



U.S. Department of Justice

Antitrust Division

Liberty Square Building

*450 5th Street, N.W.
Washington, DC 20001*

April 30, 2025

Daniel Vinnik, *Esq.*
PJM Interconnection LLC
2750 Monroe Boulevard
Audubon, PA 19403

Re: Constellation Energy Corporation's proposed acquisition of CPN CS Holdco Corp. (Calpine Corporation)

Dear Mr. Vinnik:

Enclosed is a Civil Investigative Demand ("CID") issued pursuant to the Antitrust Civil Process Act, 15 U.S.C. §§ 1311-14, which requires your company, PJM Interconnection LLC, to produce documents and answer interrogatories specified in the attached CID Schedule. The CID seeks this material in connection with the above-referenced investigation.

The CID covers documents in your company's possession, custody, or control, wherever the documents are located. Accordingly, please take all the necessary steps to ensure that your company immediately preserves all documents and information in its possession, custody, or control that are relevant to this investigation, including documents that are being retained by a third-party and documents contained in employee-owned devices. The company must preserve documents relevant to this investigation even if it believes those documents are protected from discovery due to claims of privilege or another protected status.

The company should also take all necessary measures to prevent the destruction, deletion, or disappearance of relevant documents and information. To that end, the company must suspend the planned destruction or automatic deletion, destruction, or disappearance of any relevant document, recording, or data, including e-mail or instant messaging software or other messaging applications whether for ephemeral or non-ephemeral data; suspend and prevent the use of any messaging applications or features of any messaging application that affirmatively and automatically destroy or delete messages; and suspend the reuse or disabling of any cloud storage and all other means of storing or archiving documents (e.g., email-logging or disaster-recovery systems), including methods to preserve documents offline (e.g., back-up tapes or cloud storage).

If suspending your document destruction policies would create undue burden, or suspending auto-deletion is otherwise technically unfeasible, please contact me so that we can discuss the matter. Federal law provides serious criminal penalties, including up to twenty years imprisonment, for any person who knowingly alters, destroys, mutilates, conceals, covers up, falsifies, or makes a false entry in any record, document, or tangible object with the intent to

impede, obstruct, or influence an ongoing or anticipated federal investigation (see, e.g., Section 1519 of Title 18, United States Code).

Unless and until the Antitrust Division notifies you otherwise in writing, the Division will not seek to enforce the CID to compel the production of documents located outside the United States at the time you received the CID. However, in order to expedite the investigation, the Division requests your company's voluntary production of any such responsive documents by the date specified in the CID or as otherwise agreed in writing.

As noted on the CID, the date for compliance is May 30, 2025. Please note that the certificate of compliance form, printed on the reverse side of the CID, must be completed by each person responsible for producing the responsive materials and must accompany your company's submission.

To comply with this CID, please deliver the requested materials to me at the Antitrust Division, 450 Fifth Street, N.W., Suite 8000, Washington, DC 20530 or electronically at Chan.Mazumdar@usdoj.gov. If your company wishes to submit the response by U.S. mail, please call Laura Littlefield at 202-213-3754 for mailing instructions.

Please note that the Division will not return any documents to your company at the conclusion of the investigation unless they are produced on paper and marked as "Original" in the production.

If you have any questions regarding the CID, please contact me at 202-476-0367.

Sincerely,

/s/

J. Chandra Mazumdar

Enclosures

United States Department of Justice

Antitrust Division
Washington, DC 20530

To: PJM Interconnection LLC
c/o Daniel Vinnik
2750 Monroe Boulevard
Audubon, PA 19403

Civil Investigative
Demand Number: **32532**

This civil investigative demand is issued pursuant to the Antitrust Civil Process Act, 15 U.S.C. §§ 1311-1314, in the course of an antitrust investigation to determine whether there is, has been, or may be a violation of the antitrust laws by conduct, activities, or proposed action of the following nature: Constellation Energy Corporation's proposed acquisition of CPN CS Holdco Corp (Calpine Corporation).

You are required by this demand to produce all documentary material described in the attached schedule that is in your possession, custody, or control, and to make it available at your address indicated above for inspection and copying or reproduction by a custodian named below. You are also required to answer the interrogatories on the attached schedule. Each interrogatory must be answered separately and fully in writing, unless it is objected to, in which event the reasons for the objection must be stated in lieu of an answer. Such production of documents and answers to interrogatories shall occur on the 30th day of May, 2025 at 5:00 p.m.

The production of documentary material and the interrogatory answers in response to this demand must be made under a sworn certificate, in the form printed on the reverse side of this demand, by the person to whom this demand is directed or, if not a natural person, by a person or persons having knowledge of the facts and circumstances relating to such production and/or responsible for answering each interrogatory.

For the purposes of this investigation, the following are designated as the custodian and deputy custodian(s) to whom the documentary material shall be made available and the interrogatory answers shall be submitted: Patricia Corcoran (custodian) and J. Chandra Mazumdar (deputy custodian), U.S. Dept. of Justice, Antitrust Division, Transportation, Energy, and Agriculture Section, 450 Fifth Street NW, Suite 8000, Washington, DC 20530.

Inquiries concerning compliance should be directed to J. Chandra Mazumdar at 202-476-0367.

Your attention is directed to 18 U.S.C. § 1505, printed in full on the reverse side of this demand, which makes obstruction of this investigation a criminal offense. The information you provide may be used by the Department of Justice in other civil, criminal, administrative, or regulatory cases or proceedings.

Issued in Washington, D.C., this 30th day of April, 2025.

/s/ Abigail A. Slater

Assistant Attorney General

18 U.S.C. § 1505. Obstruction of proceedings before departments, agencies, and committees

Whoever, with intent to avoid, evade, prevent, or obstruct compliance, in whole or in part, with any civil investigative demand duly and properly made under the Antitrust Civil Process Act, willfully withholds, misrepresents, removes from any place, conceals, covers up, destroys, mutilates, alters, or by other means falsifies any documentary material, answers to written interrogatories, or oral testimony, which is the subject of such demand; or attempts to do so or solicits another to do so; or

Whoever corruptly, or by threats or force, or by any threatening letter or communication influences, obstructs, or impedes or endeavors to influence, obstruct, or impede the due and proper administration of the law under which any pending proceeding is being had before any department or agency of the United States, or the due and proper exercise of the power of inquiry under which any inquiry or investigation is being had by either House, or any committee of either House or any joint committee of the Congress -

Shall be fined under this title, imprisoned not more than 5 years or, if the offense involves international or domestic terrorism (as defined in section 2331), imprisoned not more than 8 years, or both.

Form of Certificate of Compliance*

I/We have read the provisions of 18 U.S.C. § 1505 and have knowledge of the facts and circumstances relating to the production of the documentary material and have responsibility for answering the interrogatories propounded in Civil Investigative Demand No. _____. I/We do hereby certify that all documentary material and all information required by Civil Investigative Demand No. _____ which is in the possession, custody, control, or knowledge of the person to whom the demand is directed has been submitted to a custodian named therein.

If any documentary material otherwise responsive to this demand has been withheld or any interrogatory in the demand has not been fully answered, the objection to such demand and the reasons for the objection have been stated in lieu of production or an answer.

Signature _____

Title _____

Sworn to before me this _____ day of _____, 20____.

Notary Public

*In the event that more than one person is responsible for producing the documents and answering the interrogatories, the certificate shall identify the documents and interrogatories for which each certifying individual was responsible. In place of a sworn statement, the above certificate of compliance may be supported by an unsworn declaration as provided by 28 U.S.C. § 1746.

**CIVIL INVESTIGATIVE DEMAND FOR
DOCUMENTS AND INFORMATION
ISSUED TO PJM INTERCONNECTION, LLC**

Unless otherwise indicated or modified by the Department of Justice, each specification of this Demand requires a complete search of the Company. In the Department's experience, modifications to this Demand may reduce the burden of searching for responsive documents and information in a way that is consistent with the Department's needs. The Company is encouraged to propose such modifications, but all modifications must be agreed to in writing by the Department.

SPECIFICATIONS

1. Identify all internal and external PJM generating units operating at any time since January 1, 2023, and provide the following fields: (a) unit ID; (b) node ID; (c) unit name; (d) primary fuel type; (e) secondary fuel type, if any; (f) technology type; (g) operator ID; (h) operator name; (i) participant ID; (j) parent company name; (k) dates for which the unit was a designated PJM capacity resource; (l) installed capacity rating; (m) effective forced outage rate; (n) indicator if external resource; (o) indicator if exempt from offer mitigation; (p) indicator if can only submit cost-based offers; (q) bidder ID; and (r) valid dates (to be used if one of the fields above changed during the relevant period).
2. Provide a list of all PJM members and participants in the auctions for energy, capacity, or FTRs at any time since January 1, 2023. Provide the following fields: (a) participant ID; (b) participant name; (c) parent company name; (d) settlement billing address; and (e) valid dates (to be used if one of the fields above changed during the relevant period).
3. From January 1, 2023, to the present, separately for each PJM energy auction, provide all data used to clear the day-ahead and real-time auction, including:
 - a. the energy offers effective for the day-ahead market for each generating unit identified in response to Specification 1. Provide the following fields: (i) market date; (ii) node ID; (iii) unit ID; (iv) unit type; (v) start-up cost; (vi) no-load cost; (vii) all market-based offer price increments; (viii) all corresponding market-based offer quantity increments; (ix) all cost-based offer price increments; (x) all corresponding cost-based offer quantity increments; and (xi) bidslope indicators;
 - b. the energy offers effective for the real-time market for each generating unit identified in response to Specification 1. Provide the following fields: (i) market date; (ii) node ID; (iii) unit ID; (iv) unit type; (v) start-up cost; (vi) no-load cost; (vii) all market-based offer price increments; (viii) all corresponding market-based offer quantity increments; (ix) all cost-based offer price increments; (x) all corresponding cost-based offer quantity increments; and (xi) bidslope indicators;

- c. the day-ahead and real-time quantity schedules for each hydroelectric and self-scheduled unit identified in response to Specification 1. Provide the following fields: (i) date; (ii) hour; (iii) node ID; (iv) unit ID; (v) day-ahead scheduled quantity; and (vi) real-time scheduled quantity;
- d. the following unit-level data for each generating unit identified in response to Specification 1: (i) date; (ii) hour; (iii) node ID; (iv) unit ID; (v) day-ahead MW taken; (vi) real-time MW taken; (vii) unit availability flag (e.g., available, unavailable, must-run); (viii) marginal flag indicator; (ix) cost-capped indicator; (x) economic minimum; (xi) economic maximum; (xii) emergency minimum; (xiii) emergency maximum; (xiv) minimum run time; and (xv) ramp rates;
- e. for each bid, offer, or transaction that is marginal in the day-ahead market: (i) type of transaction; (ii) date; (iii) hour; (iv) node ID; (v) unit ID; (vi) participant ID; (vii) bid, offer, or transaction price; (viii) MW taken; and (ix) unit participation factors for each generation and intertie node;
- f. for each bid, offer, or transaction that is marginal in the real-time market: (i) type of transaction; (ii) date; (iii) hour; (iv) node ID; (v) unit ID; (vi) participant ID; (vii) bid, offer, or transaction price; and (viii) MW taken; and (ix) unit participation factors for each generation and intertie node;
- g. all fixed demand bids, all price-sensitive demand bids, all decrement demand bids, and all incremental supply offers. Provide the following fields: (i) type of bid or offer; (ii) date; (iii) hour; (iv) node ID; (v) participant ID; (vi) all market-based offer or bid price increments; (vii) all corresponding market-based offer or bid quantity increments; and (viii) MW taken;
- h. all day-ahead fixed transactions, all day-ahead dispatchable transactions, all day-ahead up-to congestion transactions, all real-time fixed transactions, all real-time dispatchable transactions, and all real-time up-to congestion transactions. Provide the following fields: (i) type of transaction; (ii) date; (iii) hour; (iv) source node ID; (v) sink node ID; (vi) participant ID; (vii) all market-based offer or bid price increments; (viii) all corresponding market-based offer or bid quantity increments; and (ix) MW taken;
- i. for the day-ahead market, for each node, aggregate, zone, interface, and hub: (i) date; (ii) hour; (iii) node ID; (iv) the locational marginal price (including the MCE, MCL, and MCC components); (v) the MWs of load; and (vi) the MWs of generation;
- j. for the real-time market, for each node, aggregate, zone, interface, and hub: (i) date; (ii) hour; (iii) node ID; (iv) the locational marginal price (including the MCE, MCL, and MCC components); (v) the MWs of load; and (vi) the MWs of

generation; and

- k. for the day-ahead market, separately for each binding constraint: the constraint's shadow price by hour.
- 4. From January 1, 2023, to the present, for every generating unit identified in response to Specification 1 in PJM, provide the unit ID, the date and hour when a unit was experiencing an outage, and provide all reasons for that outage provided by the generator operator.
 - 5. Provide a list of each location in PJM for which a locational marginal price has been calculated at any time since January 1, 2023, including all nodes, aggregates, zones, interfaces, and hubs. Provide the following fields: (a) node ID; (b) node name; (c) node type (e.g., load, bus, aggregate, interface, hub); (d) node zone; (e) latitude and longitude; and (f) valid dates (to be used if one of the fields above changed during the relevant period). Provide a file that maps individual buses to their aggregates.
 - 6. From January 1, 2023, to the present, provide:
 - a. the net flows over all of PJM's transmission elements separately for: (i) the day-ahead market; and (ii) the real-time market; and
 - b. the transfer capabilities (both warning levels and transfer limits) for all of PJM's transmission elements.
 - 7. From January 1, 2023, to the present:
 - a. separately for (i) the day-ahead market; and (ii) the real-time market, identify all imports to or exports from PJM, and identify the supplier of the import or export, the amount taken, the contract path (including an indicator if constrained), and whether the supplier of any import had network transmission service in PJM; and
 - b. provide the import and export transfer capability between PJM and MISO, PJM and NYISO, and PJM and any other Control Area electrically connected to PJM on an hourly basis.
 - 8. From January 1, 2023, to the present, separately for each generating unit identified in response to Specification 1 or load node in PJM, provide the day-ahead shift factor calculated by PJM for every node or transmission element, including all transmission elements referenced as a constraint with frequent occurrence in (a) the Monitoring Analytics March 13, 2025 report "2024 State of the Market Report for PJM;" and (b) the Monitoring Analytics March 14, 2024 report "2023 State of the Market Report for PJM."

9. From January 1, 2023, to the present, for each time the Three Pivotal Supplier Test was applied and resulted in mitigation in the day-ahead energy or real-time energy markets, provide the analysis that was done and the results of the analysis.
10. For each generating unit identified in response to Specification 1, separately for 2023, 2024, and 2025 year-to-date, state the number of hours the unit was mitigated in (a) the day-ahead energy market; and (b) the real-time energy market.
11. For each generating unit identified in response to Specification 1 that was frequently mitigated since January 1, 2023, state the time period the unit was frequently mitigated and the Tier assigned (Tiers 1 through 3).
12. Separately for each annual PJM Reliability Pricing Model (“RPM”) Base Residual Auction from the 2024/25 Auction to the present:
 - a. provide the market demand curves for each LDA;
 - b. identify each potential capacity resource, including the parent holding company name, and for each resource identified, state: (i) the type of capacity (e.g., demand resource, existing generating unit, entering generating unit, energy efficiency resource, qualifying transmission upgrade); (ii) the type of product (e.g., annual, summer extended, limited); (iii) whether offers were coupled and if so, the coupling name; (iv) the segment name; (v) the LDA; (vi) the price offered; (vii) the quantity offered; (viii) any offer cap and if so, the calculation type (e.g., default ACR selected, ACR data input (APIR), ACR data input (non-APIR), opportunity costs), and whether it was imposed; (ix) the price actually used in the auction if the offered price exceeded the imposed cap; and (x) whether it was committed to satisfy reliability requirements of Load-Serving Entities that have elected the FRR alternative;
 - c. identify each capacity resource used to satisfy the FRR alternative, including the type of resource (e.g., demand, generation) and the committed quantity; and
 - d. any other inputs or other materials related to the determination of market results.
13. From January 1, 2023, to the present, for each PJM member denoted in response to Specification 2, provide the member’s ARR and FTRs. Provide the following fields: (a) month; (b) participant ID; (c) source; (d) sink; (e) ARR MWs; and (f) FTR MWs.
14. Submit all long-term strategic planning studies, any workpapers for such studies, and any data or documents relied on for such studies, discussing the impact on constraints or energy prices of any upgrades to, enhancements of, or construction of transmission elements of 230 kV or greater: (a) that have occurred since 2021 or (b) that are currently planned or proposed, for transmission located: (i) within PJM or (ii) within any Control Area electrically connected to PJM.
15. Submit all studies, any workpapers for such studies, and any data or documents relied

on for such studies, discussing Constellation’s proposed acquisition of Calpine and any related acquisitions of Constellation voting securities by ECP.

16. From January 1, 2023, to the present, provide the hourly demand level used to clear the day-ahead market and all demand levels used to clear the real-time market.
17. From January 1, 2023, to the present, provide any daily forecast that was distributed to participants in the day-ahead market.
18. For each database used or accessed to provide any response to the above specifications, provide documentation detailing the field name, field format, and field definition. Where hourly information is provided, explain: (a) how daylight savings time is accommodated; (b) how instantaneous prices and quantities are averaged over the hour; and (c) whether the hour denotes the “hour beginning” or the “hour ending.”
19. Provide any databases used to merge two or more of the files produced in response to any Specification, including the file that provides a match between the unit IDs used in the offer data and the unit IDs used in the outage data.

DEFINITIONS

The following definitions apply for the purposes of this Demand:

1. The terms “**you**,” “**the Company**,” or “**PJM**” mean PJM Interconnection LLC, its domestic and foreign parents, predecessors, divisions, subsidiaries, affiliates, partnerships and joint ventures, and all directors, officers, employees, agents, and representatives or other persons acting or purporting to act for or on behalf of any of the foregoing. The terms “parent,” “subsidiary,” “affiliate,” and “joint venture” refer to any person in which there is partial (25 percent or more) or total ownership or control between the Company and any other person.
2. The term “**ACR**” means net avoidable cost rate.
3. The term “**APIR**” means avoidable project investment rate.
4. The term “**ARR**” means auction revenue rights.
5. The term “**Calpine**” means CPN CS Holdco Corp., Calpine Corporation, their domestic and foreign parents, predecessors, divisions, subsidiaries, affiliates, partnerships, and joint ventures, and all directors, officers, employees, agents, and representatives or other persons acting or purporting to act for or on behalf of any of the foregoing. The terms “parent,” “subsidiary,” “affiliate,” and “joint venture” refer to any person in which there is partial (25 percent or more) or total ownership or control between Calpine and any other person.
6. The term “**Collaborative Work Environment**” means a platform used to create, edit, review, approve, store, organize, share, and access documents and information by and among authorized users, potentially in diverse locations and with different devices. Even when based on a common technology platform, Collaborative Work Environments are often configured as separate and closed environments, each one of which is open to a select group of users with layered access control rules (reader vs. author vs. editor). Collaborative Work Environments include Microsoft SharePoint sites, eRooms, document management systems (e.g., iManage), intranets, web content management systems (“CMS”) (e.g., Drupal), wikis, and blogs.
7. The term “**Constellation**” means Constellation Energy Corporation, Constellation Energy Generation LLC, their domestic and foreign parents, predecessors, divisions, subsidiaries, affiliates, partnerships, and joint ventures, and all directors, officers, employees, agents, and representatives or other persons acting or purporting to act for or on behalf of any of the foregoing. The terms “parent,” “subsidiary,” “affiliate,” and “joint venture” refer to any person in which there is partial (25 percent or more) or total ownership or control between Constellation and any other person.
8. The term “**Control Area**” means a network area under the responsibility of a balancing authority, which is an entity that manages the operation of an electric system.
9. The term “**Data Dictionary**” means documentation of the organization and structure of the databases or data sets that is sufficient to allow their reasonable use by the Department,

including, for each table of information: (a) the name of the table; (b) a general description of the information contained; (c) the size in both number of records and megabytes; (d) a list of fields; (e) the format, including variable type and length, of each field; (f) a definition for each field as is used by the Company, including the meanings of all codes that can appear as field values; (g) the fields that are primary keys for the purpose of identifying a unique observation; (h) the fields that are foreign keys for the purpose of joining tables; and (i) an indication of which fields are populated.

10. The term “**documents**” means all written, printed, or electronically stored information (“ESI”) of any kind in the possession, custody, or control of the Company, including information stored on social media accounts like X (formerly, Twitter) or Facebook, chats, instant messages, text messages, other Messaging Applications, and documents contained in Collaborative Work Environments and other document databases. “Documents” includes metadata, formulas, and other embedded, hidden, and bibliographic or historical data describing or relating to any document. Unless otherwise specified, “documents” excludes bills of lading, invoices in non-electronic form, purchase orders, customs declarations, and other similar documents of a purely transactional nature; architectural plans and engineering blueprints; and documents solely relating to environmental, tax, human resources, OSHA, or ERISA issues.
11. The term “**ECP**” means Energy Capital Partners IV-D, LP, Energy Capital Partners Management, LP, their domestic and foreign parents, predecessors, divisions, subsidiaries, affiliates, partnerships, and joint ventures, and all directors, officers, employees, agents, and representatives or other persons acting or purporting to act for or on behalf of any of the foregoing. The terms “parent,” “subsidiary,” “affiliate,” and “joint venture” refer to any person in which there is partial (25 percent or more) or total ownership or control between ECP and any other person.
12. The term “**FRR**” means frequency reservation rights.
13. The term “**FTR**” means financial transmission rights.
14. The term “**identify**” means to state:
 - a. in the case of a person other than a natural person: name, principal address, and telephone number;
 - b. in the case of a natural person other than a former employee of the Company: name, employer, business address, business telephone number, business email, and title or position;
 - c. in the case of a former employee of the Company: name, current address, telephone number and email address, and the date that the employment with the Company ended; and
 - d. in the case of a communication: a description of the substance of the communication; the names of all participants in the communication; the identity of

witnesses to the communication; and the date, time, and place of the communication.

15. The term “**LDA**” means locational delivery area.
16. The term “**MCC**” means marginal cost of congestion.
17. The term “**MCE**” means marginal cost of energy.
18. The term “**MCL**” means marginal cost of losses.
19. The term “**Messaging Application**” refers to any electronic method that has ever been used by the Company and its employees to communicate with each other or entities outside the Company for any business purposes. “Messaging Application” includes platforms, whether ephemeral or non-ephemeral messaging, for email, chats, instant messages, text messages, and other methods of group and individual communication (e.g., Microsoft Teams, Slack). “Messaging Application” may overlap with “Collaborative Work Environment.”
20. The term “**MISO**” means Midcontinent Independent System Operator, Inc.
21. The term “**newsgathering**” means the process by which a member of the news media collects, pursues, or obtains information or records for purposes of producing content intended for public dissemination.
22. The term “**NYISO**” means New York Independent System Operator.
23. The term “**person**” includes the Company and means any natural person, corporate entity, partnership, association, joint venture, government entity, or trust.
24. The term “**PJM**” means PJM Interconnection, L.L.C.
25. The term “**plans**” includes proposals, recommendations, or considerations, whether finalized or adopted.
26. The terms “**Sensitive Personally Identifiable Information**” or “**Sensitive PII**” mean information or data that would identify an individual, including a person’s Social Security Number; or a person’s name, address, or phone number in combination with one or more of their (a) date of birth; (b) driver’s license number or other state identification number, or a foreign country equivalent; (c) passport number; (d) financial account number; or (e) credit or debit card number.
27. The terms “**Sensitive Health Information**” or “**SHI**” mean information or data about an individual’s health, including medical records and other individually identifiable health information, whether on paper, in electronic form, or communicated orally. SHI relates to the past, present, or future physical or mental health or condition of an individual, the provision of health care to an individual, or the past, present, or future payment for the provision of health care to an individual.

28. The term “**Three Pivotal Supplier Test**” means a structural test that measures the degree to which the supply from three suppliers is required in order to meet demand.

INSTRUCTIONS

Timing

1. All references to year refer to calendar year. Unless otherwise specified, this Demand calls for documents, data, and other information created, altered, or received by the Company within two years of the date on which this Demand was issued. For interrogatory responses, submit a separate response for each year or year-to-date unless otherwise specified. If calendar-year data are not available, supply the Company’s fiscal-year data indicating the twelve-month period covered, and submit the Company’s best estimate of calendar-year data.

Production Format

2. Department representatives must approve the format and production method of any documents, data, or other information before the Company makes an electronic production in response to this Demand. Before preparing its production, the Company must contact the Department to explain what materials are available and how they are stored. This discussion must include Company personnel who are familiar with its electronically stored information and databases/data sets.
3. Before using software or technology (including search terms, predictive coding, de-duplication, or similar technologies) to identify or eliminate documents, data, or information potentially responsive to this Demand, the Company must submit a written description of the method(s) used to conduct any part of its search. In addition, for any process that relies on search terms to identify or eliminate documents, the Company must submit: (a) a list of proposed terms; (b) a tally of all the terms that appear in the collection and the frequency of each term; (c) a list of stop words and operators for the platform being used; and (d) a glossary of industry and Company terminology. For any process that instead relies on predictive coding to identify or eliminate documents, you must include (x) confirmation that subject-matter experts will be reviewing the seed set and training rounds; (y) recall, precision, and confidence-level statistics (or an equivalent); and (z) a validation process that allows for Department review of statistically significant samples of documents categorized as non-responsive documents by the algorithm.
4. If the Department agrees to narrow the scope of this Demand to a limited group of custodians, a search of each custodian’s files must include files of their predecessors; files maintained by their assistants or under their control; and common or shared databases or data sources maintained by the Company that are accessible by each custodian, their predecessors, or assistants.
5. Submit responses to this Demand in a reasonably usable format as required by the Department in the letter sent in connection with this Demand. Documents must be complete and unredacted, except for privilege and for any Sensitive Personally Identifiable Information or Sensitive Health Information redacted pursuant to Instruction 6. Documents

must be submitted as found and ordered in the Company's files and must not be shuffled or otherwise rearranged. The Company is encouraged to submit copies of hard-copy documents electronically (with color hard copies where necessary to interpret the document) in lieu of producing original hard-copy documents. Unless otherwise agreed to by the Department, produce electronic documents in electronic form only. Electronic productions must be free of viruses. The Department will return any infected media for replacement, which may delay the Company's date of compliance with this Demand.

6. Do not produce any Sensitive PII or SHI before discussing the information with Department representatives. If any document responsive to a particular specification contains Sensitive PII or SHI that is not responsive to that specification, redact the unresponsive Sensitive PII or SHI before producing the document. Provide any index of documents prepared by any person in connection with your response to this Demand that lists such redacted documents by document control number. If the index is available in electronic form, provide it in that form.
7. This Demand does not seek, and the Company should not produce, any documents, data, or information relating to newsgathering. If any document or data that is otherwise responsive to a particular specification contains information relating to newsgathering, the Company should redact such information before producing the document or data. Provide any index of documents or data prepared by any person in connection with your response to this Demand that lists such redacted documents by document control number. If the index is available in electronic form, provide it in that form. If the Company has any questions regarding whether documents, data, or information relates to newsgathering, please contact the Department representative identified below.
8. Provide any index of documents prepared by any person in connection with your response to this Demand. If the index is available in electronic form, provide it in that form.
9. Data called for by this Demand must be submitted electronically in a reasonably usable compilation that will allow the Department to access the information it contains. Producing a database or data set in its entirety often does not satisfy this requirement. For the Department to be able to access and interpret data, the Company must provide, for each database, a description of each database or data set to be produced, including: (1) its software platform; (2) its type (e.g., flat, relational, or enterprise); (3) the sources (e.g., other databases or individuals) used to populate the database; (4) for relational or enterprise databases, documents specifying the relationships among tables (e.g., an entity relationship diagram); (5) any query forms; (6) any regularly prepared reports produced from that database; (7) the entity within the Company that maintains and updates the data; and (8) a Data Dictionary and any other keys that decode or interpret the data, including, for each table in the database:
 - a. the name of the table;
 - b. a general description of the information contained;
 - c. the size in both number of records and megabytes;

- d. a list of fields;
- e. the format, including variable type and length, of each field;
- f. a definition for each field as it is used by the Company, including the meanings of all codes that can appear as field values;
- g. the fields that are primary keys for the purpose of identifying a unique observation;
- h. the fields that are foreign keys for the purpose of joining tables; and
- i. an indication of which fields are populated.

It is likely that only a subset or compilation of the contents of any particular database or data set will need to be produced. Before the Department agrees to narrow the scope of this Request to a limited group of databases/data sets, prior to the submission of any databases/data sets, samples of each must be provided to, and approved by, Department representatives. A sample is a selection of complete observations, where one observation may span multiple rows, this is illustrative, to the extent possible, of all the different values that each field can take on and in their approximate proportions to those in the full database/data set or a narrowed subset that has been agreed upon. The sample should be comprised of no less than 100 observations that correspond to the current or prior calendar year, to the extent the database/data set has a time dimension.

- 10. The Company must continue to preserve documents or data contained in disaster recovery systems or backup media that may contain information responsive to this Demand. If you have any questions, please contact the Department representative identified below to discuss your obligation to preserve or search backup media.
- 11. The Company must identify and submit documents sufficient to show and, to the extent not reflected in such documents, describe in detail (including when the policy or procedure was last updated or changed, when any updates or changes were made during the period of this Demand, and what prompted each update or change):
 - a. Company's policies and procedures relating to the retention and destruction of documents, including:
 - i. any specific policies on the retention and destruction of email, chats, instant messages, text messages, and other methods of group and individual communication (e.g., Microsoft Teams, Slack);
 - ii. storage, deletion, and archiving of electronically stored information; or
 - iii. specific policies for documents in or sent via any Collaborative Work Environments or Messaging Applications;
 - b. Company policies and procedures relating to the use of both employee-owned devices and Company-owned devices to conduct Company business, including technological feasibility of accessing Company emails, chats, instant messages, text

messages, and other methods of group and individual communication (e.g., Microsoft Teams, Slack), documents, and databases; and

- c. Company policies and procedures relating to installation or use of Messaging Applications on Company and employee-owned devices used to conduct Company business, including message retention obligations, suspension of automatic time-based or capacity-based deletion protocols, and use of services to capture or archive messages (e.g., use of Smarsh to archive SMS messages) that could be used to store or transmit documents responsive to this Request.
12. Produce all non-privileged portions of any responsive document (including non-privileged or redacted attachments) for which a privilege claim is asserted. Each document withheld in whole or in part from production based on a claim of privilege must be assigned a unique privilege identification number and separate fields representing the beginning and ending document control numbers and logged as follows:
- a. Each log entry must contain, in separate fields: privilege identification number; beginning and ending document control numbers; parent document control numbers; attachments document control numbers; family range; number of pages; all authors; all addressees; all blind copy recipients; all other recipients; date of the document; an indication of whether it is redacted; the basis for the privilege claim (e.g., attorney-client privilege), including the anticipated litigation for any work-product claim and the underlying privilege claim if subject to a joint-defense or common-interest agreement; and a description of the document's subject matter sufficiently detailed to enable the Department to assess the privilege claim and the facts relied upon to support that claim.
 - b. Include a separate legend containing an alphabetical list (by last name) of each name on the privilege log, identifying titles, company affiliations, the members of any group or email list on the log (e.g., the Board of Directors) and any name variations used for the same individual.
 - c. On the log and the legend, list all attorneys acting in a legal capacity with the designation ESQ after their name (include a space before and after the "ESQ").
 - d. Produce the log and legend in electronic form that is both searchable and sortable. Upon request, the Company must submit a hard copy of the log and legend.
 - e. Department representatives will provide an exemplar and template for the log and legend upon request.
 - f. Any document created by the Company's outside counsel that has not been distributed outside the Company's in-house counsel's office or the Company's outside counsel's law firm does not have to be logged. But if the document was distributed to anyone who does not work exclusively in the Company's in-house counsel's office or who has any business responsibilities, it must be logged. Unlogged documents are subject to any preservation obligations the Company or counsel may have.

13. If the Company is unable to answer a question fully, it must supply all available information; explain why such answer is incomplete; describe the efforts made by the Company to obtain the information; and list the sources from which the complete answer may be obtained. If the information that allows for accurate answers is not available, submit best estimates and describe how the estimates were derived. Estimated data should be followed by the notation "est." If there is no reasonable way for the Company to estimate, provide an explanation.
14. If documents, data, or other information responsive to a particular specification no longer exists for reasons other than the Company's document retention policy, describe the circumstances under which it was lost or destroyed, describe the information lost, list the specifications to which it was responsive, and list persons with knowledge of such documents, data, or other information.
15. To complete this Demand, the Company must submit the certification on the reverse of the Civil Investigative Demand form, executed by the official supervising compliance with this Demand, and notarized.

Direct any questions the Company has relating to the scope or meaning of anything in this Demand or suggestions for possible modifications thereto to J. Chandra Mazumdar at (202) 476-0367. The response to this Demand must be addressed to the attention of J. Chandra Mazumdar and delivered between 8:30 a.m. and 5:00 p.m. on any business day to 450 Fifth Street, NW, Suite 8000, Washington, DC 20001. If the Company wishes to submit its response by U.S. mail, please call Mr. Mazumdar for mailing instructions.