UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CRUSOE ENERGY SYSTEMS, LLC, Petitioner,

V.

UPSTREAM DATA INC., Patent Owner.

PGR2023-00039 Patent 11,574,372 B2

Before HYUN J. JUNG, JAMES J. MAYBERRY, and MATTHEW S. MEYERS, *Administrative Patent Judges*.

MEYERS, Administrative Patent Judge.

DECISION
Granting Institution of Post-Grant Review
35 U.S.C. § 324



Crusoe Energy Systems, LLC ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting post-grant review of claims 1–4, 7–12, 15–30, 34–37, and 40 ("the challenged claims") of U.S. Patent No. 11,574,372 B2 (Ex. 1001, "the '372 patent"). Upstream Data Inc. ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp."). With our authorization (Ex. 1101), Petitioner filed a Preliminary Reply to Patent Owner's Preliminary Response (Paper 12, "Prelim. Reply") to address § 325(d) issues raised in the Preliminary Response. Patent Owner filed a Preliminary Sur-reply thereto (Paper 13, "Prelim. Sur-reply").

We have authority to determine whether to institute a post-grant review. 35 U.S.C. § 324 (2018); 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director."). Section 324(a) provides that a postgrant review may not be instituted "unless... the information presented in the petition..., if such information is not rebutted, would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable." Upon consideration of the evidence and arguments in the Petition (including its supporting testimonial evidence), the evidence and arguments in the Preliminary Response (including its supporting testimonial evidence), the Preliminary Reply, and the Preliminary Sur-reply, we determine that the information presented shows that it is more likely than not that Petitioner would prevail with respect to at least one of the challenged claims. Accordingly, we institute post-grant review on all challenged claims on all asserted grounds. See 37 C.F.R. § 42.208(a) ("When instituting post-grant review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability



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asserted for each claim."); see also SAS Inst. Inc. v. Iancu, 138 S. Ct. 1348, 1359–60 (2018).

I. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies that Crusoe Energy Systems, LLC is the real party-in-interest. Pet. 124. Patent Owner indicates Upstream Data Inc. is the patent owner and real party-in-interest in this proceeding. Paper 4, 2.

B. Related Proceedings

The parties state that the '372 patent is at issue in *Upstream Data Inc.* v. *Crusoe Energy Systems LLC*, Case No. 1:23-cv-01252 (D. Colo.) (filed May 18, 2023). Pet. 123; Paper 4, 2.

C. The '372 Patent

The '372 patent is titled "Blockchain Mine at Oil or Gas Facility." Ex. 1001, code (54). Figure 1, reproduced below, is a schematic of a system for power a blockchain mine at a remote oil well, using a generator.



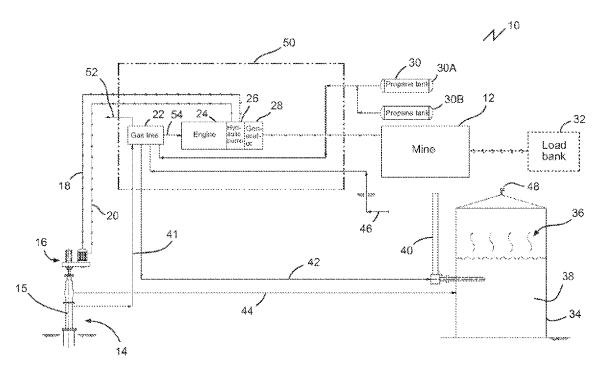


Figure 1 illustrates blockchain mining device 12, oil well 14, and generator 28. *Id.* at 8:35–40.

According to the '372 patent, "[a]t remote oil and gas facilities, excess natural gas is often wasted, for example vented to atmosphere or burned via flaring." Ex. 1001 at 1:11–13. The '372 patent identifies that this is because "[i]n many locations it may not be economically feasible to build the infrastructure required to take the produced gas, or resultant electricity generated by combustion of the gas, to market." *Id.* at 7:49–52. The '372 patent discloses that the "cheaper the electricity the more reward the miner will receive relative to competition." *Id.* at 13:20–21. The '372 patent further discloses that reliance on "low-cost hydroelectric power" has led to a "centralization of blockchain miners in specific countries with abundant hydroelectric power." *Id.* at 14:4–11. This, according to the '372 patent, is counter to the idea of decentralization and distribution inherent in the



blockchain model, so the '372 patent identifies a "need to further decentralize BITCOIN and other blockchain mining through a more decentralized source of low-cost power." Id. at 14:13–20. To this end, the '372 patent describes positioning a generator and blockchain mining device "at a suitable location relative to the hydrocarbon well, storage site, or processing facility," such as located adjacent to a remote oil well. Id. at 9:14-19.

D. Illustrated Claims

The '372 patent includes 41 claims, and Petitioner challenges claims 1–4, 7–12, 15–30, 34–37, and 40. Of the challenged claims, claims 1 and 24 are independent. Claim 1 is illustrative and reads as follows¹:

[1pre] A system comprising:

- [1a] a source of combustible gas produced from a facility selected from a group consisting of a hydrocarbon production, storage, or processing facility;
- [1b] a generator connected to the source of combustible gas to receive a continuous flow of combustible gas to power the generator; and
- [1c] blockchain mining devices connected to the generator, in which:
 - [1c i] the blockchain mining devices each have a mining processor and are connected to a network interface;
 - [1c ii] the network interface is connected to receive and transmit data through the internet to a network that stores or has access to a blockchain database;
 - [1c iii] the mining processors are connected to the network interface and adapted to mine transactions associated with the blockchain database and to communicate with the blockchain database;



¹ We utilize Petitioner's annotations. Pet. i.

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