Response to FCC Questions Received January 11, 2023 Version 3.0 From:	Gary Barnhard, Geometric Energy Corporation (GEC)
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To:	Doug Young
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Applicant:	Geometric Energy Corporation (GEC)
File Number:	0083-EX-CN-2022
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Follow on Comments for Question (6)	See elaboration on answer below

Please provide the actual powers the spacecraft will consume as shown on page 14 of the mission description.

⇨ The current version of the Orbital Debris Assessment Report (ODAR), DOGE-1 Revision 2-0, Page -10 already has the new information requested included. (see below)

Description of Electrical and Power System:
The P31U Electrical Power System (EPS) provided by GOMSpace A/S is flight heritage equipment that supplies power to the spacecraft bus and payload. The EPS includes:

- BPX batteries (3x 75 Wh packs = 225 Wh total) – GOMSpace A/S (flight heritage)
- Solar panels (8x 8W XY panels + 1x 2.3W Z panel = 66.3 W total) – Exobotics Ltd

The spacecraft bus and payloads can draw power from both the batteries and the solar arrays individually or simultaneously as needed to support operations.

The battery packs are all equipped with power regulation ICs that regulate the discharge state of the individual battery cells. All of the battery packs are charged by solar panels.

The satellite bus nominally consumes less than 20 W of power, with certain modes reducing or increasing the load. The payload maximum available power (solar array + batteries) is 100 W. The charge/discharge cycle is managed by a power management system overseen by the On-Board Computer (OBC) and the Electrical Power System (EPS).

Identification of Other Stored Energy: None.

Identification of Any Radioactive Materials: None.

⇨ The Mission Description has been updated with the estimated power the spacecraft will consume (see below).

Mission Description Document Change

FROM:

The satellite bus nominally consumes less than TBD W of power, with certain modes reducing or increasing the load. The payload is expected to consume an average of TBD W of power. The charge/discharge cycle is managed by a power management system overseen by the On-Board Computer (OBC) and the Electrical Power System (EPS).

TO:

The satellite bus nominally consumes less than 20 W of power, with certain modes reducing or increasing the load. The payload maximum available power (solar array + batteries) is 100 W. The charge/discharge cycle is managed by a power management system overseen by the On-Board Computer (OBC) and the Electrical Power System (EPS).