency, while remaining as cost-effective as possible.

13. To accomplish that goal, the core model contains numerous algorithms that run thousands of calculations each time the model is used. EPA has developed the algorithms at issue over the course of a number of versions of the OMEGA model.

14. OTAQ staff sometimes make small updates to the suite of OMEGA modeling tools as often as once per week.

15. In the past, when EPA has planned to take a regulatory action—whether that be a proposed or final rule or a technical assessment supporting a proposed or final rule—that relies on the OMEGA model, the agency has released an approved, final version of the model and

associated input and output files publicly alongside that regulatory action so the public may use the same tools and input data the agency did in its final analysis for that action.

16. The last version of OMEGA that EPA released publicly is v.1.4.56, which accompanied EPA's 2016 Proposed Determination and 2016 Draft Technical Assessment Report Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Standards. Since that time, the model has been updated by staff in various ways to reflect changes in how EPA does its analysis.

17. On August 24, 2018, EPA and the National Highway Traffic Safety Administration (NHTSA) jointly proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, which, if finalized, would amend certain existing Corporate Average Fuel Economy (CAFE) and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establish new standards, all covering model years 2021 through 2026. Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, 83 Fed. Reg. 42,896 (proposed Aug. 24, 2018).

18. As outlined in the SAFE Vehicles proposal, it was determined it was "reasonable and appropriate" to use the U.S. Department of Transportation's (DOT's) CAFE model for EPA's analysis of regulatory alternatives rather than the OMEGA model. 83 Fed. Reg. at 43,000-02.

19. During the interagency review process for the SAFE Vehicles proposal, EPA briefly used the results from an interim version of the OMEGA model (v.1.4.59) as part of a presentation to the Office of Management and Budget, to discuss whether there were any ways the CAFE model analysis could be improved or made more efficient. However, the agency did not actually rely on the OMEGA model for analysis or otherwise in the rulemaking process.

20. While that interim version (v.1.4.59) was functional enough to run for illustrative purposes, EPA would not consider it a “complete” model version ready for public release.

21. Version 1.4.59 would not be considered “complete” in that it has not yet gone through any of the processes necessary to finalize the OMEGA model for release in tandem with an agency rulemaking, including briefing and approval from high-level policymakers.

C. EPA’s Response to Plaintiffs’ FOIA Request

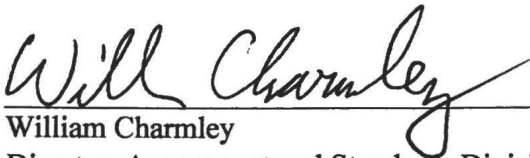
22. By letter dated March 4, 2019, EPA released “in full all the latest available input files for the latest full version of the OMEGA model (version 1.4.59).” In addition, EPA withheld “the latest full version of the OMEGA model itself (version 1.4.59) [i.e. the core model] pursuant to 5 U.S.C. § 552(b)(5), the Deliberative Process Privilege.” A true copy of EPA’s March 4, 2019, letter is attached hereto as Exhibit B.

23. On March 29, 2019, after negotiations with EPA, Plaintiffs narrowed the remainder of their request to “comprise the most recent complete set of records compatible with v.1.4.59 of EPA’s OMEGA model (with the exception of model ‘output’ data files).” In particular, Plaintiffs requested “Model Documentation,” “Installation Files” (i.e. source code), most recent “OMEGA pre-processors” including the “OMEGA ‘Machines,’” and the most recent input files compatible with OMEGA v.1.4.59. *See* Dkt. No. 37 (Joint Status Report).

24. By letter dated April 1, 2019, EPA completed its final response to Plaintiffs’ FOIA Request as narrowed. EPA determined that there are no agency records responsive to the portion of the request that sought “Model Documentation” for OMEGA v.1.4.59. EPA released in full all “OMEGA pre-processors” and “post-processors,” including the OMEGA “Machine” tool, that are compatible with OMEGA v.1.4.59. A true copy of EPA’s April 1, 2019, letter is attached hereto as Exhibit C.

I declare, under penalty of perjury, that the foregoing is true and correct.

Dated: May 3, 2019
Ann Arbor, MI



William Charmley
Director, Assessment and Standards Division
Office of Transportation and Air Quality
U.S. Environmental Protection Agency