

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner,

v.

GRAPHITE CHARGING COMPANY LLC,
Patent Owner.

IPR2024-00388
Patent 8,291,243 B2

Before KEN B. BARRETT, MATTHEW S. MEYERS, and
JOHN R. KENNY, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Tesla, Inc. (“Petitioner”)¹ filed a Petition requesting *inter partes* review of U.S. Patent No. 8,291,243 B2 (“the ’243 patent,” Ex. 1001). Paper 2 (“Pet.”). The Petition challenges the patentability of claims 1–20 of the ’243 patent. Graphite Charging Company, LLC (“Patent Owner”)² filed a Preliminary Response to the Petition. Paper 6 (“Prelim. Resp.”). With our authorization, Petitioner filed a Reply (Paper 7, “Prelim. Reply”) and Patent Owner filed a Sur-reply (Paper 13, “Prelim. Sur-reply”).

An *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2018). Having considered the arguments and evidence presented by Petitioner and Patent Owner, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing on at least one of the challenged claims of the ’243 patent. Accordingly, we institute an *inter partes* review as to all the challenged claims of the ’243 patent on all the grounds of unpatentability set forth in the Petition.

B. *Related Proceedings*

Both parties identify, as a matter involving or related to the ’234 patent, *Graphite Charging Company LLC v. Tesla, Inc.*, No. 1:23-cv-00925 (W.D. Tex.). Pet. 1; Paper 4, 2; Paper 8, 2. That case has been transferred

¹ Petitioner identifies Tesla, Inc. as the real party in interest. Pet. 1.

² Patent Owner identifies Graphite Charging Company, LLC as the real party in interest. Paper 4, 2; Paper 8, 2.

to the United States District Court for the Northern District of California, and is captioned *Graphite Charging Company LLC v. Tesla, Inc.*, No. 3:24-cv-02717 (N.D. Cal.). *See, e.g.*, Paper 8, 2; Ex. 2008, 1.

Both parties also indicate that the '243 patent currently is the subject of *Ex Parte* Reexamination Control No. 90/019,303. Pet. 1, Paper 4, 2; Paper 8, 2.

C. The '243 Patent

The '243 pertains to “methods, systems, program products and devices for adapting the power consumption of a computational device in response to environmental conditions.” Ex. 1001, 1:6–9. The '243 patent explains that computer systems may impose large burdens on a power grid. *Id.* at 1:31–32. “To reduce energy usage, manufacturers have developed numerous power-efficient technologies: for example, processor speeds and/or use can be adaptively reduced or stopped when the processor is not heavily used, monitors and peripherals can be put in a reduced power-consumption mode, etc.” *Id.* at 1:36–41. According to the '243 patent, such mechanisms were only configured to operate on a localized basis and done in response to local considerations. The '243 patent states that “[t]otal energy or environmental savings realized by such processes may be nullified or insignificant when considered on an overall (e.g. annual) basis when energy used by the device in more-active or higher-powered uses is acquired during peak energy demand times, thus utilizing the highest-cost or most environmentally-degrading energy available to the device.” *Id.* at 1:49–55.

The '243 patent states that it teaches methods “for adapting the power consumption of a computer system to environmental conditions, including local and global demands on a power grid, by monitoring environmental

conditions and appropriately adjusting the power demand of the computer system and/or of a physical infrastructure that houses the computer system.”

Id. at 2:56–62. “Operating environmental condition data relevant to the generation of electric power is acquired from an operating environment feed and analyzed to determine a high electric power demand indication.” *Id.* at 1:61–64. “If the analyzing determines a high electric power demand indication, then a computational device automatically reduces an amount of electric power consumption.” *Id.* at 1:64–67.

Examples of feeds, information and data appropriate to function as environmental data inputs . . . or as power-setting indicators . . . include a spot price of electricity, a rate of change of price of electricity, weather conditions, time of day, a facility (e.g. a household, building or company) energy use, census data associated with a specified energy use or demand, as well as other data relevant to energy costs.

Id. at 4:50–57.

D. Illustrative Claim

Of the challenged claims of the ’243 patent, claims 1, 11, 15, and 18 are independent claims. Claim 1, reproduced below with bracketed annotations inserted, is illustrative.

1. [1Pre] A method for adapting the power consumption of a computational device in response to environmental conditions, comprising:
 - [1A] acquiring operating environmental condition data relevant to the generation of electric power in a power grid system from an operating environment feed input;
 - [1B] analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system; and
 - [1C] a computational device automatically reducing a current amount of consumption of electric power from the

power grid system by the computational device if the analyzing determines the high electric power demand indication.

Ex. 1001, 10:59–11:5.

E. Evidence

Petitioner relies on the following references:

Name	Reference	Exhibit No.
Wang	WO 2006/096854 A2; published Sept. 14, 2006	1005
AESO Report	Current Supply Demand Report, Alberta Electric Supply Operator (AESO), Feb. 17, 2005	1006
Cooley	US 9,052,904 B1; filed Sept. 5, 2008; issued June 9, 2015	1007

Petitioner also relies on the declaration of C. Arthur MacCarley, Ph.D., P.E. (Ex. 1003) in support of its arguments. The parties also rely on other exhibits as discussed below.

F. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §³	Reference(s)/Basis
1–20	103(a)	Wang
2, 12–14, 20	103(a)	Wang, AESO Report
1, 3, 11, 15, 18	102(e)	Cooley

³ The application that issued as the ’243 patent was filed before the effective date of the Leahy Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), and we apply the pre-AIA versions of 35 U.S.C. §§ 102 and 103. *See* Ex. 1001, code (22); *see also* Pet. 3 (asserting that “[t]he pre-AIA statutory provisions . . . apply”).

II. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 315(d)

Patent Owner asserts that “[t]he Director ordered an ex parte reexamination of the ’243 Patent on December 12, 2023,” and argues that, “[i]n view of the finite resources of the Board and the co-pending ex parte reexamination, the Director should deny the Petition under 35 U.S.C.[.] § 315(d).”⁴ Prelim. Resp. 41–42; *see id.* at 41 (Patent Owner emphasizing the word “termination” in § 315(d)).

Patent Owner’s argument about the finite resources of the Board suggests that the Board is conducting the reexamination proceeding. *See* Prelim. Resp. 46 (Patent Owner referring to “the Board’s reasons for granting the ex parte reexamination,” and asserting that “the Board has made substantive statements about the prior art in the ex parte reexamination by issuing a non-final office action . . . [and, i]n a non-final office action, the Board issued two grounds of rejection.”). The reexamination, however, is being conducted by the Central Reexamination Unit, not by the Board. Thus, the Board’s resources are not being utilized in the reexamination. We determine that, given the circumstance that are present here, discretionary denial of the Petition due to the Board’s resources is not warranted.

III. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 314(a)— *GENERAL PLASTIC*

Patent Owner argues that, in view of the co-pending reexamination, the Board should discretionarily deny institution of an *inter partes* review

⁴ “[D]uring the pendency of an inter partes review, if another proceeding or matter involving the patent is before the Office, the Director may determine the manner in which the inter partes review or other proceeding or matter may proceed, including providing for stay, transfer, consolidation, or termination of any such matter or proceeding.” 35 U.S.C. § 315(d).

under 35 U.S.C. § 314(a) pursuant to *General Plastic Industries Co. Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (precedential) (“*General Plastic*”). Prelim. Resp. 42–50; Prelim. Sur-reply 1–2. The request for reexamination was filed on November 21, 2023, by third party requester Unified Patents, LLC. *See* Prelim. Resp. 43, 46; Ex. 1008, 2–3. The Petition was filed on February 14, 2024, by Tesla, Inc. Paper 2. Neither party identifies an earlier petition challenging claims of the ’243 patent in the Patent Trial and Appeal Board. *See, e.g.*, Pet. 8–9 (addressing *General Plastic*); *id.* at 1–2 (identifying related matters); Prelim. Resp. 42–50 (addressing *General Plastic*); Paper 8, 2–3 (Patent Owner’s mandatory disclosures identifying related matters).

In *General Plastic*, the Board considered several factors in determining whether to exercise discretion under § 314(a) to deny institution when a party files multiple or “follow-on” petitions challenging the same patent as a previous petition. *See General Plastic*, Paper 19 at 15–16; *see also id.* at 17 (“Multiple, staggered *petitions* challenging the same patent and same claims raise the potential for abuse.” (emphasis added)). Here, it is our understanding that there has been no prior petition challenging the ’243 patent at the Board. The parties do not direct us to any authority extending the application of *General Plastic* to a situation, such as here, where a reexamination request was filed before a petition. *Cf., e.g., Geneoscopy, Inc. v. Exact Sciences Corp.*, IPR2024-00459, Paper 9 at 32 (PTAB July 26, 2024) (“Given the facts and circumstances of this case, we are not inclined to extend the holding of *General Plastic* to Petitioner’s prior *ex parte* reexamination request.”); *Dish Network LLC v. Entropic Commc’ns, LLC*, IPR2024-00373, Paper 9 at 10 (PTAB July 26, 2024) (“The parties point to

no authority to support that *General Plastic* has ever been applied in the context of a reexamination filed before a petition similar to the facts of this case. We decline to consider further discretionary denial under *General Plastic* under the facts presented here.”); *Samsung Elecs. Co., Ltd. v. Netlist, Inc.*, IPR2022-00615, Paper 20 at 21 (PTAB Oct. 19, 2022) (“Patent Owner points to no authority that *General Plastic* has ever been applied to deny institution of a petition based on a prior reexamination. We decline to extend *General Plastic* to discretionarily deny the Petition on this basis.”); *Toshiba Memory Corp. v. Anza Tech., Inc.*, IPR2018-01597, Paper 12 at 45 (PTAB Mar. 12, 2019) (“To the extent that Anza [asks us] to deny institution based on prior reexaminations, it is not explained sufficiently why the rationale of *General Plastic* extends to such situations. We decline to do so for the first time in this case.” (footnote omitted)).

We decline to extend *General Plastic* to the circumstances in this case. As such, we decline to exercise discretion to deny the Petition under § 314(a) and *General Plastic*.⁵

IV. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 314(a)—*FINTIV*

Patent Owner argues that, in view of the parallel litigation in the District Court, the Board should discretionarily deny institution of an *inter partes* review under 35 U.S.C. § 314(a) pursuant to *Fintiv*. Prelim.

⁵ In light of our reasoning here, we do not reach Patent Owner’s argument that third-party reexamination requestor Unified Patents and Petitioner Tesla share a significant relationship for purposes of the first *General Plastic* factor. See Prelim. Resp. 43–44 (citing *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, Paper 11 at 9–10 (PTAB Apr. 2, 2019) (precedential)).

Resp. 50–57; Prelim. Sur-reply 2–5; *see Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”).

We consider the following factors to assess “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding”:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Fintiv, Paper 11 at 5–6.

A. Procedural Posture

Patent Owner filed, on or about August 4, 2023, a complaint in the United States District Court for the Western District of Texas. Ex. 1010, 31; *see also* Pet. 10 (citing the same). The Petition for *inter partes* review was filed on February 14, 2024. Paper 3, 1 (Notice of Filing Date Accorded to Petition). According to Petitioner, at the time of the filing of the Petition, “the parties [were] briefing a motion to transfer [the district court litigation to California], and merits-based fact discovery is stayed pending resolution of that motion,” and that “no merits discovery has taken place and no schedule has been entered.” Pet. 9–10; *see also* Prelim. Resp. 52 n.8 (“The parties previously agreed to stay ‘all merits-based fact discovery . . . until resolution of Defendant’s Motion to Transfer . . .’” (*Graphite Charging*

Company LLC v. Tesla, Inc., 3:24-cv-02717-VC, Dkt. No. 36, ¶ 5.f (W.D. Tex. Dec. 6, 2023))” (alterations in original)).⁶ The motion to transfer the case was granted on April 25, 2024. *See* Prelim. Resp. 52 n.8 (Patent Owner stating that the motion was “resolved.”); Paper 8, 2 (Patent Owner’s updated mandatory disclosures indicating that the case was transferred).

Upon the case’s arrival in the United States District Court for the Northern District of California, the Court issued an Order Setting Initial Case Management Conference and ADR Deadlines. Ex. 2006 (filed May 7, 2024); *see also* Ex. 2005, 8 (Docket No. 71 indicating that new dates were set due to case reassignment). On May 31, 2024, the Court granted the parties’ joint request to stay the proceedings “pending resolution, including any appeal(s), of Tesla’s IPR proceedings on the Asserted Patents and Graphite’s forthcoming petition for writ of mandamus [regarding the order transferring the case from Texas to California], whichever is resolved later.” Ex. 2008, 2, 5. The Court amended the parties’ draft stay order to require the parties to file a joint status report every six months. *Id.* at 5.

B. First Factor – Stay in the Related Litigation

The parties agree that the district court litigation, currently in the Northern District of California, is stayed. Prelim. Reply 1; Prelim.

⁶ The parties, in support of their respective arguments, cite to papers filed in the District Court but did not file those papers as exhibits in this case. *See* Prelim. Resp. 52 n.8 (Patent Owner citing the order on the motion to transfer); Prelim. Reply 1 (Petitioner citing the stay order, which was later filed by Patent Owner as Exhibit 2008). In the future, if a party wishes to rely on a document from the record of another tribunal, the party shall file—in compliance with our rules and the scheduling order—that document as an exhibit in this *inter partes* review. *See, e.g.*, 37 C.F.R. § 42.63 (a) (“All evidence must be filed in the form of an exhibit.”).

Sur-reply 2; *see also* Ex. 2008 (Stay Order). As mentioned above, the district court litigation is stayed “pending resolution, including any appeal(s), of [Petitioner] Tesla’s IPR proceedings on the Asserted Patents and [Patent Owner] Graphite’s forthcoming petition for writ of mandamus [regarding the order transferring the case from Texas to California], whichever is resolved later.” Ex. 2008, 2.

Patent Owner argues that its petition for writ of mandamus may be granted and that the case would be sent back to the Western District of Texas and the stay lifted. Prelim. Sur-reply 2–3. Patent Owner also notes that the court’s order in the Northern District of California requires the parties to file a joint status report every six months, and argues that the stay may be lifted as early as November 2024. *Id.* at 3. We decline to speculate as to whether the mandamus petition will be granted or whether the District Court for the Northern District of California will lift the stay prior to the occurrence of the triggering events identified in the order (resolution of the IPR proceedings or grant of the mandamus petition).

This factor weighs heavily against denial.

C. Second Factor – Proximity of The Court’s Trial Date to The Board’s Projected Statutory Deadline For A Final Written Decision

Our understanding is that, in light of the stay, there is no trial date set in the underlying litigation. *See, e.g.*, Ex. 2008, 1 (The joint stipulation and stay order stating that “an Initial Case Management Conference following transfer has not yet occurred, and currently no case schedule has issued.”). The Board’s statutory deadline for a final written decision is August 2025.

Although it is speculative as to whether the stay will be lifted in the near future, we address the parties’ positions regarding the filing-to-trial statistics. Petitioner asserts that the expected time from filing to trial is 25.8

months in the Western District of Texas and is 36.7 months in the Northern District of California. Prelim. Reply 1 (citing Ex. 1009, 37, 66). In the Petition, and while the case still was pending in Texas, Petitioner asserted that a median time-to-trial of 25.8 months, “using the August 2023 filing date, yields an estimated trial date [in Texas] in October 2025, well after the Board’s projected Final Written Decision,” and argued that the expected trial date in Texas would be further out because merits-based discovery had been stayed. Pet. 10; *but see* Prelim. Sur-reply 3 (Patent Owner arguing that Petitioner’s estimated date of August 2025 for the Board’s final written decision “is speculative, particularly in view of the additional time for briefing authorized by the Board.” (citing Prelim. Resp. 1)). Even if the case were not currently stayed in California, it would be difficult to determine how much of the statistical time-to-trial periods remain as the litigation initially was pending for some time in the Western District of Texas but under a stay of merits-based discovery, and then was pending for at least a short period of time in the Northern District of California before the stay. Regardless, even if the mandamus petition was granted very soon and the case returned to Texas or if the stay in California was lifted prior to the conclusion of the IPR proceedings, it appears that much of the statistical time-to-trial periods remain and, thus, the projected trial dates in both would be after the projected issuance, twelve months from now, of a final written decision in this IPR.

This factor weighs against denial.

D. Third Factor – Investment by the Court and the Parties in the Underlying Litigation

Petitioner, in the Petition, argues that, due to the stay of merits discovery in Texas, little substantive work will have occurred by the time of

an institution decision in this IPR. Pet. 10. Petitioner also contends that it “expediently filed this petition approximately six months after Patent Owner filed its Complaint.” *Id.* (citing Ex. 1010, 31). In the Preliminary Reply, Petitioner asserts that, because of the stay, “[n]o *Markman* hearing or substantive discovery will occur.” Prelim. Resp. 1.

Patent Owner, in the Preliminary Response and after the case had been transferred to California but before the stay, asserted that the Court established certain discovery deadlines in June and July 2024, and argued that “substantive merits-based discovery will have occurred before the institution decision.” Prelim. Resp. 54. Thus, Patent Owner asserts that some discovery might occur before institution. *Cf. id.* at 53 (Patent Owner indicating that the subject discovery is that “[t]he parties must also meet and confer to discuss their initial disclosures and discovery plan by July 16, 2024, and make their initial disclosures by July 30, 2024.”). Patent Owner, however, does not argue that there actually has been a substantial investment by the court or the parties in this regard. *See id.* at 53–54; Prelim. Sur-reply 3 (Patent Owner merely asserting that, “[a]s soon as the case returns to the WDTX or the stay is lifted in the NDCA, the presiding court and the parties will resume activity in the parallel proceedings.”).

The parties, in jointly stipulating to the stay in California, represented to the court that:

this case is in its infancy as the parties have not yet engage[d] in any merit-based case activities, have not served or responded to any non-venue written discovery, have not exchanged contentions, did not perform any claim construction exchanges,

have not taken any non-venue discovery, [and
Petitioner/Defendant] Tesla has not yet answered.

Ex. 2008, 2. We determine that there has been little investment in the parallel proceeding by the court and the parties.

This factor weighs against denial.

E. Fourth Factor – Overlap of the Issues

Under the fourth *Fintiv* factor, we consider the “overlap between issues raised in the petition and in the parallel proceeding.” *Fintiv*, Paper 11 at 12. Specifically, we may consider whether “the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding.” *Id.* This factor involves concerns of inefficiency and the possibility of conflicting decisions. *Id.*

Patent Owner argues that “[t]here is significant overlap between the district court and this proceeding because all claims asserted in the parallel litigation are also contested here in the IPR.” Prelim. Sur-reply 3. Patent Owner does not assert that there is an overlap of the grounds, arguments, or evidence. Rather, Patent Owner argues that there could be an overlap because Petitioner has not submitted a stipulation to not pursue certain grounds in the District Court that might mitigate concerns of potentially conflicting decisions and duplicative efforts between the Board and the District Court. Prelim. Resp. 54–55 (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18 (PTAB Dec. 1, 2020) (precedential as to § II.A); *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 11–12 (PTAB June 16, 2020) (informative)). Patent Owner further argues that, “[w]hen the stay is lifted, the risk of conflict between the two proceedings will increase, especially

considering that Petitioner has not entered into a *Sotera*-type stipulation to mitigate such risks.” Prelim. Sur-reply 3.

Petitioner does not dispute Patent Owner’s assertion that there is a complete overlap in the claims challenged in this IPR and in the District Court. Rather, Petitioner argues, in the Petition and before transfer and the subsequent stay, that “Factor Four favors institution or is neutral because the Final Written Decision here will likely trigger estoppel before trial.” Pet. 10 (emphasis omitted). In the Preliminary Reply, Petitioner argues that “[t]here will . . . be no overlapping invalidity issues during the stay.” Prelim. Reply 1–2.

We do not agree with Patent Owner’s argument that the risk of conflict will increase when the stay is lifted. It is merely speculative that the stay will be lifted prior to the conclusion of this IPR. At this time, due to the stay, the IPR and district court action are proceeding in series, not parallel. After a final written decision issues in this IPR, Petitioner indicates that it will be constrained by the estoppel provision of 35 U.S.C. § 315(e)(2).⁷ See Pet. 10; *cf.* Prelim. Resp. 55 (Patent Owner acknowledging that “the estoppel statute . . . precludes parties from raising such grounds [that are the subject of a *Sotera* stipulation].”). Thus, there likely will be no overlap between the issues in the IPR and the district court proceeding, and concerns of inefficiency and the possibility of conflicting decisions are mitigated.

This factor is either neutral or weighs slightly against denial.

⁷ “The petitioner in an inter partes review . . . that results in a final written decision . . . may not assert . . . in a civil action . . . that the claim [challenged in the IPR] is invalid on any ground that the petitioner raised or reasonably could have raised during that inter partes review.” 35 U.S.C. § 315(e)(2).

F. Fifth Factor – Whether Petitioner is the Defendant in the Related Litigation

Petitioner acknowledges that it is the defendant in the parallel litigation. *See* Pet. 10. Because the petitioner and the defendant in the parallel proceeding are the same party, this factor weighs in favor of discretionary denial. *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 19 (PTAB Dec. 1, 2020) (precedential as to § II.A); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 15 (PTAB May 13, 2020) (informative); *cf.* Prelim. Resp. 56 (arguing that Petitioner’s assertion that this factor weighs in favor of institution or is neutral is unpersuasive because Petitioner relies on a routine Board decision that is neither precedential nor informative).

G. Sixth Factor – Other Circumstances Including the Merits

The sixth *Fintiv* factor takes into account other circumstances that may bear on the decision to exercise discretion to deny, such as the merits of the patentability challenges. *Fintiv*, Paper 11 at 14–16. The parties’ arguments for this factor concern only whether the Petition made a showing of unpatentability by compelling merits. *See* Pet. 11; Prelim. Resp. 56–57; Prelim. Reply 2; Prelim. Sur-reply 4–5. Board precedent provides that we should only consider the compelling merits issue if the first five *Fintiv* factors favor discretionary denial. *CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 4–5 (Vidal February 27, 2023) (precedential). “Thus, in circumstances where the Board determines that the other *Fintiv* factors 1–5 do not favor discretionary denial, the Board shall decline to discretionarily deny under *Fintiv* without reaching the compelling merits analysis.” *Id.*

As discussed above, the first three *Fintiv* factors weigh against discretionary denial, the fourth factor is either neutral or weighs slightly against denial, and only the fifth factor favors denial. Considering these factors as a whole, we determine that the first five *Fintiv* factors collectively weigh against discretionary denial, and thus, we do not assess compelling merits.

H. Conclusion Regarding the Fintiv Factors

We consider “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Fintiv*, Paper 11 at 6. We determine that the facts weighing against exercising discretion to deny institution collectively outweigh those facts weighing in favor of exercising discretion. Thus, we decline to deny institution based on the *Fintiv* factors.

V. ANALYSIS OF PETITIONER’S CHALLENGES

A. Principles of Law

Petitioner bears the burden of persuasion to prove unpatentability of the claims challenged in the Petition, and that burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987); *see also Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir. 2008) (to anticipate a patent claim under 35 U.S.C. § 102, “a single prior art reference must expressly or inherently disclose each claim limitation”). Moreover, “[b]ecause the hallmark of

anticipation is prior invention, the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). Whether a reference anticipates is assessed from the perspective of one of ordinary skill in the art. *See Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368–69 (Fed. Cir. 2003) (“‘[T]he dispositive question regarding anticipation [i]s whether *one skilled in the art* would reasonably understand or infer from the [prior art reference’s] teaching’ that every claim element was disclosed in that single reference.” (second and third alterations in original) (quoting *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991))).

Additionally, “[u]nder the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates.” *MEHL/Biophile Int’l Corp. v. Milgraum*, 192 F.3d 1362, 1365 (Fed. Cir. 1999); *see In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349–50 (Fed. Cir. 2002).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art;

(3) the level of skill in the art; and (4) if present, any objective evidence of obviousness or non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. The Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quoting *Custom Accessories, Inc. v. Jeffrey–Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)).

Petitioner contends:

A person having ordinary skill in the art (“POSA”) as of the Priority Date would have held a bachelor’s degree in electrical engineering, computer science, or a related degree and would have also had at least two years training or experience with intelligent power-management techniques for electrical or electronic devices that use or control utility grid electricity. Ex-1003 ¶¶17–21. Additional advanced educational degrees could substitute for some years of experience, and vice versa. *Id.*

Pet. 11. Patent Owner states that, “[f]or purposes of this Preliminary Response, Patent Owner generally does not contest the level of ordinary skill in the art as stated by Petitioner.” Prelim. Resp. 7 (citing Pet. 11).

Patent Owner further states that it “disputes Petitioner’s characterization of a POSA’s knowledge of prior art principles, including green computing principles and use-based power-consumption adaptations.” *Id.* According to Patent Owner, “[t]his dispute arises because Petitioner’s detailed discussion of the POSA’s knowledge concerning these principles

appears only within the expert declaration, (*See* EX1003, at ¶ 20), rather than in the main text of the Petition,” and argues that this constitutes an improper incorporation by reference. *Id.*; *see also id.* at 10 (Patent Owner similarly arguing that Dr. MacCarley’s “characterization of the Examiner’s awareness of the asserted prior art and their relevancy during prosecution of the ’243 Patent” “should not be taken into account when assessing the level of ordinary skill in the art.”). We do not reach, as part of this determination of the general description of the level of ordinary skill in the art, Dr. MacCarley’s testimony regarding, for example, the ordinary artisan’s purported familiarity with specific principles such as green computing principles and use-based power-consumption adaptations.

Petitioner’s definition, as set forth in the block quote above, is consistent with the level of ordinary skill reflected in the prior art references of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (recognizing that the prior art itself may reflect an appropriate level of skill in the art). For purposes of this decision, we apply that definition of the person of ordinary skill in the art, as block quoted above. The parties may, in future briefing authorized in the scheduling order, address the specific knowledge of the person of ordinary skill in the art.

C. Claim Construction

We apply the same claim construction standard used in district court actions under 35 U.S.C. § 282(b), namely that articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). In applying that standard, claim terms generally are given their ordinary and customary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire

patent disclosure. *Phillips*, 415 F.3d at 1312–13. “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). “[W]hile extrinsic evidence can shed useful light on the relevant art, . . . it is less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (internal quotation marks omitted).

Petitioner states that it “applied plain and ordinary meanings to all terms and no express constructions are required here.” Pet. 11. “For purposes of this Preliminary Response, Patent Owner states that no express construction is necessary at this stage.” Prelim. Resp. 7.

We agree with the parties, and determine that, on this record and for purposes of this decision, no claim terms require express construction. We, however, discuss here a claim construction issue in order to narrow and clarify the issues going forward.

“processing means”

Independent claim 18 and its dependent claim 19 recite a “processing means.” Ex. 1001, 13:20, 13:25, 14:6–7. Independent claim 18, for example, recites: “A programmable device comprising: *a processing means*; a memory . . . ; and a network interface . . . ; wherein *the processing means* is configured to [perform certain steps].” *Id.* at 13:19–14:5 (emphasis added).

As mentioned above, Petitioner contends that all claim terms, including “processing means,” should be construed as having their plain and ordinary meanings. *See* Pet. 11. The Petition states: “Cautious of 37 C.F.R.

§42.104(b)(3), Petitioner notes that *processing means* of Claims 18–19 does not appear to be in means-plus-function format because the claims include no corresponding function.” *Id.* However, Petitioner offers an alternative contention as to the structure in the Specification of the ’243 patent corresponding to the “processing means” in the event that the phrase is construed as a means-plus-function element. *Id.* (“If *processing means* is in means-plus-function format, the corresponding structure would be ‘central processing unit (CPU) or other processing means 201/231’ of the programmable device of Figure 2. . . . This device is ‘configured to set the power consumption of a computational device in response to environmental conditions.’”). And, in applying the claims to prior art references, Petitioner offers alternative arguments in the event that the phrase is construed as a means-plus-function element. *See* Pet. 75 n.5 (“If *processing means* is in means-plus-function format, Wang’s application processor 416 is an equivalent thereto”); *id.* at 100 n.7 (“If *processing means* is in means-plus-function format, Cooley’s processor 514 is an equivalent thereto”).

Patent Owner does not argue that “processing means” is a means-plus-function element. *See* Prelim. Resp. 8 n.2 (“For the purposes of this Preliminary Response, Patent Owner is solely addressing Petitioner’s hypothetical means-plus-function argument and does not currently take a position on whether the ‘processing means’ constitutes a means-plus-function claim or its construction.”); *see also id.* at 31 n.5, 40 n.7. Patent Owner further argues that, because Petitioner states that “the claims include no corresponding function,” “Petitioner’s means-plus-function claim construction analysis for the ‘processing means’ claim limitations in

Claims 18 and 19 is fundamentally flawed and *should not be considered by the Board.*” *Id.* at 8–9 (citing Pet. 11–12) (emphasis added).

Therefore, neither party contends that “processing means” is a means-plus-function element, and neither party asks us to construe the phrase that way. We do not reach Petitioner’s alternative construction and, at this preliminary stage and in light of the parties’ positions, we do not construe “processing means” as a means-plus-function element governed by § 112, sixth paragraph.

At this early stage of the proceeding, the Board has not made a final determination on the construction of “processing means.” The parties may, in future briefing authorized in the scheduling order, address the issue.

D. The Alleged Obviousness of Claims 1–20 Over Wang (Ground 1)

Petitioner alleges that claims 1–20 of the ’243 patent would have been obvious over Wang. *See* Pet. 12–34 (addressing claim 1). Patent Owner argues, generally as to Ground 1, that “[t]he Petition lacks the ‘particularity’ needed to pinpoint the grounds and evidence as required in IPR proceedings,” that “Petitioner’s reliance on expert testimony from a declaration to address deficiencies in the Petition undermines its position,” and that Petitioner has failed to provide an adequate analysis for a motivation to combine and reasonable expectation of success. Prelim. Resp. 2, 17, 32–33. We address, below, Petitioner’s contentions and Patent Owner’s specific arguments in the context of those contentions.

1. Wang (Ex. 1005)

Wang pertains to “methods of energy management,” and “[m]ore particularly, . . . pertains to systems and methods to manage power grid peak energy load on the basis of tariff information originating either directly or

indirectly from a utility company or utility related company such as an energy marketer, load distributor, or independent market operator.”

Ex. 1005, 1:5–9.⁸

According to Wang, it discloses, *inter alia*, “a system and method for reliably and cost effectively disseminating power tariff information directly from a tariff setting body to . . . microcontrollers embedded in appliances (e.g., household appliances such as dishwashers and dryers).” *Id.* at 41:5–8. “Such appliances, in turn, use this information to regulate appliance usage in a manner [so] as to minimize utility costs subject to any constraints needed to accommodate appliance user life style choices.” *Id.* at 41:8–10.

Wang’s Figure 5 is reproduced below.

⁸ We, like Petitioner, cite to the page numbers of the underlying document rather than the exhibit page numbers.

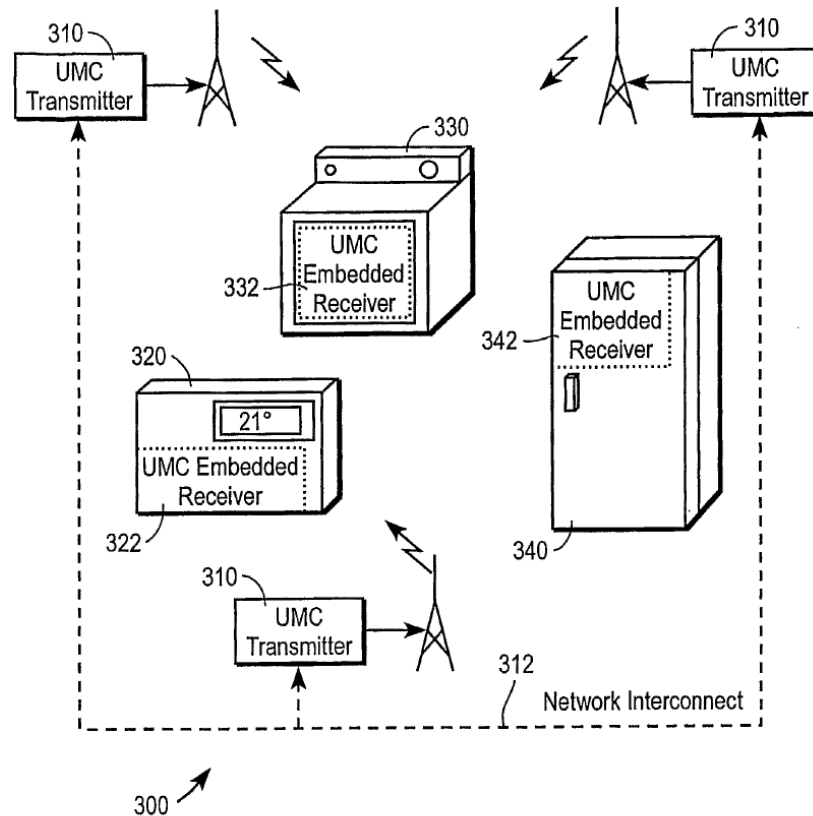


FIG. 5

Figure 5 depicts “a utility message channel (UMC) system 300 for disseminating utility information, at the appliance level, within a geographic region.” *Id.* at 41:23–24. “[T]ransmitters 310 . . . wirelessly broadcast tariff information directly to receivers 322, 332, 342 embedded within energy consuming appliances 320, 330, 340, respectively.” *Id.* at 41:25–27.

Wang discloses the apparatus receiving data in addition to tariff information. For example, Wang discloses:

In another aspect of the invention, a household appliance or other electrical apparatus comprises a transceiver and a microprocessor in communication with the transceiver. The transceiver comprises a receiver for receiving signals and a transmitter for transmitting signals. *The microprocessor comprises instructions for receiving, via the receiver, broadcasted radio signals that include electrical grid data; and instructions for communication, via the transmitter, information about an electrical load of the household electrical apparatus.*

The electrical grid data may be, for example, a grid status, an energy tariff, or customer relationship management [(“CRM”)] data.

Id. at 16:23–30 (emphasis added); *see also id.* at 39:19–26 (“For example, such message [to users] can convey critical price points (CPPs) for energy, or alternately a grid reliability warning to all users to reduce use or face outages. Further, critical weather warning . . . can be communicated.”).

Wang discloses, as one example, an HVAC thermostat embodiment where the air conditioning temperature set point is modulated by the tariff rate. *Id.* at 51:10–27. Wang’s Figure 10 is reproduced below.

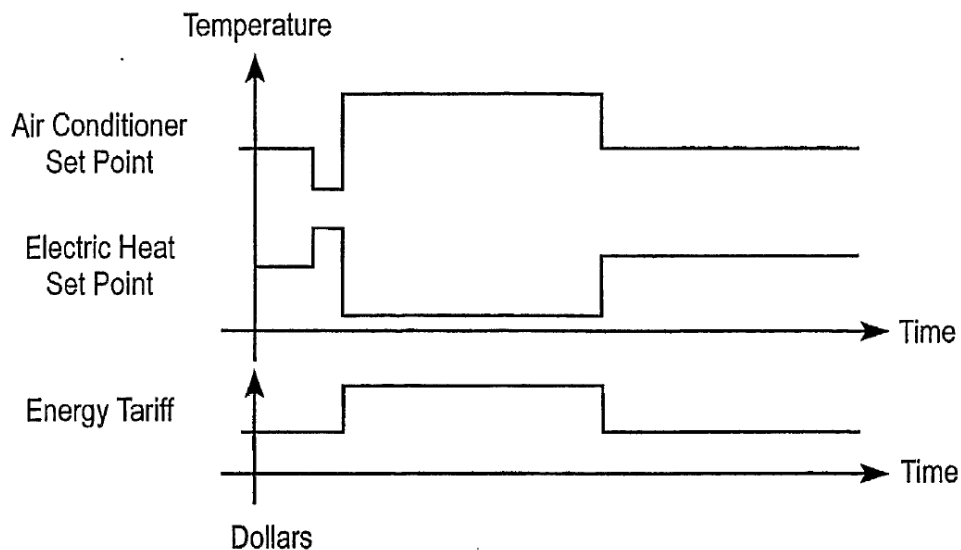


FIG. 10

Figure 10 “illustrates a method of facilitating load shedding using energy tariff information in accordance with an embodiment of [Wang].” *Id.*

at 18:16–17. Wang explains that:

In a preferred embodiment when tariffs are known a priori, during the summer season, the HVAC controller 530 instructs air conditioner 540 to lower the room temperature somewhat below the nominal consumer defined comfort set point for a short period of time just prior to the beginning of the higher power tariffs. In so doing, additional heat is extracted from the

house at a lower tariff rate in an effort to extend the time after which the air conditioner must be engaged in order to keep the temperature below the high tariff set point. At the time of higher energy rates the temperature set point is raised slightly higher than the consumer defined comfort level for a period of time equal to the duration of the higher tariff rates.

Id. at 51:19–27

2. *The Alleged Obviousness of Claim 1 Over Wang*

a. *[1Pre] A method for adapting the power consumption of a computational device in response to environmental conditions, comprising:*

Petitioner contends that, if the preamble is limiting, Wang teaches or suggests it. Pet. 12–15. Petitioner further contends that “Wang is directed to ‘methods [for] manag[ing] power grid peak energy load [i.e., *adapting . . . power consumption*] on the basis of tariff information [i.e., *environmental conditions*] . . . from a utility company.’” *Id.* at 12–13 (quoting Ex. 1005, 1:5–9) (bolding omitted; alterations in original). Petitioner additionally contends that Wang’s smart appliances correspond to the recited “computational devices,” and that Wang’s power-management methods involve “environmental conditions” in addition to tariffs, such as “power pricing, grid status, critical weather events, customer relationship management (CRM), and so on.” *Id.* at 13 (citing Ex. 1005, 16:26–30, 35:31–36:2, 39:19–26, 41:5–10).

Patent Owner argues that “Petitioner fails to adequately discuss how Wang’s teachings satisfy the requirements of the preamble,” but does not identify any particular failure in this regard. *See* Prelim. Resp. 18. Rather, Patent Owner argues that Dr. MacCarley’s declaration contains an opinion—that Wang’s disclosure is not limited to household applications—that “should be disregarded, as this represents an improper incorporation by

reference of arguments not presented within the Petition itself.” *Id.* (citing Ex. 1003 ¶ 52).

We need not reach the argument that Dr. MacCarley’s opinion is improperly incorporated by reference because, even if the declaration contains more discussion than found in the Petition, Patent Owner does not explain adequately how the Petition itself is deficient or how disregarding the subject opinion results in, as Patent Owner asserts, a failure of Petitioner “to adequately discuss how Wang’s teachings satisfy the requirements of the preamble.” *Id.*

We determine that Petitioner has shown sufficiently for purposes of institution that Wang teaches the preamble.

b. [1A] acquiring operating environmental condition data relevant to the generation of electric power in a power grid system from an operating environment feed input;

Limitation 1A, generally speaking, recites the step of acquiring a particular type of data from a specified input. Ex. 1001, 10:62–64. The recited data is “operating environmental condition data relevant to the generation of electric power in a power grid system.” *Id.* Petitioner contends that “Wang describes various types of operating environmental condition data, including data regarding power pricing and availability, grid status and reliability, critical weather events, and CRM [(customer relationship management)].” Pet. 15 (citing Ex. 1005, 16:26–30, 35:31–36:2, 41:5–10).

The recited input is an “operating environment feed input.” Ex. 1001, 10:64. Petitioner asserts that “operating environment feed input” “does not appear in the specification and the claims do not define it.” *Id.* at 19. Petitioner contends that this phrase “could refer to (i) a publisher of

operating environmental condition data (e.g., an energy provider), (ii) a broadcaster responsible for relaying the data (e.g., a relay server), and/or (iii) a mechanism for transmitting it (e.g., an RSS feed).” *Id.* (citing Ex. 1003 ¶ 67). Petitioner sets out its contentions as to how Wang teaches or suggests acquiring data via each of these options. *See id.* at 16–19 (contentions specifically regarding “acquiring”); *id.* at 19–22 (contentions regarding the three input options) (citing, *inter alia*, Ex. 1003 ¶¶ 67–74). For example, Petitioner contends that Wang teaches, “[f]or a publisher-input, ‘[u]tility companies often publish information relating to current load utility on the internet.’” *Id.* at 19–20 (citing Ex. 1005, 35:31–36:1, 39:25–31, 41:5–8) (second alteration in original); *see id.* (discussing data reproduced in Wang from the Alberta Electric System Operator (AESO)); *see also id.* at 20–22 (contentions regarding tariff rates and other data disseminated to smart appliances).

Patent Owner argues that “Wang does not teach the elements of Claim 1[A] because the Petition does not provide evidence at least as to how the UMC receiver of Wang sufficiently acquires operating environmental condition data.” Prelim. Resp. 20 (brackets in original). We do not agree. Petitioner provides citations to Wang’s disclosure and to Dr. MacCarley’s testimony as evidence in support of its contention that Wang’s UMC receiver acquires operating environmental condition data. *See, e.g.*, Pet. 17 (citing Ex. 1005, 15:14–18, 47:13–15); *id.* at 23 (citing Ex. 1003 ¶¶ 55–75). At this preliminary stage, the evidence sufficiently supports Petitioner’s position. Wang discloses, for example, that “[UMC] Receiver 400 includes an RDS/RBDS receiver 402” and “each appliance can have its own integrated RDS/RBDS . . . receiver capable of independent receipt of real

time utility tariffs, . . . and grid status information broadcasted directly from a wide area network.” Ex. 1005, 47:14–15, 15:14–17; *see also id.* at 41:23–27 (“Referring now to Fig. 5, a utility message channel (UMC) system 300 for disseminating utility information, at the appliance level, within a geographic region, is disclosed. UMC system 300 includes one or more transmitters 310 that wirelessly broadcast tariff information directly to receivers 322, 332, 342 embedded within energy consuming appliances 320, 330, 340, respectively.”).

Patent Owner argues that “Petitioner provides argument and expert testimony unsupported by documentary evidence about the definition of the operating environment feed input claim term.” Prelim. Resp. 18 (citing Pet. 19; Ex. 1003 ¶ 67). As mentioned above, Petitioner contends that the term is not defined in the claims or specification of the ’243 patent and could refer to three things, and further contends that Wang teaches the input under those three possible options. *See* Pet. 19. Patent Owner, at this point in the proceeding, does not contend that “operating environment feed input” needs to be construed, does not offer a proposed construction for that term, and does not dispute Petitioner’s contentions as to how Wang discloses the recited input. *See* Prelim. Resp. 18. We determine that Petitioner has shown adequately for purposes of institution that Wang teaches an “operating environment feed input” under all of the suggested constructions.

Patent Owner asserts that two statements of opinion from Dr. MacCarley’s declaration are “unsupported by documentary evidence.” Prelim. Resp. 18 (citing Ex. 1003 ¶¶ 70–71). Each of those opinions is made in a broader discussion of Wang’s disclosure. *See* Ex. 1003 ¶¶ 68–71. Patent Owner does not explain adequately how the purported lack of

documentary evidence support affects, if at all, Dr. MacCarley’s opinions or Petitioner’s overall contention that Wang discloses or teaches the claimed step of acquiring operating environmental condition data.

Patent Owner lists several aspects of Dr. MacCarley’s declaration that purportedly “cannot be found in the Petition” and argues that “the Board should disregard this extensive list of statements in deciding whether Wang teaches the elements of Claim 1[A].” *See id.* at 19–20 (brackets in original). Patent Owner, however, does not explain adequately why we should necessarily disregard testimony not repeated in the Petition or how, if at all, the absence of that specific testimony in the Petition affects Petitioner’s overall showing as to the “acquiring” limitation.

We determine that Petitioner has shown sufficiently for purposes of institution that Wang teaches limitation 1 A, the step of acquiring operating environmental condition data.

c. [1B] analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system; and

For this analyzing limitation, Petitioner contends that Wang’s “appliances ‘[are] configured to use [environmental condition data] . . . in an autonomous manner’ and ‘[are] capable of independent load-shedding decisions,’” and that analyzing the data is required for this autonomous operation and load-shedding. Pet. 23–24 (quoting Ex. 1005, 15:13–27; citing Ex. 1005, 47:33–48:6, 49:16–23; Ex. 1003 ¶ 78) (first and fourth alterations in original). Petitioner further contends, *inter alia*, that “Wang discusses AESO data . . . , which is taught or suggested as being analyzed to make determinations regarding demand for electric power,” and that the adjustment by Wang’s appliance processor of power consumption indicates

that a determination of a high demand for electricity was performed or at least would have been an obvious technique. *See id.* at 26–27.

Petitioner specifically contends that:

Given that tariffs function to discourage energy use during periods of high demand, a POSA would have understood the power pricing increase as indicative of a *high demand for electric power from the power grid system*. Ex-1003 ¶84. Further, a POSA would have understood the set-point adjustments as requiring or at least strongly suggesting a *determin[ation] [of] an indication of a high demand for electric power*.

Relatedly, “the appliance may employ a random back-off algorithm to delay [its] activation . . . **following the cessation of [an] on-peak event**.” Ex-1005, 55:3–6. In determining cessation of the on-peak event, Wang’s devices analyze operating environmental condition data to make determinations regarding demand for electric power. Ex-1003 ¶85. These teachings further underscore the obviousness of such a technique.

Id. at 27 (alterations in original). Patent Owner argues that “paragraphs 84 and 85 of the expert declaration do not provide any documentary evidence to support th[ese] assertion[s].” Prelim. Resp. 21. Patent Owner, however, does not explain adequately why documentary evidence is necessary for the underlying opinions or how the purported lack of documentary evidence for the opinions undermines the reasoning of Petitioner’s argument or of Dr. MacCarley’s supporting opinions. We determine that, at this preliminary stage, Dr. MacCarley’s testimony, which is unrebutted at this point, sufficiently supports Petitioner’s position.

Patent Owner also asserts that an opinion of Dr. MacCarley regarding analyzing by Wang’s display “is neither cited nor referenced in the Petition,” and then makes the seemingly contradictory argument that “this reliance on the expert declaration amounts to an improper incorporation by reference of

arguments” and should not be considered by the Board. Prelim. Resp. 21. Patent Owner does not explain adequately why an opinion not referenced in the Petition constitutes an improper incorporation by reference of that opinion into the Petition.

We determine that Petitioner has shown sufficiently for purposes of institution that Wang teaches limitation 1B, the step of analyzing the data to determine an indication of a high demand for electric power.

d. [1C] a computational device automatically reducing a current amount of consumption of electric power from the power grid system by the computational device if the analyzing determines the high electric power demand indication.

Petitioner contends that Wang teaches or suggests limitation 1C. Pet. 29–34. Petitioner summarizes its contentions regarding this limitation as follows:

Wang teaches or suggests a computational device (i.e., a smart appliance) automatically reducing a current amount of consumption of electric power from the power grid system by the computational device (i.e., load shedding, such as by adjusting a temperature set point) if the analyzing determines the high electric power demand indication (e.g., based on tariff rate data). Ex-1003 ¶¶89–96.

Id. at 34.

Patent Owner does not raise any arguments regarding these contentions. *See* Prelim. Resp. 17–21; Prelim. Sur-reply 4–5. We determine that Petitioner has shown sufficiently for purposes of institution that Wang teaches limitation 1C.

e. Motivation and Reasonable Expectation of Success

Petitioner addresses together a reason to combine and a reasonable expectation of success. *See* Pet. 77–78. Petitioner summarizes its position

in asserting that “combining elements from Wang’s various embodiments would have been a ‘predictable variation’ that would not ‘require a leap of inventiveness.’” *Id.* at 78 (citing *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009) (“Combining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness.”)); Ex. 1003 ¶¶ 201–203). Petitioner contends that the different embodiments of Wang “are disclosed in adjacent figures, and Wang itself indicates that ‘[m]any modifications and variations in this invention can be made without departing from its spirit and scope.’” *Id.* at 77 (quoting Ex. 1005, 63:3–7) (alteration in original). Petitioner further contends that:

Given the interchangeable nature taught for various features of Wang’s embodiments, it would have been a routine and obvious matter for a POSA to combine aspects from Wang’s various embodiments (e.g., data acquisition, internal hardware, data analysis performed by the UMC receiver 400 and/or the display 200). Moreover, many of Wang’s embodiments—particularly of specific smart appliance types—include common components, thus further confirming combinability of aspects of the disclosed embodiments. A POSA would have had a reasonable expectation of success in combining features of the embodiments together.

Id. at 77–78; *see also* Prelim. Reply 2 (Petitioner asserting that Patent Owner’s arguments against a motivation to combine embodiments is “based on ignoring relevant portions of the prior art.”); *id.* at 4–5 (replying to Patent Owner’s argument that the Petition’s showing of reasonable expectation of success is insufficient).

Patent Owner, in the Preliminary Response, argues that “[u]nsupported attorney argument is used to establish a reasonable expectation of success,” and “[s]uch unsubstantiated argument cannot

provide a reasonable expectation of success.” Prelim. Resp. 33 (citing Pet. 77–78). In its Preliminary Sur-reply, Patent Owner argues that “it was Petitioner’s burden to show that a POSITA would have a motivation to combine Wang’s different embodiments and a reasonable expectation of success,” and that “Petitioner failed to make the requisite showings, and its unsubstantiated and conclusory attorney argument on that point violates the particularity requirement.” Prelim. Sur-reply 4; *see also id.* at 5 (Patent Owner arguing that “characterizing something as ‘not requiring a leap of inventiveness’ does not relieve Petitioner from articulating its obviousness positions.”). Patent Owner asserts that “Petitioner’s argument regarding its expert’s declaration is misplaced because that portion of the Petition does not cite to the expert declaration.” *See id.* at 4–5 (citing Pet. 77–78).

We do not agree with Patent Owner’s arguments. First, contrary to Patent Owner’s assertion, Petitioner did cite to Dr. MacCarley’s declaration in support of its contentions regarding a motivation to combine Wang’s embodiments and a reasonable expectation of success in doing so. *See* Pet. 78 (citing Ex. 1003 ¶¶ 201–203). We note that Petitioner also quoted from Wang in support of its contentions. *See, e.g., id.* at 77 (quoting Ex. 1005, 63:3–7). Thus, Petitioner’s case is not based solely on unsupported attorney argument, as Patent Owner asserts. Second, we do not agree that Petitioner’s articulation is merely conclusory. The Petition contains a discussion that is beyond a bald assertion that the claimed subject matter would have been obvious and that there would have been a reasonable expectation of success. *See* Pet. 77–78.

We determine that Petitioner has articulated sufficient reasons, for purposes of institution, why it would have been obvious to one of ordinary

skill in the art would to combine aspects of Wang’s embodiments to arrive at the claimed subject matter and that Petitioner has shown sufficiently for purposes of institution that a person of ordinary of ordinary skill in the art would have had a reasonable expectation of success in combining those aspects of the embodiments.

f. Conclusion as to Independent Claim 1

Having considered the parties’ arguments and evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claim 1 as being rendered obvious by Wang.

3. The Remaining Claims Challenged as Being Obvious Over Wang

Petitioner contends that claims 2–20 also would have been obvious over Wang. Pet. 34–77. Patent Owner presents arguments in opposition, many of which are similar to those we have addressed above. Prelim. Resp. 21–32; *see, e.g., id.* at 23 (Patent Owner asserting that Dr. MacCarley’s declaration contains an “argument” that “is neither included nor referenced in the Petition,” and that “[t]herefore, the Board should exclude this argument when evaluating whether Wang teaches the elements of claim 3.”).

For the reasons discussed above, Petitioner has shown a reasonable likelihood that at least independent claim 1 is unpatentable. Additionally, for the reasons discussed below, we determine that the Petition does demonstrate a reasonable likelihood of prevailing on its challenge to, at least, the independent claims as anticipated by Cooley. Having decided to institute as to at least one challenged claim, we institute an *inter partes* review on all challenged claims and on all asserted grounds. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60 (2018); 37 C.F.R. § 42.108(a)

(“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”). During trial, the parties will have the opportunity to further discuss their respective positions on this single-reference obviousness challenge based on Wang.

E. The Alleged Obviousness of Claims 2, 12–14, and 20 Over Wang and AESO Report (Ground 2)

Petitioner alleges that claims 2, 12–14, and 20 of the ’243 patent would have been obvious over Wang. *See* Pet. 78–82. Patent Owner opposes. Prelim. Resp. 33–35.

1. AESO Report (Ex. 1006)

Patent Owner states that, “for purposes of this Preliminary Response, Patent Owner generally does not challenge Petitioner’s description of the AESO Report.”⁹ Prelim. Resp. 11 (citing Pet. 5–6). According to Patent Owner, “[t]he AESO Report was ‘Last Update[d]’ on February 17, 2005, and provides the Current Supply Demand Report for the Alberta Region for coal, gas, hydro, and wind power.” *Id.* at 10–11 (citing Ex. 1006) (second alteration in original).

2. The Status of AESO Report as a Prior Art Printed Publication

Petitioner contends that the AESO Report is prior art under 35 U.S.C. § 102(b). Pet. 5–6. Patent Owner disagrees, stating:

Patent Owner disputes the applicability of the AESO Report as prior art under 35 U.S.C. § 102(b), and its availability to the public. This dispute arises because Petitioner’s detailed discussion of the AESO Report’s express inclusion of data regarding fossil-fuel-powered plants (EX1003, at ¶ 29), the

⁹ “AESO” refers to the Alberta Electric System Operator in Calgary, Canada. Ex. 1005, 36:2–3.

POSA's access to the AESO Report (*id.* at ¶¶ 29–31), the POSA's motivation to obtain the AESO Report (*id.* at ¶ 31), the instructions detailing how the POSA could obtain the AESO Report (*id.* at ¶¶ 31–33), and reference to EX1018, the affidavit from the Internet Archive confirming the public availability (*id.* at ¶ 33), appears only in the text of the expert declaration, rather than in the main text of the Petition.

Prelim. Resp. 11. Patent Owner argues that “[s]uch presentation constitutes an improper incorporation by reference.” *Id.* Patent Owner further argues that, “[e]ven if the expert declaration is considered, which it should not, Petitioner has provided no documentary evidence that the February 17, 2005 AESO Report was available to, viewed, or downloaded by the interested public or a POSA before the October 24, 2008 priority date other than its expert's testimony.” *Id.* at 12 (Ex. 1003 ¶¶ 29–33).

For the reasons that follow, we disagree with Patent Owner's arguments and determine that Petitioner has made an adequate showing at this stage.

As an initial matter, we disagree with Patent Owner to the extent that it contends that all of the evidence going to public accessibility must be reproduced in the Petition. Petitioner contends that “[c]ertain data provided by AESO appears in Wang and Wang also provides a link to AESO's website,” and that “[t]he data in AESO Report and that appearing directly in Wang include the same types of information.” Pet. 5–6 (citing Ex. 1005, 35:5–6, Tables 2, 3 (located at Ex. 1005, 36–37); Ex. 1006). Petitioner further contends that, “[a]s explained by Dr. Arthur MacCarley, these provide a POSA (and any interested member of the public) with ample direction to locate the underlying AESO Report.” *Id.* (citing Ex. 1003 ¶¶ 28–33).

Wang, which lists a priority date of 2005 and a publication date of 2006 (and, thus, before the 2008 filing date of the '243 patent), states:

In fact much information on grid operation is already publicly available. For example, the data provided in Section 5.9 was obtained from the Alberta Electric System Operator in Alberta, Canada on its home page URL [(Uniform Resource Locator)] (www.aeso.ca).

* * *

Utility companies often publish information relating to current utility load on the Internet. . . . Such information can include a description of overall utility load, or the current availability of alternative electrical energy supplies. For example, the Alberta Electric System Operator (AESO) in Calgary, Canada, publishes the following data on the overall status of the electric grid operated by AESO.

Ex. 1005, 35:4–6, 35:31–36:4. Wang then includes tables of data, and we agree with Petitioner that Wang's data is of the same type shown in the AESO Report. *Compare, e.g.*, Ex. 1005, 36:10–37:4 (Tables 1, 2, 3), with Ex. 1006 (“Summary,” “Hydro” and “Wind and Other” tables).

Dr. MacCarley's testimony that a person of ordinary skill in the art would have been aware that power providers commonly publish grid data on the internet and would have had access to the AESO data is consistent with Wang's discussion and is unrebutted at this stage of the proceedings. *See* Ex. 1003 ¶ 31.

Petitioner also contends that the “AESO Report [(Exhibit 1006)] is an archived capture of one particular report from February 17, 2005, which is around when Wang was filed,” and cites a case concerning the use of the Wayback Machine. Pet. 6. As Patent Owner agrees, Exhibit 1006 has a Last Update date of February 17, 2005. *See* Prelim. Resp. 10; *see also* Ex. 1006 (document header having a Wayback Machine URL that includes a number beginning with “20050217” and “<http://ets.aeso.ca>”). Petitioner also

provides a declaration from a Records Request Processor at the Internet Archive to which is appended several archived AESO reports captured by the Wayback Machine. Ex. 1018; *see id.* at 12–13 (the February 17, 2005, report).

Patent Owner argues that “Petitioner fails to provide any evidence that ‘a query of a search engine *before the critical date*, using any combination of search words, would have led to [the AESO Report] appearing in the search results.’” Prelim. Resp. 12 (citing *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1349–50 (Fed. Cir. 2016)) (alteration in original). Patent Owner’s reliance on *Blue Calypso* is misplaced. That case involved a situation where there was a lack of “any testimonial evidence that a person interested in e-commerce and peer-to-peer marketing would be independently aware of the web address for Dr. Ratsimor’s personal page.” *Blue Calypso*, 815 F.3d at 1349. Even if the AESO website was not locatable via a search engine (an issue we do not reach), Wang discloses the URL, suggesting that persons of ordinary skill in the art were aware of the location of the data on the internet without the need to employ a search engine or, at least, would be aware of the URL after the publication of Wang.

We determine that Petitioner has presented evidence adequate for purposes of institution to show that the AESO Report was publicly accessible more than one year prior to the challenged patent’s filing date of October 24, 2008, *see* Ex. 1001, code (22), and therefore is prior art under § 102(b).

3. *Claims 2, 12, and 20*

Claim 2 depends directly from independent claim 1 and recites:

wherein the analyzing the operating environmental condition data determines the indication of the high demand for electric power from the power grid system if *the operating environmental condition data indicates that a small size fossil fuel plant is coming on-line to provide power to the power grid system in response to a power demand on the power grid system.*

Ex. 1001, 11:6–13 (emphasis added). Dependent claims 12 and 20 depend from independent claims 11 and 18, respectively, and each similarly recites a limitation regarding a small size plant. *See id.* at 12:28–35, 14:19–27.

Petitioner contends that the AESO Report indicates that the H.R. Milner plant has the lowest Maximum Continuous Rating (MCR) on the list and therefore is a small-scale fossil fuel plant relative to the other listed plants. *Id.* at 80. According to Petitioner, “the TNG [(Total Net Generation)] values for H.R. Milner and/or other units identifiable as small-scale fossil fuel plants could be used to determine that such a plant is coming on-line to provide power to the grid system (e.g., a TNG value for the respective unit changing from zero to a non-zero value).” *Id.* at 81 (citing Ex. 1003 ¶ 213).

Petitioner further contends that “[t]here is express motivation to combine Wang and the AESO Report . . . because Wang expressly discloses using data from AESO,” and that “[a] POSA would have found it obvious to make use of all data from AESO guided by Wang’s teachings to inform power-curtailement determinations based on global demand indicators for the power grid (or based on individual power producers).” Pet. 78; *see also id.* at 79 (citing Ex. 1003 ¶¶ 204–207 as support for the motivation contentions); *id.* at 81 (“Using AESO Report [as a source of additional data]

amounts to applying a known technique (use of utility data to inform power-curtailment decisions) in the same way that it is already used by Wang.” (citing Ex. 1003 ¶ 211)).

Patent Owner argues that, by not challenging independent claims 1, 11, and 18 as obvious in light of the combination of Wang and the AESO Report, “Petitioner thereby implicitly concedes that independent claims 1, 11, and 18, along with their respective dependent claims, are non-obvious, aligning with the principle that ‘[d]ependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.’” Prelim. Resp. 34 (alteration in original) (quoting *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988)). Petitioner’s first ground challenges the independent claims as obvious over Wang, and we do not find that Petitioner concedes those same claims are nonobvious, as Patent Owner argues. Also, we do not read *In re Fine* as requiring a Petitioner to present a two-reference obviousness ground for an independent claim allegedly rendered obvious by the primary reference alone in order to preserve an argument that its dependent claims are obvious.

Patent Owner also argues that the Petition is deficient regarding a showing of a reason to combine the references’ teachings and a reasonable expectation of success. Prelim. Resp. 33–35; *see, e.g., id.* at 35 (“Petitioner also lacks evidentiary support both in the Petition and its expert declaration about the specific motivation to combine and reasonable expectation of success of Wang and the AESO Report for claim 2.”). We determine that Petitioner’s discussion of motivations to combine Wang and the AESO Report to be adequate for purposes of institution, particularly the contentions that Wang already teaches the use of AESO Report data and that using

additional such data “to inform power-curtailment decisions” “amounts to applying a known technique.” *See* Pet. 78–79, 81. Although a reasonable expectation of success is not explicitly mentioned in the context of claim 2 in this ground, we determine, for purposes of this decision, that such an assertion is implicit at least in Petitioner’s contention that the proposed combination is simply the addition of more information from the AESO Report to Wang’s process that already successfully uses AESO information, a modification that Petitioner contends would have been routine to a person of ordinary skill in the art and would be applying a known technique. *See* Pet. 81; *see also, e.g., id.* at 78 (“A POSA would have found it obvious to make use of all data from AESO guided by Wang’s teachings to inform power-curtailment determinations based on global demand indicators for the power grid (or based on individual power producers).”); *id.* at 79–80 (explaining that Ground 2 retains the features of Wang discussed in Ground 1 and “[the] AESO Report just adds further data on which power-curtailment decisions are based.”). We determine that Petitioner has presented sufficient evidence, at this preliminary stage, that a person of ordinary skill would have had a reasonable expectation of success in achieving that which is claimed. The record in this regard may be further developed during the trial.

Having considered the parties’ arguments and evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claim 2, and the analogous claims 11 and 18, as being rendered obvious by Wang and the AESO Report.

4. Dependent Claims 13 and 14.

Petitioner’s contentions regarding the obviousness of dependent claims 13 and 14 are, in their entirety:

Claims 12–14 depend (directly or indirectly) from obvious Claim 11. Section 9.11. Claims 12–14 are otherwise analogous to Claims 2, 5, and 9, respectively, and are obvious for similar reasons. Ex-1003 ¶¶215; *cf.* Sections 10.2, 9.5, and 9.9.

Pet. 82.

Unlike claim 2, dependent claims 13 and 14 do not recite a small plant. Rather, claim 13 recites, in part, “the operating environmental condition data indicates an unusual weather condition that may result in heavy demand for power from the power grid system.” Ex. 1001, 12:39–41. And, claim 14 recites, in part, “the high electric power demand indication in response to data in the operating environmental condition data that comprises at least one of: a spot price value of electricity; and a rate of change of a price of electricity.” *Id.* at 12:43–47 (paragraphing omitted).

Petitioner does not appear to explain adequately, at least, how claims 13 and 14 are purportedly analogous to claim 2, the relevance of the AESO Report in the challenge to claims 13 and 14, or why a person of ordinary skill in the art would have found those claims to be obvious over the Wang in view of the AESO Report. *Cf.* Prelim. Resp. 34 (Patent Owner addressing claims 13 and 14 separately from claims 2, 12, and 20). Accordingly, it does not appear that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claims 13 and 14 as obvious over Wang and the AESO Report.

*F. The Alleged Anticipation of Claims 1, 3, 11, 15 and 18 By Cooley
(Ground 3)*

Petitioner alleges that claims 1, 3, 11, 15, and 18 of the ’243 patent are anticipated by Cooley. *See* Pet. 83–92 (addressing claim 1). Patent Owner argues, generally as to Ground 3, that “Cooley does not teach all of the elements of the independent challenged claims,” and that Petitioner’s ground

“lacks the particularity needed to pinpoint the grounds and evidence . . . and improperly relies on and incorporates by reference expert testimony from a declaration to address arguments that do not appear in the Petition, requiring its denial.” Prelim. Resp. 2, 36.

1. Cooley (Ex. 1007)

Cooley is titled “System and Method for Determining Whether to Reschedule Malware Scans Based on Power-Availability Information for a Power Grid and Power-Usage Information for the Scans.” Ex. 1007, code (54). According to Cooley, “[c]omputing devices often execute various tasks, such as automatic disk defragmentation and anti-virus scans, on regularly scheduled bases,” which, when many devices do so simultaneously, may result in usage spikes on a power grid. *Id.* at 1:10–16.

Cooley discloses “[a] computer-implemented method for determining whether to reschedule tasks on computing devices based on power-availability information for a power grid.” Ex. 1007, code (57) (Abstract).

As one example, Cooley discloses that:

a system for determining whether to reschedule tasks on computing devices based on power-availability information for a power grid may comprise: 1) a power availability module for publishing power-availability information for the power grid, and 2) a task-scheduling module for receiving the power-availability information from the power-availability module, identifying at least one task scheduled to execute on a computing device, and then determining, based on the power-availability information, whether to reschedule the task.

Id. at 12:26–36.

Cooley explains that:

The phrase “power availability information,” as used herein, generally refers to any information that may indicate, or may be used to calculate, the amount of power available on a

power grid at a moment in time. In certain embodiments, the power-availability information may identify an amount of power currently available on the power grid and/or an amount of power expected to be available on the power grid at a future time.

Id. at 4:55–62. “In additional embodiments, the power-availability information may comprise power-capacity information for the power grid and/or power-usage information for the power grid.” *Id.* at 4:65–5:1.

At step 330, the system may determine whether to reschedule the task on the computing device based on the power availability information received in step 320. For example, task-scheduling module 108, which may be stored and configured to run on computing device 230, may determine, by analyzing the power-availability information received in step 320, that there is sufficient power available to execute the task as currently scheduled. Thus, in this example, task-scheduling module 108 may allow the task to execute on computing device 230 at its scheduled time.

In an additional embodiment, the power-availability information received in step 320 may indicate that the power availability for the power grid is low (i.e., below a certain threshold) or that demand is high. In these situations, task scheduling module 108 may postpone or reschedule the task based on the power-availability information.

Id. at 5:28–43.

2. *The Alleged Anticipation by Cooley of Claim 1*

a. *[1Pre] A method for adapting the power consumption of a computational device in response to environmental conditions, comprising:*

Petitioner contends that, if the preamble is limiting, Cooley discloses it. Pet. 83–84. Petitioner, in summarizing its contentions, asserts that “Cooley discloses *adapting the power consumption of a computational device* (e.g., rescheduling tasks on computing devices) *in response to environmental conditions* (i.e., power-availability information).” *Id.* at 83

(Ex. 1003 ¶¶ 219–223). Patent Owner does not raise any specific arguments regarding these contentions. *See* Prelim. Resp. 36–38; Prelim. Sur-reply 4–5. Petitioner has shown sufficiently for purposes of institution that Cooley discloses the preamble.

b. [1A] acquiring operating environmental condition data relevant to the generation of electric power in a power grid system from an operating environment feed input;

Petitioner contends that Cooley discloses limitation 1A. Pet. 84–89. Limitation 1A recites, in part, the step of “acquiring operating environmental condition data relevant to the generation of electric power in a power grid system.” Ex. 1001, 10:62–64. In that regard, Petitioner contends that “Cooley receives ‘power-availability information,’ which is ‘any information that may indicate, or may be used to calculate, **the amount of power available on a power grid** at a moment in time,’” and that, “[s]pecifically, ‘the power-availability information may identify an amount of power currently available on the power grid and/or an amount of power expected to be available.’” Pet. 85 (quoting Ex. 1007, 4:55–62). Petitioner further contends that Cooley uses statistical data based on previous data. *Id.* (citing Ex. 1007, 5:18–22). Petitioner additionally contends, for example, that Cooley discloses a power-availability module that may receive information from power management mechanism via a network. *Id.* at 86 (citing Ex. 1007, 4:52–55).

As for the source of the data, i.e., “from an operating environment feed input,” Petitioner contends that Cooley teaches this regardless as to how that phrase is understood. Pet. 87 (citing Section 9.1.2 of the Petition, which discusses three possible options to which the phrase could refer). Petitioner specifically contends, for example, that Cooley teaches receiving

information from a power utility (for a publisher- or broadcaster-input), by interacting with a number of computing devices on the grid, and “through some intermediary, like a broadcaster.” *Id.* at 87–88 (citing Ex. 1007, 5:19–27, 14:16–18; Ex. 1003 ¶ 234). Petitioner further contends that, “[f]or a mechanism-input, the network qualifies as it ‘generally refers to any medium facilitating communication or data transfer . . . includ[ing]—without limitation—an intranet, [various networks], the internet, power line communication (PLC), a cellular network . . . , or the like.’” *Id.* at 88 (citing Ex. 1007, 4:24–28) (alterations in original).

Patent Owner argues that the Petition relies on unsupported expert testimony, pointing to statements by Dr. MacCarley’s regarding a person of ordinary skill in the art’s understanding and what such a person would know. Prelim. Resp. 37 (referring to “testimony about a POSA’s understanding that implementation at scale would also result in implementation in households, buildings and companies . . . ; and that a POSA would know that utility companies or power grids would publish information relating to current load utility on the internet” (citing Pet. 85, 88; Ex. 1003 ¶¶ 228, 232)). Patent Owner argues that “[s]uch unsupported expert testimony should be considered conclusory,” but Patent Owner does not explain adequately how, or even if, doing so would affect Petitioner’s case. *Id.*; *see, e.g., id.* (arguing that Dr. MacCarley’s opinion about information published via the internet is conclusory, but not disputing Petitioner’s contention that Cooley’s device acquires the information within the meaning of limitation 1 A). To the extent that Patent Owner suggests that a petition should be denied if it relies on a declaration that does not have a citation after every statement made therein, we do not agree. We also note that the two identified statements are

expressed as opinions and each are stated in the larger context of discussions of Cooley's disclosure. *See, e.g.*, Ex. 1003 ¶¶ 228, 230–232.

Patent Owner also asserts that “Petitioner’s expert provides several arguments that are neither included nor referenced in the Petition,” and that “the Board should exclude these arguments when determining whether Cooley teaches Claim 1[A].” Prelim. Resp. 37 (brackets in original). Patent Owner lists four statements by Dr. MacCarley that purportedly are not repeated or referenced in the Petition. *Id.* Patent Owner, however, does not indicate how, if at all, that affects the showing in the Petition itself as to limitation 1A, and Patent Owner does not argue that Cooley fails to disclose any aspect of that limitation. *See id.*

We determine that Petitioner has shown sufficiently for purposes of institution that Cooley discloses limitation 1A.

c. [1B] analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system; and

Petitioner contends that Cooley discloses limitation 1B. Pet. 89–90. Specifically, Petitioner contends that:

In Cooley, “the system may **determine whether to reschedule the task on the computing device based on the power-availability information** received in step 320” Ex-1007, 5:28. Further, “the power-availability information received in step 320 may indicate that **the power availability for the power grid is low (i.e., below a certain threshold) or that demand is high**,” and based on that determination, “may postpone or reschedule the task based on the power-availability information.” *Id.*, 5:38.

Id. at 89–90. Patent Owner does not raise any specific arguments regarding these contentions. *See* Prelim. Resp. 36–38; Prelim. Sur-reply 4–5.

Petitioner has shown sufficiently for purposes of institution that Cooley discloses limitation 1B.

d. [1C] a computational device automatically reducing a current amount of consumption of electric power from the power grid system by the computational device if the analyzing determines the high electric power demand indication.

Petitioner contends that Cooley discloses limitation 1C. Pet. 90–92.

Petitioner summarizes its contentions regarding this limitation as follows:

Cooley discloses *a computational device* (e.g., a computing device comprising a CPU, such as a laptop or desktop computer, a PDA, digital camera, multimedia player, or an embedded system) *automatically reducing a current amount of consumption of electric power from the power grid system by the computational device if the analyzing determines the high electric power demand indication* (e.g., postponing or rescheduling computing tasks).

Id. at 92 (citing Ex. 1003 ¶¶ 240–243); *see also id.* at 90–92 (citing Ex. 1007, 3:48–54, 4:7–14, 7:9–30, Fig. 2).

Patent Owner argues that “Petitioner’s expert provides arguments that are neither included nor referenced in the Petition,” identifies one purported example, and asserts that “the Board should exclude this argument when determining whether Cooley teaches Claim 1[C].” Prelim. Resp. 38 (brackets in original). Similar to limitation 1A, Patent Owner, does not indicate how, if at all, the purported absence of Dr. MacCarley’s statement in the Petition affects the showing in the Petition itself as to limitation 1C, and Patent Owner does not argue that Cooley fails to disclose any aspect of that limitation. *See id.*

We determine that Petitioner has shown sufficiently for purposes of institution that Cooley discloses limitation 1C.

e. Conclusion as to Independent Claim 1

Having considered the parties' arguments and evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claim 1 as anticipated by Cooley.

3. Dependent Claim 3

Claim 3 depends directly from independent method claim 1, and recites, in part, "automatically increasing the current amount of consumption of electric power . . . from a current reduced electric power consumption level in response to not determining the indication of the high demand for electric power." Ex. 1001, 11:15–20.

Petitioner presents contentions as to how Cooley discloses this subject matter. *See* Pet. 92–93. Patent Owner argues that "Petitioner provides only unsupported, conclusory argument for its contention that a POSA would have understood that a postponed task need[s] to be performed later." Prelim. Resp. 38 (citing Pet. 92; Ex. 1003 ¶ 245).

We do not agree with Patent Owner's argument. Petitioner relies on evidence in the form of the opinion testimony of Dr. MacCarley, which, at this point in the proceeding, is unrebutted. *See* Pet. 92–93 (citing Ex. 1003 ¶¶ 244–246); *see also id.* (quoting Ex. 1007, 7:17, 7:22–27 (Cooley's disclosure regarding postponing the task permit "until there is sufficient power available"))).

Having considered the parties' arguments and evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to dependent claim 3 as anticipated by Cooley.

4. Independent Claims 11, 15, and 18

Independent claims 11, 15, and 18 recite, respectively, a service comprising providing a computer infrastructure, an article of manufacture

comprising a computer readable storage medium, and a programmable device, with each involving the performance of the same or similar method recited in claim 1. *See* Ex. 1001, 12:13–27, 12:48–64, 13:19–19:5.

Petitioner presents contentions as to how all of the limitations of those claims are disclosed in Cooley. Pet. 93–101.

For claims 11 and 15, Patent Owner makes arguments similar to those we have addressed above and found unavailing. *See* Prelim. Resp. 38–41; *e.g.*, *id.* at 39 (“Petitioner’s expert also provides argument neither included nor referenced in the Petition,” and “[t]his amounts to an improper incorporation by reference, and should not be considered by the Board.”).

For claim 18, Patent Owner argues that Petitioner has provided a flawed analysis for “processing means” if that term is construed as a means-plus-function element. Prelim. Resp. 40–41. As discussed above in the claim construction section, neither party advocates for a means-plus-function construction and we do not construe “processing means” as governed by 35 U.S.C. § 112, sixth paragraph. *See supra* V.C. Therefore, at this stage of the proceeding, Patent Owner’s argument does not show a flaw in Petitioner’s case.

Having considered the parties’ arguments and evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to independent claims 11, 15, and 18 as anticipated by Cooley.

VI. CONCLUSION

Petitioner has demonstrated a reasonable likelihood of prevailing in showing the unpatentability of at least one of the challenged claims of the ’243 patent. Accordingly, we institute an *inter partes* review on all challenged claims on all asserted grounds. *See SAS Inst. Inc.*, 138 S. Ct.

at 1354, 1359–60; 37 C.F.R. § 42.108(a). At this stage of the proceeding, we have not made a final determination with respect to the patentability of any of the challenged claims.

VII. ORDER

For the foregoing reasons, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–20 of the '243 patent is instituted with respect to all grounds of unpatentability set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '243 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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