

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

OBM, INC.

&

CHOLLA ENERGY LLC,

Petitioners,

v.

LANCIUM LLC

Patent Owner.

IPR2023-01407
U.S. Patent No. 10,608,433

**PATENT OWNER LANCIUM LLC'S
PRELIMINARY RESPONSE TO PETITION**

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. OVERVIEW OF THE ’433 PATENT	4
III. OVERVIEW OF THE ASSERTED REFERENCES	10
A. MONTALVO (EX1004)	10
B. APC-TARIFF (EX1005)	19
IV. PERSON OF ORDINARY SKILL IN THE ART	25
V. CLAIM CONSTRUCTION	26
VI. THE PETITION FUNDAMENTALLY MISUNDERSTANDS AND MISINTERPRETS MONTALVO AND APC-TARIFF	26
A. MONTALVO’S SOLUTION DOES NOT IMPOSE “MINIMUM DEMAND REDUCTION REQUIREMENTS,” AS INCORRECTLY ALLEGED BY THE PETITION	27
B. THE PETITION MISREPRESENTS MONTALVO’S BACKGROUND DESCRIPTION OF “DR AGREEMENTS” AS BEING PART OF MONTALVO’S SOLUTION	30
C. THE PETITION MISUNDERSTANDS MONTALVO’S DESCRIPTION OF “DAY AHEAD” AND “DAY OF” DR EVENTS AS IMPOSING MINIMUM POWER CONSUMPTION REQUIREMENTS	33
D. THE PETITION MISUNDERSTANDS THE TEACHINGS OF THE PSEDR PROGRAM IN THE APC-TARIFF	36
VII. WHEN THE ACTUAL TEACHINGS OF MONTALVO AND APC- TARIFF ARE CONSIDERED, A POSITA WOULD NOT HAVE COMBINED REFERENCES AS ALLEGED	38

VIII. GROUND 1 FAILS TO ESTABLISH A REASONABLE LIKELIHOOD OF PREVAILING AGAINST ANY CHALLENGED CLAIM.....	43
A. MONTALVO DOES NOT DISCLOSE ELEMENTS [1.2.1], [17.2], [20.2] 43	
B. MONTALVO COMBINED WITH APC-TARIFF DOES NOT DISCLOSE ELEMENTS [1.2.2], [17.3], [20.3]	46
C. MONTALVO COMBINED WITH APC-TARIFF DOES NOT DISCLOSE ELEMENTS [1.2.3]-[1.2.4], [17.4]-[17.5], [20.4]-[20.5]	50
D. MONTALVO DOES NOT RENDER OBVIOUS ELEMENTS [1.2.5], [17.6], [20.6]	53
IX. GROUNDS 2-3 FAIL FOR SAME REASONS AS GROUND 1	57
X. THE CARVALLO DECLARATION (EX1003) IS LARGELY A <i>VERBATIM</i> COPY OF PETITION THAT PROVIDES INSUFFICIENT EVIDENCE TO SUPPORT OBVIOUSNESS.....	57
XI. THE PETITION FAILS TO ESTABLISH PUBLIC ACCESSIBILITY OF THE APC-TARIFF REFERENCE.....	60
XII. CONCLUSION.....	64
CERTIFICATE OF WORD COUNT	65
CERTIFICATE OF SERVICE	66

TABLE OF AUTHORITIES

<u>Cases</u>	<u>Page(s)</u>
<i>Panduit Corp.</i> , 810 F.2d at 1568.....	42
<i>Warsaw Orthopedic, Inc.</i> , 832 F.3d at 1332.....	42
<i>Ariosa Diagnostics v. Verinata Health, Inc.</i> , 805 F.3d 1359, 1366 (Fed. Cir. 2015)	42
<i>Arendi S.A.R.L. v. Apple Inc.</i> , 832 F.3d 1355, 1362 (Fed. Cir. 2016)	42
<i>WBIP, LLC v. Kohler Co.</i> , 829 F.3d 1317, 1337 (Fed. Cir. 2016)	42
<i>Xerox Corp. v. Bytemark, Inc.</i> , IPR2022-00624, Paper 9 at 15 (PTAB Aug. 24, 2022)	59
<i>Upjohn Co. v. Mova Pharm. Corp.</i> , 225 F.3d 1306, 1311 (Fed. Cir. 2000)	59
<i>Carella v. Starlight Archery & Pro Line Co.</i> , 804 F.2d 135, 138 (Fed. Cir. 1986)	59
<i>KSR Intern. Co. v. Teleflex Inc.</i> , 550 U.S. 398, 421 (2007)	60
<i>Arendi S.A.R.L. v. Apply, Inc.</i> , 832 F.3d 1355, 1361–62 (Fed. Cir. 2016)	60
<i>Hulu, LLC v. Sound View Innovations, LLC</i> , IPR2018-01039, Paper 29 at 16 (PTAB Dec. 20, 2019)	61
<i>Adam Agan Ltd. v. Bayer Cropscience LP</i> , PGR2022-00057, Paper 9, 31–32 (PTAB Feb. 13, 2023)	63
 <u>Statutes</u>	
35 U.S.C. § 103	32, 36, 39

PATENT OWNER'S EXHIBIT LIST

Ex. No.	Brief Description
2001	Declaration of Dr. Haas
2002	Comparison of Petition against Corrected EX1003 (Carvallo Declaration)

I. INTRODUCTION

The Board should deny institution of the Petition in IPR2023-01407. Challenged claims 1-20 of U.S. Patent No. 10,608,433 (“the ’433 Patent”) are directed to systems, methods, and non-transitory computer readable medium (independent claims 1, 17, and 20, respectively). Per Petitioner’s proffered claim construction, which Patent Owner does not dispute for the purposes of this IPR, the claims require that the claimed system use a minimum amount of power during associated time intervals (i.e., “minimum power thresholds”) pursuant to a specific type of agreement called a “power option agreement,” which grants a power entity the option to turn off (i.e., curtail) the amount of power used by the load up to the minimum power threshold for each time interval. In this way, the claims provide an electrical load or user that acts like a generator by providing the power entity the option to curtail the load’s electricity usage up to the minimum power threshold that, when implemented, frees up that amount of power for other loads (e.g., hospitals, homes, schools, etcetera) in times of emergency when electrical or power supply falls short of demand.

The Petition relies on the combination of two references (Montalvo (EX1004) and the APC-Tariff (EX1005), which are described in more detail below) to argue that claims 1, 17, and 20 are obvious. The Petition is incorrect. Montalvo does not

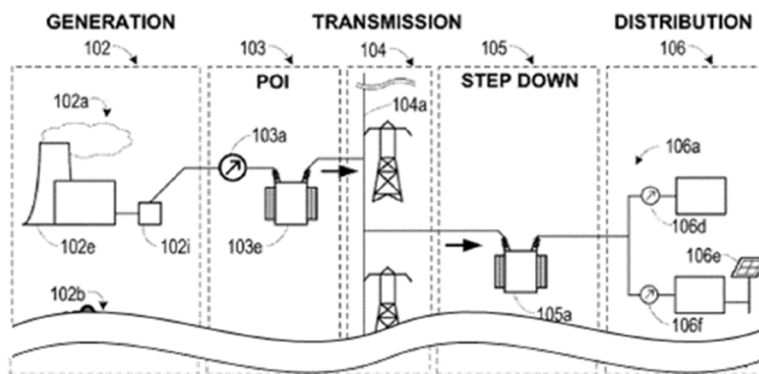
teach the claimed “power option agreement,” “minimum power thresholds,” determining a “performance strategy” “responsive to receiving the power option data,” or providing instructions to implement the “performance strategy. Rather, Montalvo initially describes traditional so-called demand response (“DR”) agreements and then simply automates this well-known arrangement with a benefit of adding end user aggregation and end user convenience features. As described in more detail herein, Montalvo does not disclose “a power option agreement” or “minimum power thresholds” as there is no teaching that the end user must use specified amounts of power for specified time intervals. Far from teaching such a teaching, Montalvo teaches that end users in its system can opt out of participating in demand response actions. There is also no teaching that any adjustments to power consumption in Montalvo are done in response to the amount of power that the end user committed to use for each time interval, as there is no teaching such specific commitments were ever made. And while the Petition attempts to rely on the APC-Tariff to supply these missing elements, the APC-Tariff fails to supply such teaching. Indeed, the APC-Tariff does not require an end user to use at least a specified minimum amount of power at any time. Rather, it sets a maximum amount of power that an end user or load can use during a curtailment event. This lack of teaching is fatal to all Grounds.

The Petition should be denied for other reasons as well. For example, the Carvallo Declaration is largely a *verbatim* copy of the Petition and, as a result, fails to provide *prima facie* evidence of obviousness from a person of ordinary skill in the art (“POSITA”). Additionally, the Petition fails to carry its burden to provide sufficient evidence that identifies with particularity that the APC-Tariff qualifies as a printed publication. Instead, the Petition merely presents evidence that suggests the APC-Tariff *may* have been publicly available. None of this evidence, however, proves public availability of the APC-Tariff as of the Petition’s purported date of publication. That the Petition attempts to support the APC-Tariff’s alleged date of publication by relying on other, non-authenticated, non-patent literature (that also do not contain evidence of public accessibility) further weakens Petitioner’s argument and does not meet Petitioners’ burden under *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 16 (PTAB Dec. 20, 2019). These failures also impact all Grounds.

The Board should deny institution of the Petition for any one of these deficiencies, let alone the combination, which clearly demonstrates that the Petition has not established a reasonable likelihood of prevailing with regard to any of the challenged claims.

II. OVERVIEW OF THE '433 PATENT

The technology of the '433 patent at issue in this IPR relates to methods and systems for adjusting power consumption based on a power option agreement. As depicted in its Figure 1, of which an excerpted version is shown below, an electrical grid typically includes: (i) power generation stations (e.g., nuclear power plants 102a) that produce electricity, (ii) transmission lines 104 that carry the power from the generation stations to demand centers (i.e., consumers), and (iii) distribution networks 106 that carry power to individual consumers. EX1001, 1:26-4:8; EX2001, ¶33. To maintain stability on the grid, the grid operator strives to maintain a balance between the amount of power entering the grid (via generators) and the amount of grid power used by loads (e.g., customers in the distribution segment 106). EX1001, 4:9-13; EX2001, ¶33.



PRIOR ART
FIGURE 1

EX1001, FIG. 1 (excerpt provided).

Grid operators can use a variety of tools to maintain grid stability, including, e.g., using variable market prices to influence generation capacity and/or using controllable loads. EX1001, 7:58-8:55. While the '433 Patent discloses a variety of embodiments, the subject matter of the Challenged Claims is generally directed to the use of “power option agreements” with flexible datacenters acting as controllable loads. The power option agreements give grid operators “the right, but not obligation, to reduce the amount of power delivered (e.g., grid power) to the load up to an agreed amount of power during an agreed upon time interval.” *Id.*, 43:46-57. As described in the '433 Patent, “[i]n order to provide the [grid operator] with this option, the load needs to be using at least the amount of power subject to the option (e.g., a minimum power threshold).” *Id.*, 43:57-60; EX2001, ¶34. The result is that the grid operator can then quickly and reliably reduce load on the grid by instructing the flexible datacenters to reduce load up to an agreed amount, but this only works because the flexible datacenters have agreed to use at least a defined amount of power subject to the option during the time periods of the option agreement. For example, a controllable load may agree under a power option agreement “to use at least 1 MW of grid power *at all times* during a specified 24-hour time interval,” which then provides “the [grid operator] with *the option of being able to reduce* the

amount of power delivered to the load by any amount up to 1 MW *at any point* during the specified 24-hour time interval.” EX1001, 43:60-65 (emphasis added).

As depicted in Figure 11 of the '433 Patent (reproduced below), an example system for implementing power option agreements can include controllable loads provided by flexible datacenters 1102-1104 that have entered into power option agreements with a power entity 1140 (e.g., grid operator), and a remote master control system 262 that controls the datacenters 1102-1104 according to the power option agreements. *Id.*, 43:36-45:46, FIG. 11; EX2001, ¶35. The remote master control system 262 can receive power option data from the power entity 1140 and determine “performance strategies” for the flexible datacenters 1102-1104. EX1001, 45:5-46, 45:61-46:6. The '433 Patent describes that “the power option data may specify the minimum power threshold or thresholds associated with one or more time intervals for the load to operate at in accordance with based on the power option agreement.” *Id.*, 46:1-5.

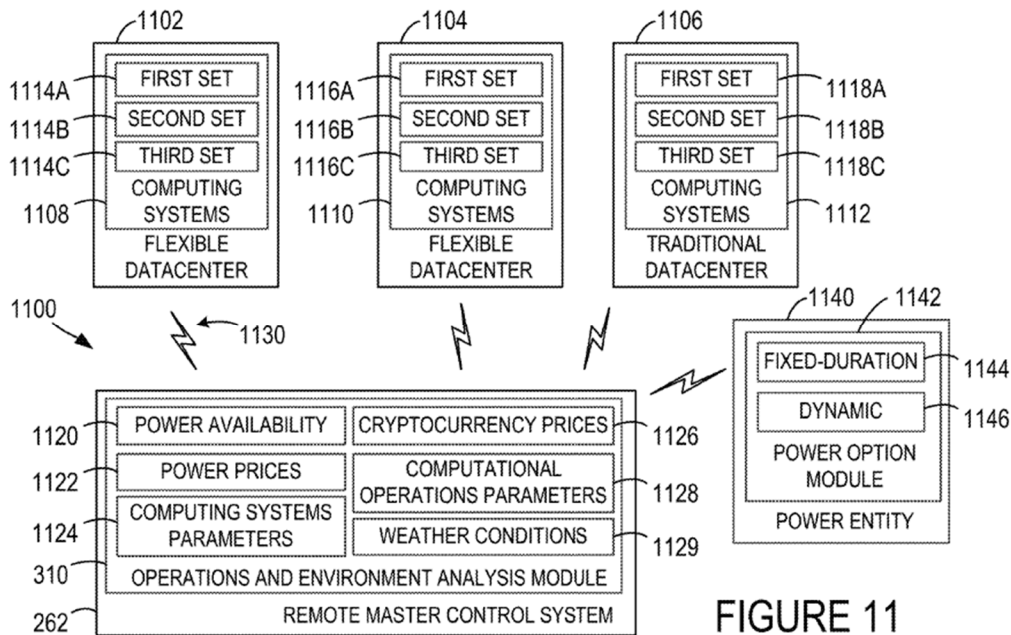


FIGURE 11

Id., FIG. 11.

The '433 Patent's Figure 12 (reproduced below) depicts an example “graph line 1206 [that] represents sets of minimum power thresholds 1206A, 1206B, 1206C that are specified by power option data based on the power option agreement.” *Id.*, 50:66-1; FIG. 12. Power consumption by a load within each time interval at or above the graph line 1206 would meet the minimum power thresholds 1206A-C for the power option agreement, but consumption falling below the line 1206 at a time interval would not. *Id.*, 51:1-52:11; EX2001, ¶36.

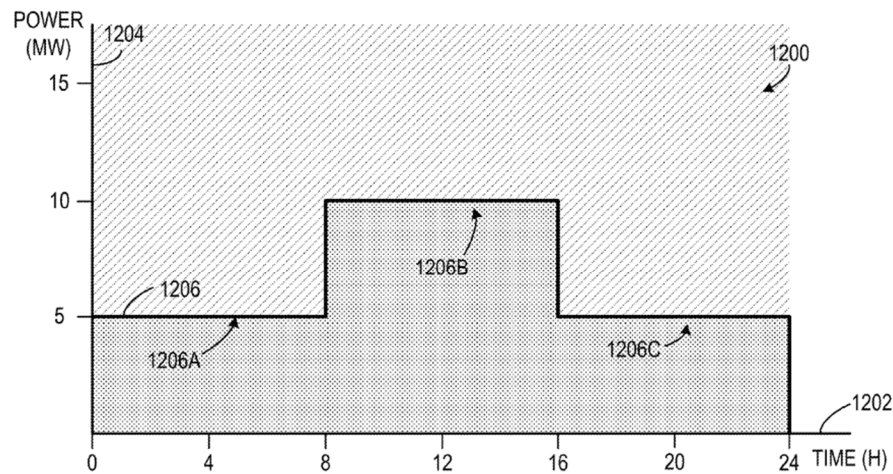


FIGURE 12

Id., FIG. 12.

As described in the '433 Patent, the remote master control system 262 can determine performance strategies across the time intervals for controllable loads using power option data and monitored conditions. For example, the '433 Patent describes that:

the remote master control system 262 can monitor conditions in concert with the minimum power thresholds and time intervals (e.g., power option data) set forth in, and/or derived from, one or more power option agreements to determine performance strategies that can enable the load to meet the expectations of the power option agreement(s) while also efficiently using power to accomplish computational operations.

Id., 45:8-15; *see also id.*, 48:62-49:3, 54:32-55:33, FIG. 13, Abstract.

The '433 Patent describes that “a performance strategy can specify operating parameters” for a controllable datacenter, such as “power consumption targets” for the controllable datacenter. *Id.*, 48:66-49:3. As an illustrative example of determining a performance strategy for a specific time interval within a set of time intervals, the '433 Patent describes that:

In light of the power option data, a control system may determine and provide a *performance strategy to the load (e.g., a set of computing systems) that includes a power consumption target that meets or exceeds the minimum power threshold 1206B* (i.e., 10 MW). The performance strategy may depend on the power option data as well as other possible conditions, such as the price of grid power, the availability of computing systems, and/or the type of computing operations, etc.

Id., 51:54-63 (emphasis added); *see also id.*, 55:14-33, FIG. 13.

A control system, such as the remote master control system 262, can provide instructions to controllable datacenters (loads) to operate in accordance with the determined performance strategy. *Id.*, 54:22-31, 55:57-63, FIG. 13. The instructions are provided to a controllable load to “ensure that the *minimum power thresholds* are met [by operation of the controllable load] during the defined time intervals based on the power option agreement [for the controllable load].” *Id.*, 55:60-63 (emphasis added).

As noted above, by ensuring operation of a controllable load at a minimum power threshold for a time interval, the solution provided by the '433 Patent ensures that at least the amount of power equal to the minimum power threshold is available to be quickly shed by the controllable load and thus made available to other loads during that time interval. *Id.*, 11:9-15; EX2001, ¶¶33-40.

III. OVERVIEW OF THE ASSERTED REFERENCES

A. MONTALVO (EX1004)

In contrast to the '433 Patent (*supra*, Sec. II), the aim of the Montalvo reference is to provide a “fully automated” demand response (“DR”) system that “minimize[s] undesired impact at the end users” who participate in a DR program, and that permits participation by a broader range of end users, including end users with smaller energy demands (e.g., residential users). EX1004, [0026], [0041], [0098], Abstract; *see also id.*, [0043], [0058]-[0059], [0074], Claim 1; EX2001, ¶41.

Unlike Montalvo, the '433 Patent, and Challenged Claims, are focused on methods and systems for causing a controllable load to maintain a mandatory minimum power consumption level during the option periods so that it is available to be curtailed (i.e., power reduced) under the option when there is a shortage of power available. And unlike the '433 Patent, and Challenged Claims, Montalvo is directed to a system for reducing or curtailing load when a demand response (“DR”)

event is activated. During a demand respond event, Montalvo's DR system dynamically selects and attempts to reduce power consumption across a set of loads across end users that are currently participating in a DR agreement as described in Montalvo. EX1004, [0055], [0069], [0098]. Montalvo does not impose load requirements to qualify for or participate in its DR program, and instead monitors real time energy loads for end users and then selects loads to reduce that, in aggregate, will meet the curtailment requirements for a DR event. *Id.*; EX2001, ¶42. Montalvo is configured to identify and direct automatic curtailment actions at an appliance level, such as modifying the operation of cooling or heating equipment in a residential home. EX1004, [0076], [0105], [0107], [0149]. Montalvo minimizes the impact of demand reduction actions on end users by using hierarchies of prioritized, appliance-level curtailment actions that the end users have agreed to permit the DR system to automatically undertake, as needed, for a DR event. EX1004, [0041], [0068], [0098], Abstract; EX2001, ¶42.

For example, Montalvo describes that its DR system “*permits* the individual homeowners *to participate in demand reduction*, in accordance with a DR Agreement” even though “[a] typical residential home can only reduce about 1-2 KW of electrical load during a DR event.” EX1004, [0059] (emphasis added); *see also id.*, [0022]. Montalvo describes that under conventional DR systems, such a

residential home “*would not qualify* to become an end user that can enter into a DR Agreement with the ISO/utility company and/or ECSP, whose *minimum requirement for demand reduction* for a DR Agreement is *typically* about 100 KW-200 KW.” *Id.* (emphasis added). However, Montalvo’s system eliminates these conventional minimum requirements to qualify for and participate in a DR program and permits for end users with smaller loads to participate. *Id.*; EX2001, ¶¶43-44. Montalvo accomplishes this, in part, through the “aggregation of residential homeowners into a group to form an aggregated end user [which] permits the individual homeowners to participate in demand reduction, in accordance with a DR Agreement.” EX1004, [0059]. As a result, Montalvo’s system permits for DR program participation by “residential homeowners and/or commercial entities, such as stores, who by themselves would not qualify to become an end user that is a party to a DR Agreement.” *Id.*

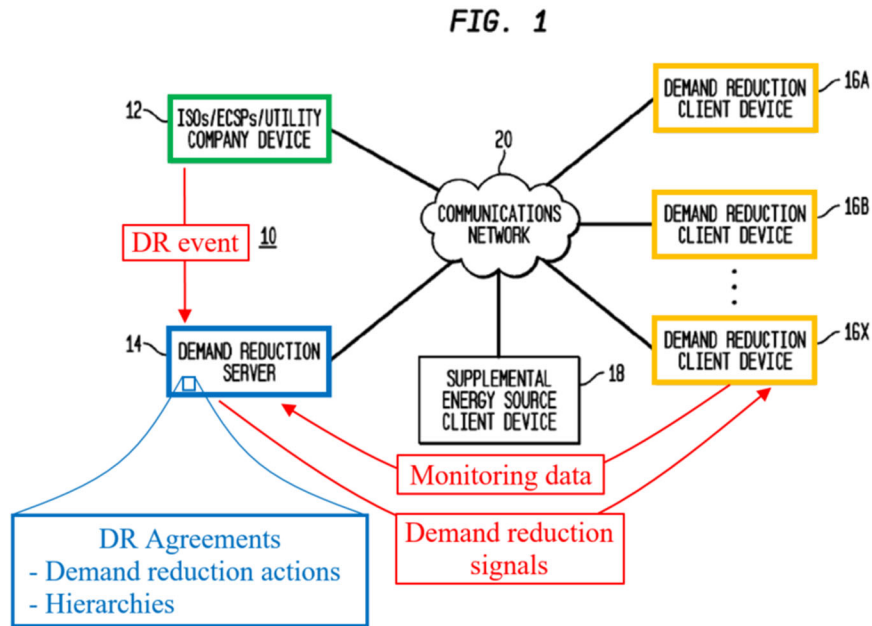
Montalvo describes that DR Agreements with end users “set forth the *amount of electrical load to be reduced*, and when such load will be reduced, for a DR event(s) by the respective end users.” *Id.*, [0003] (emphasis added); EX2001, ¶¶44-45. Montalvo describes that its system uses DR Agreements with end users that specify parameters for reductions during DR events. *Id.*, [0068]. In particular, Montalvo describes that its DR Agreements specify:

- “demand response events” for which the end user agrees to reduce demand,
- “demand reduction actions” that the end user agrees to implement for each specified DR event; and
- “a *hierarchy or hierarchies indicating an order in which demand reduction actions are to be implemented for a specific DR event*, where the demand reduction actions are ordered in the hierarchy or hierarchies *to minimize an undesired impact* at the end user during a DR event.”

Id., [0068] (emphasis added); EX2001, ¶45. Montalvo describes that “[t]he demand reduction actions desirably are determined in accordance with *a hierarchy of demand reduction actions* to minimize undesired impact at the end users and *based on monitoring data* for the end user.” EX1004, [0098] (emphasis added); *see also id.*, [0026], [0069], [0103]-[0105], Abstract, FIG. 5. Montalvo’s “monitoring data” is described as including a variety of information that can be used to determine real time and expected future energy loads for end user appliances, which can then be used to identify and select loads available for demand reduction actions through the ordering provided by the hierarchies of demand reductions. *Id.*, [0069], [0086], [0093], [0098], [0102], [0104]; EX2001, ¶46.

Referring to Montalvo’s FIG. 1 (reproduced below with annotations), Montalvo’s DR system 10 includes a computer 12 associated with energy generators

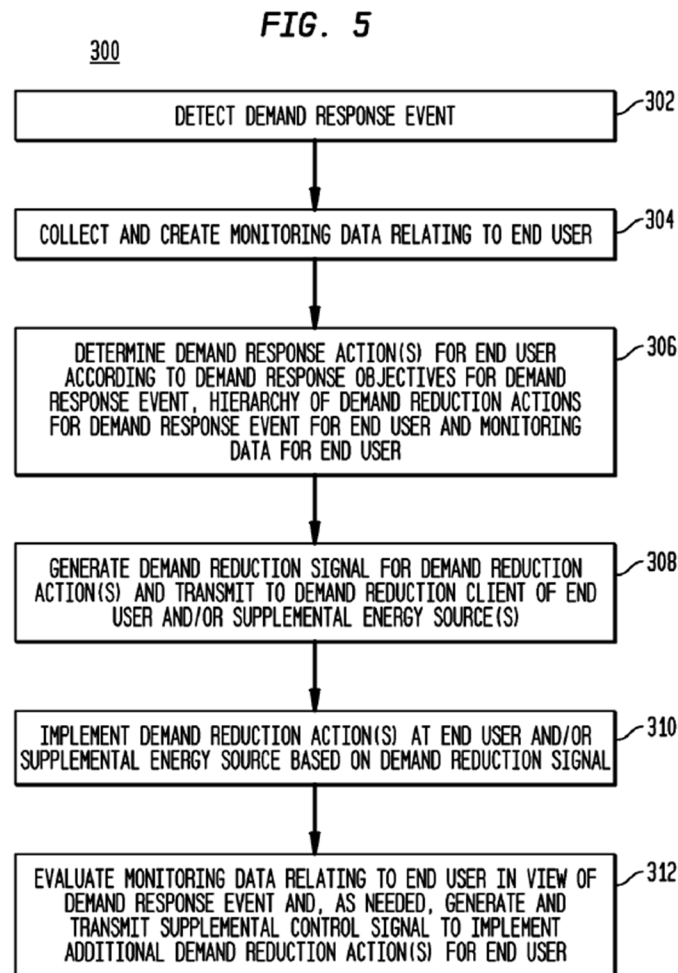
(green) and a DR server 14 (blue) that administers the DR program according to DR Agreements for end users corresponding to the DR clients 16A-X (orange). The DR server 14 maintains data, which specifies demand reduction actions and hierarchies ordering the demand reduction actions agreed to by the end users. The DR clients 16A-X continually collect and transmit real time monitoring data to the DR server 14. In response to receiving information about a DR event from the energy generator computer 12, the DR server 14 selects a set of end user appliances and demand reduction actions for the selected appliances that, collectively, will meet the reduction requirements of the DR event. The DR server 14 performs these determinations using the DR Agreements and the monitoring data, and transmits demand reduction signals to the DR clients 16A-X, which direct performance of the determined demand reductions for the specific DR event.



EX1004, FIG. 1 (annotations added); EX2001, ¶47.

Referring to Montalvo's FIG. 5 (reproduced below), the DR server 14 performs a process 300 to determine and direct dynamic demand reductions at end users in response to a DR event. EX1004, [0098]-[0133], FIG. 5. Montalvo's process 300 includes detecting a DR event (step 302; *id.*, [0099]-[0101]); using monitoring data continuously collected from DR clients (step 304; *id.*, [0102]) and DR Agreement information (i.e., hierarchy of demand reductions) to determine demand response actions to be performed by an end user for the DR event (step 306; *id.*, [0104]-[0121]); generating and transmitting signals to perform determined demand reduction actions (step 308; *id.*, [0122]) to be implemented by the DR clients (step 310; *id.*, [0124]-[0127]); and evaluating the performance of the instructed

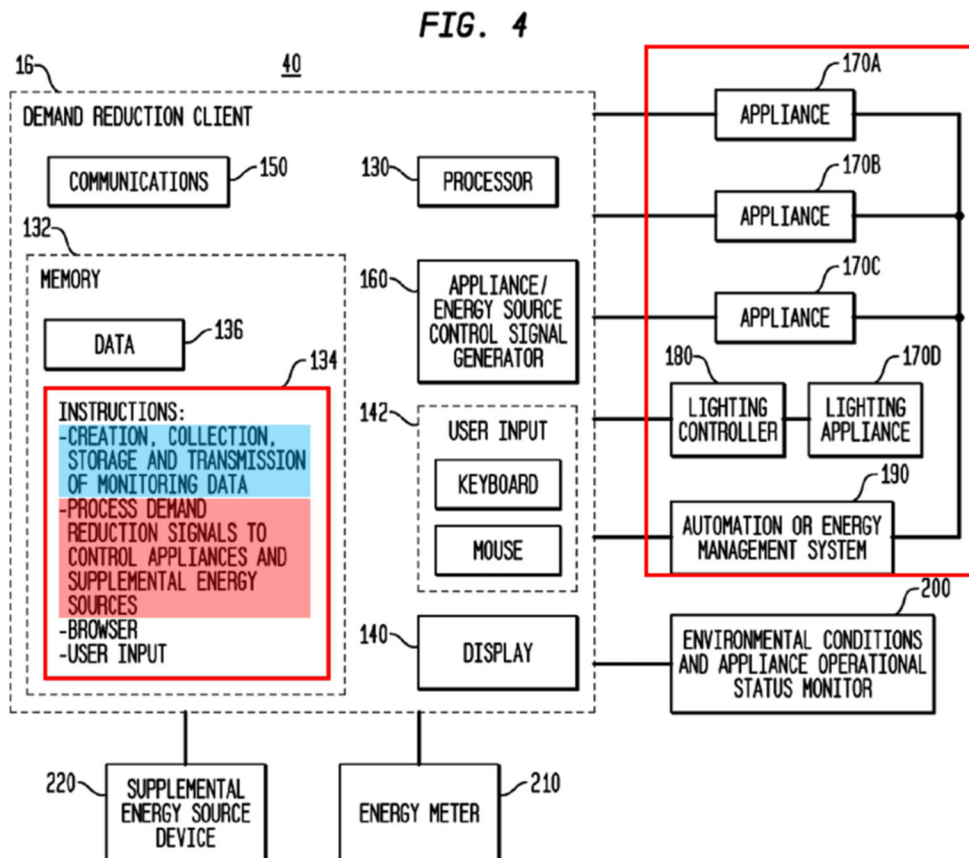
reduction actions using “feedback monitoring data” from the DR clients to determine any supplemental control signals needed to meet the requirements for the DR event (step 312, *id.*, [0128]-0133]). EX2001, ¶¶48-49.



EX1004, FIG. 5.

Referring to Montalvo's FIG. 4 (reproduced below), Montalvo's DR client 16 includes instructions 134 for collecting and transmitting monitoring data to the DR

server (blue highlighting), and for processing and implementing the demand reduction signals (red highlighting) to control the appliances 170A-D, a lighting controller 180, and an automation control and energy management system 190, and to control supplemental energy sources 220 at the end user. EX1004, [0086]-[0089]. Montalvo describes a variety of example appliances 170 and corresponding demand reduction actions that can be performed by the DR client 16. *See e.g., id.*, [0105]-[0111], [0116], [0119]-[0120], [0129]-[0135].



Id., FIG. 4 (annotations added); EX2001, ¶50.

Montalvo additionally explains that end user compliance with demand reduction signals is *optional*. EX2001, ¶51. For example, Montalvo describes that its DR system permits end users to “partially or fully opt out of a DR event” before or during the course of the DR event. EX1004, [0070], [0085], [0137]-[0138]. A user of the DR client 14 can use the input mechanism 142 “prior to and/or during a DR event” to partially opt out of a DR event by “modify[ing] set points, such as environmental limits and appliance operation limits,” or to fully “opt out of participation in a DR event.” *Id.*, [0085]. Montalvo further sets forth an example of its automated system resorting to Plan B and Plan C in the event that the end user did not comply with the automated request (*e.g.*, the end user’s appliance continued to operate despite the request it be shut down). *Id.*, [0133]. Additionally, Montalvo does not describe any fines or penalties when an end user does not comply with demand reductions for a DR event. EX2001, XXX. Montalvo further describes embodiments where, for example, the monitoring data includes information regarding how many times the end user opted out of a DR event (EX1004, [0138]), the provision of a website with information describing incentives to increase the likelihood of compliance with the DR Agreement (*id.*, [0142]), monitoring to determine actual KW reduction (*id.*, [0144]), and/or implementation of sound effects to indicate reduction in electricity consumption (*id.*, [0145]).

B. APC-TARIFF (EX1005)

The portions of the APC-Tariff relied upon in the Petition relate to an optional “Peak Shaving and Emergency Demand Response Rider” (“PSEDR”). EX1005, 221-225. In contrast to Montalvo, which does not impose minimum load requirements to qualify and participate in its DR program (*supra*, Sec. III.A), the PSEDR program requires participants to both: (i) “contract for a definite amount of PSEDR capacity, not to exceed the customer’s normal demand capable of being curtailed,” and, (ii) to separately have a “minimum PSEDR capacity . . . [of] 100 kW.” *Id.*, 221-222. These are separate and distinct requirements. EX2001, ¶¶52, 65-77.

Under the PSEDR program in the APC-Tariff, participating customers agree to provide a “curtailed demand” that is measured using either the “Guaranteed Load Drop (GLD)” or the “Firm Service Level (FSL)” method. *Id.*, 222. This “curtailed demand” does not directly correlate with ’433 Patent disclosure or its claimed subject matter (e.g., power consumption targets that are equal to or greater than received minimum power threshold for each time interval in a set of time intervals). Instead, each of the two disclosed methods in the PSEDR program operate using a ***maximum load*** for a customer to operate at ***during a curtailment event***, as elucidated below. EX2001, ¶¶53, 65-77.

The GLD method requires each customer to “designate a [GLD], which amount shall be the minimum demand reduction that the customer will provide for each hour during a curtailment event.” *Id.* The APC-Tariff describes that compliance with the required GLD amount is determined by subtracting the customer’s “actual hourly load” from their “Customer Baseline Load (CBL)” to determine the customer’s “Actual Load Drop (ALD)” during a curtailment event ($ALD = CBL - \text{actual hourly load}$). *Id.* Non-compliance is determined for a customer “[i]f in any hour of a curtailment event the ALD is less than the GLD,” which results in a non-compliance charge being assessed to the customer. *Id.*, 222, 225. The APC-Tariff describes that the CBL “will be calculated for each hour corresponding to each curtailment event hour” as “the *average* corresponding hourly demands *from the highest four (4) out of the five (5) most recent similar non-event days* in the period preceding the relevant curtailment event.” *Id.*, 222 (emphasis added).

Since the ALD is determined by comparing the customer’s “actual hourly load” against the determined CBL, which is a historic average load for the customer on recent non-event days, the ALD effectively measures the customer’s current deviation from the historical average load provided by the CBL – meaning that ***compliance*** with the GLD (determined comparing ALD and GLD) is ***determined***

based on a customer's current deviation from a recent historical load average.

EX1005, 222; EX2001, ¶¶54-55, 65-77.

For purposes of illustration, assume that over a period of five days D1-D5 that there are no curtailment events, and that a curtailment event then occurs at noon on the sixth day D6. The CBL for noon on day D6 would then be determined using the greatest four hourly loads at noon (i.e., noon to 1pm) from days D1-D5. For purposes of illustration, assume the greatest four hourly loads at noon were on days D1-D4, which result in the CBL being equal to the average of the customer's hourly loads at noon on days D1-D4 ($\text{CBL} = \text{average}(\text{hourly load at noon on days D1-D4})$). Since the ADL in this example is equal to the CBL minus the customer's actual hourly load at noon on day D6, the ADL ends up being the average hourly load on days D1-D4 minus the customer's actual hourly load at noon on day D6 ($\text{ADL} = \text{average}(\text{hourly load at noon on days D1-D4}) - \text{hourly load at noon on day D6}$). Compliance with the curtailment event is determined when the customer's average hourly load on days D1-D4 minus the customer's actual hourly load at noon on day D6—the customer's ADL amount—is greater than or equal to the GLD amount for the customer. EX1005, 222; EX2001, ¶69.

The GLD method of the PSEDR program does not disclose requiring the customer to maintain a minimum load or power consumption level at or above the

CBL level. Instead, the APC-Tariff simply requires that, during a curtailment event, the customer is operating at a compliance load level that is less than or equal to the historic CBL amount minus the GLD amount (compliance load level = CBL – GLD). EX1005, 222; EX2001, ¶70. The GLD method ends up effectively defining a ***maximum actual hourly load*** (compliance load level) for the curtailment event, at or below which the customer can operate ***during the curtailment event*** in order to be in compliance. EX1005, 222; EX2001, ¶70.

Further, during non-curtailment event periods, the APC-Tariff does not require the current hourly load to be at or near the historic CBL level before a curtailment event occurs. During a curtailment event, the APC-Tariff does not require a reduction in the customer's current load by the GLD amount or any other value. EX1005, 222; EX2001, ¶71. Instead, the GLD method simply requires that the customer's load ***during a curtailment event*** has deviated from the historic CBL load amount by at least the GLD amount—meaning the customer's load is operating at or below a ***maximum hourly load*** provided by subtracting GLD amount from the CBL amount. As a result, since compliance is determined based on comparison of a current actual load against historic load amounts (CBL), a customer can comply with a curtailment event under the GLD method without reducing their current load amount by the GLD amount (or more) in the following scenarios:

- reducing current load by less than the GLD amount is compliant when customer is already operating with actual hourly load greater than compliance load level (CBL minus GLD) but less than historic CBL amount,
- maintaining current load without reduction is compliant when customer is already operating with actual hourly load at or below compliance load level (CBL minus GLD), and
- increasing current load is compliant when customer's actual hourly load is already less than compliance load level (CBL minus GLD).

EX1005, 222; EX2001, ¶71.

A customer may also be required to reduce their current load by an amount greater than the GLD amount in order to comply with a curtailment event, for example, when the current load exceeds the CBL amount. EX1005, 222; EX2001, ¶72.

Additionally, the APC-Tariff does not require a customer to maintain a current hourly load greater than or equal to the GLD amount for a specific time interval. EX1005, 222; EX2001, ¶73. The GLD amount is simply a value that is subtracted from the CBL to determine the maximum load for a customer to comply with the PSEDR program *during a curtailment event*. There is no requirement that customers operate at or above the GLD amount during normal operation (no

curtailment event)—meaning customers can be at an hourly load during normal operation that is below the GLD amount. EX1005, 222; EX2001, ¶73. Customers operating below the GLD amount when a curtailment event is received can still be in compliance with the PSEDR program so long as their load is adjusted to a level that is at or below the compliance load level (CBL minus GLD) during the curtailment event. EX1005, 222; EX2001, ¶73.

Turning to the other disclosed PSEDR method, and like the GLD method, the FSL method also generates a historic customer load value (similar to CBL) against which a PSEDR capacity amount (similar to GLD) is applied to determine a customer's maximum operational load (i.e., compliance load level) during a curtailment event. EX1005, 222-223; EX2001, ¶74. In the FSL method, the historic customer load value is called the "Firm Service Level Peak Load Contribution (PLC)," which is "calculated each year as the average of [the customer's] load during PJM's five (5) highest daily peak loads." EX1005, 223. The PSEDR capacity amount in the FSL method is called the "Available Curtailable Demand (ACD)," which "[t]he customer must designate." *Id.* The customer's maximum operational load under the FSL method is called the "Firm Service Level (FSL)," which is "the demand to which the customer agrees to reduce load to or below for each hour during a curtailment event." *Id.*

The PSEDR program additionally describes that a non-compliance penalty is not charged if the customer is “operating at or below their designated FSL” when a curtailment event is received because the customer has “no PSEDR capacity available with which to comply.” *Id.*; EX2001, ¶75.

Accordingly, both the GLD method and the FSL method define a *maximum load* (CBL minus GLD, FSL) for a customer to operate at *during a curtailment event* that is determined based on a combination of historical load values for the customer (CBL, PLC) minus a PSEDR capacity amount (GLD, ACD). EX1005, 222-223; EX2001, XXX. During non-curtailment events (i.e., prior to a curtailment event), neither the GLD nor the FSL method impose load requirements (minimum or maximum) on customers under normal operation (no curtailment event). EX1005, 222-223; EX2001, ¶76.

IV. PERSON OF ORDINARY SKILL IN THE ART

Patent Owner disagrees with the Petition's proposed definition of a POSITA for the '433 Patent because the Challenged Claims pertain to power control systems instead of “power generation systems,” as asserted in the Petition. Pet., 11. For example, claim 1 of the '433 Patent expressly recites a “control system” that uses a “power option agreement.” There is no recitation of “power generation systems” in the '433 claims.

For the purposes of this POPR, a person of ordinary skill in the art (“POSITA”) at the time of the claimed invention would have had a degree in mechanical engineering, electrical engineering, or a similar field with at least 1-2 years of experience with power control systems or other comparable professional experience. Additional education could substitute for professional experience, or vice versa. EX2001, ¶32.

V. CLAIM CONSTRUCTION

For the purposes of this POPR, Patent Owner applies the claim constructions proposed in the Petition for the terms “power option agreement” and “minimum power threshold.” Pet., 11. Patent Owner does not propose constructions for any other terms.

VI. THE PETITION FUNDAMENTALLY MISUNDERSTANDS AND MISINTERPRETS MONTALVO AND APC-TARIFF

The Petition misunderstands the teachings of Montalvo and the APC-Tariff in several instances. It appears that some of these misinterpretations result from taking portions of the references out of context and without considering the teachings of the references as a whole. And in other instances, it appears that the Petition simply omits or ignores relevant contrary teachings in these references. Regardless, the Petition's failure to accurately represent and apply the teachings of Montalvo and the APC-Tariff to the Challenged Claims results in at least several elements of the

independent claims simply not being met, and with purported motivations to combine the references that are at odds with the references' teachings. *Infra*, Secs. VII-VIII; EX2001, ¶¶57-85.

The following subsections outline some of the more egregious misinterpretations of Montalvo and the APC-Tariff by the Petition. These subsections are not exhaustive of all mischaracterizations of these references in the Petition.

A. MONTALVO'S SOLUTION DOES NOT IMPOSE "MINIMUM DEMAND REDUCTION REQUIREMENTS," AS INCORRECTLY ALLEGED BY THE PETITION

The Petition and supporting Carvallo Declaration (EX1003) repeatedly mischaracterize Montalvo as disclosing "minimum demand reduction requirements imposed for an end user to enter into a [demand reduction ("DR")] agreement" based on the following quote from Montalvo: "ISOs . . . typically require that an **end user** have the capability of reducing at least about 100 KW-200 KW demand during a DR event." Pet., 13-14 (quoting EX1004, [0022]), 29, 31; EX1003, ¶¶78, 107; *see also* Pet., 15, 30; EX1003, ¶¶81, 110. However, the Petition and Carvallo Declaration fail to acknowledge that this quote is describing the prior art in Montalvo's *background section*, which is not part of Montalvo's solution being asserted by the Petition. EX2001, ¶¶58-64.

The Petition and Carvallo Declaration ignore that Montalvo's actual solution, which is asserted by the Petition, ***does not impose*** these or similar minimum requirements for Montalvo's end users to participate in Montalvo's DR program—the ***opposite*** of what the Petition alleges. *Supra*, Sec. III.A; EX2001, ¶61. For example, Montalvo describes that “a single residential home, by itself, would not qualify to become an end user that can enter into a [prior art] DR Agreement with the ISO/utility company and/or ECSP” because “[a] typical residential home can only reduce about 1-2 KW of electrical load during a DR event” when a minimum reduction requirement “is typically about 100 KW-200 KW.” EX1004, [0059]; *see also id.*, [0022]. However, Montalvo describes that its solution “permits the individual homeowners to participate in demand reduction, in accordance with a DR Agreement.” *Id.*; *see also id.*, [0041], [0043].

Similarly, Montalvo's definition of “end user,” which is the term Montalvo uses to refer to entities participating in its DR program, expressly includes “a commercial or residential facility,” “an aggregation of commercial facilities,” and “a collection of residential units, such as residential homes within a development or a group of residential apartment buildings.” EX1004, [0043]; *see also, e.g., id.*, [0068], Abstract. Montalvo also refers to residential homes and houses participating

in illustrative examples of its DR program throughout the specification. *See, e.g., id.*, [0136]-[0137], [0146].

Taking the disclosure in Montalvo as a whole, a POSITA would have readily understood and appreciated that Montalvo's solution does not include "minimum demand reduction requirements," for any individual end user or load in its aggregated end user, despite the opposite assertion in the Petition and Carvallo Declaration. EX2001, ¶¶58-64; *supra*, Sec. III.A. To the contrary, Montalvo's solution is aimed at a flexible approach to demand response where "[t]he demand reduction actions desirably are determined in accordance with *a hierarchy of demand reduction actions to minimize undesired impact* at the end users and *based on monitoring data* for the end user." EX1004, [0098] (emphasis added); *see also id.*, [0026], [0069], [0103]-[0105], Abstract, FIG. 5. Montalvo further describes that its DR system permits end users to "*partially or fully opt out of a DR event*" *before or during the course of the DR event*. EX1004, [0070], [0085], [0137]-[0138]. Additionally, Montalvo describes presenting end users with interfaces to inform users about the DR Agreement and "potential financial awards" for participation in the hope that "the end users may become willing participants in a DR Agreement and, consequently, *increase the likelihood of compliance* with the terms of the DR

Agreement.” EX1004, [0142] (emphasis added); *see also id.*, [0079], [0138], [0144].

The Petition and Carvallo Declaration also do not allege or suggest modifying Montalvo's solution to incorporate separate prior art features discussed in Montalvo's background section, such as those discussed in Montalvo's paragraph [0022]. EX2001, ¶¶58-64. Accordingly, the Petition and Carvallo Declaration's allegation that Montalvo's solution includes minimum demand reduction requirements is wrong, and is based on a reading of the Montalvo that fails to consider its teachings as a whole. EX2001, ¶¶58-64.

**B. THE PETITION MISREPRESENTS MONTALVO'S
BACKGROUND DESCRIPTION OF “DR AGREEMENTS” AS
BEING PART OF MONTALVO'S SOLUTION**

Again, the Petition and Carvallo Declaration repeatedly misrepresent that a portion of Montalvo's *background section* reciting that prior art DR Agreements “set forth the amount of electrical load to be reduced, and when such load will be reduced, for a DR event(s) by the respective end users” (EX1004, [0003]) pertains to Montalvo's solution being asserted in the Petition. Pet., 13, 15, 25, 31-32, 35-36, 45, 51-52; EX1003, ¶¶78, 81, 100, 112-113, 121, 145, 160, 180. Using these misrepresentations as a building block, the Petition and Carvallo Declaration incorrectly extrapolate that “Montalvo's [solution teaches] minimum power

thresholds (the amount of load to be reduced).” Pet., 31; EX1003, ¶113; *see also* Pet., 15, 30, 32, 35-36; EX1003, ¶¶81, 112, 121-122.

However, Montalvo disparages the conventional DR Agreements and systems described in the background section as presenting several flaws and drawbacks. EX1004, [0006]-[0013], [0020]-[0022], [0024]-[0025]; EX2001, ¶60. Instead, as discussed above (*supra*, Sec. III.A), Montalvo's solution is aimed at a flexible approach that dynamically determines load reductions by identifying currently available loads to be reduced and selecting from among those loads using prioritized orderings of reduction actions provided by “a hierarchy of demand reduction actions *to minimize undesired impact* at the end users.” EX1004, [0098] (emphasis added); *see also id.*, [0026], [0069], [0103]-[0105], Abstract, FIG. 5. Montalvo's discussion of DR Agreements to provide flexible and dynamic demand reductions does not mention or suggest static “amount[s] of electrical load to be reduced” from the background (*id.*, [0003]), but instead specifies:

- “demand response events” for which the end user agrees to reduce demand,
- “demand reduction actions” that the end user agrees to implement for each specified DR event; and
- “a hierarchy or hierarchies indicating an order in which demand reduction actions are to be implemented for a specific DR event, where the demand

reduction actions are ordered in the hierarchy or hierarchies to minimize an undesired impact at the end user during a DR event.”

EX1004, [0068]; EX2001, ¶62.

Accordingly, taking the disclosure in Montalvo as a whole, a POSITA would have readily understood and appreciated that Montalvo's flexible and dynamic demand reduction system is substantially different from conventional systems described in Paragraph [0003] of the background section, and would not have readily agreed, understood, or appreciated that Montalvo discloses or suggests how they could be combined or otherwise used together. EX2001, ¶¶58-64. The Petition and Carvallo Declaration do not appreciate or attempt to reconcile these differences either. Instead, the Petition and Carvallo Declaration combine aspects from these different and seemingly inconsistent teachings in Montalvo without any explanation or evidence resolving these apparent conflicts. Pet., 13, 15, 25, 31-32, 35-36, 45, 51-52; EX1003, ¶¶78, 81, 100, 112-113, 121, 145, 160, 180.

The Petition and Carvallo Declaration's analysis smacks of impermissible hindsight resulting from using the claims as a roadmap to identify teachings in the prior art without considering the '433 Patent's claimed inventions as a whole. 35 U.S.C. § 103 (requiring evaluation of “the claimed invention as a whole”); *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004) (“The ‘as a whole’

instruction in title 35 prevents evaluation of the invention part by part. Without this important requirement, an obviousness assessment might break an invention into its component parts (A + B + C), then find a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious. This form of hindsight reasoning, using the invention as a roadmap to find its prior art components, would discount the value of combining various existing features or principles in a new way to achieve a new result — often the very definition of invention.”).

Accordingly, the Petition's allegation that Montalvo's solution includes end user minimum power thresholds is wrong, and is based on a reading of the Montalvo that fails to consider its teachings as a whole. EX2001, ¶¶58-64.

C. THE PETITION MISUNDERSTANDS MONTALVO'S DESCRIPTION OF “DAY AHEAD” AND “DAY OF” DR EVENTS AS IMPOSING MINIMUM POWER CONSUMPTION REQUIREMENTS

The Petition and Carvallo Declaration also repeatedly misrepresent that a portion of Montalvo's *background section* describing that, under conventional DR Agreements, during “a ‘day ahead’ event . . . the end user *agrees to reduce KW demand* the day following receipt of a DR event request,” and during “a ‘day of’ event . . . the end user *agrees to reduce KW demand* the day a request is received” (EX1004, [0015]-[0016] (emphasis added)) pertains to Montalvo's solution being

asserted in the Petition. Pet., 34, 37, 45-46; EX1003, ¶146. Using these misrepresentations regarding conventional DR Agreements as a building block, the Petition incorrectly asserts Montalvo's solution as including an "amount of load the end user commits to consume for day-ahead and/or day-of events," and end users making a "corresponding commitment to consume load to be able to take those DR actions, such as for day-ahead and/or day-of events." Pet., 34, 37.

Again, Montalvo disparages the conventional DR Agreements and systems described in the background section as presenting several flaws and drawbacks. EX1004, [0006]-[0013], [0020]-[0022], [0024]-[0025]; EX2001, ¶60. Instead, as discussed above (*supra*, Sec. III.A), Montalvo's solution is aimed at a flexible approach that dynamically determines load reductions by identifying currently available loads to be reduced and selecting from among those loads using prioritized orderings of reduction actions provided by "a hierarchy of demand reduction actions *to minimize undesired impact* at the end users." EX1004, [0098] (emphasis added); *see also id.*, [0026], [0069], [0103]-[0105], Abstract, FIG. 5. As set forth above (*supra*, Sec. VI.B) Montalvo's discussion of DR Agreements to provide flexible and dynamic demand reductions does not mention or suggest static "amount[s] of electrical load to be reduced" from the background (*id.*, [0003]), but instead specifies:

- “demand response events” for which the end user agrees to reduce demand,
- “demand reduction actions” that the end user agrees to implement for each specified DR event; and
- “a hierarchy or hierarchies indicating an order in which demand reduction actions are to be implemented for a specific DR event, where the demand reduction actions are ordered in the hierarchy or hierarchies to minimize an undesired impact at the end user during a DR event.”

EX1004, [0068]; EX2001, ¶62.

Furthermore, the Petition's allegations about end user “commitments” to maintain or reduce their load by specific amounts is inconsistent with the discussion that compliance with a DR Agreement and with demand reduction signals for DR events under Montalvo's solution is *optional*. *Supra*, Sec. III.A. For example, Montalvo describes that its DR system permits end users to “partially or fully opt out of a DR event” before or during the course of the DR event. EX1004, [0070], [0085], [0137]-[0138]; EX2001, ¶63.

Accordingly, taking the disclosure in Montalvo as a whole, a POSITA would have readily understood and appreciated that Montalvo's flexible and dynamic demand reduction system is substantially different from conventional prior art systems described in Paragraphs [0015]-[0016] of the background section, and

would not have readily agreed, understood, or appreciated that Montalvo discloses or suggests how they could be combined or otherwise used together. EX2001, ¶¶58-64. The Petition and Carvallo Declaration do not appreciate or attempt to reconcile these difference, either. Instead, the Petition and Carvallo Declaration combine aspects from these different and seemingly inconsistent teachings in Montalvo without any explanation or evidence resolving these apparent conflicts. Pet., 34, 37, 45-46; EX1003, ¶146. The Petition and Carvallo Declaration's analysis again smacks of impermissible hindsight resulting from using the claims as a roadmap to identify teachings in the prior art without considering them together as a whole. 35 U.S.C. § 103; *Ruiz*, 357 F.3d at 1275.

Accordingly, the Petition's allegation that Montalvo's solution includes end user commitments regarding minimum consumption amounts is wrong, and is based on a reading of the Montalvo that fails to consider its teachings as a whole. EX2001, ¶¶58-64.

D. THE PETITION MISUNDERSTANDS THE TEACHINGS OF THE PSEDR PROGRAM IN THE APC-TARIFF

The Petition and Carvallo Declaration appear to simply grab a few, high-level quotes from the description of the PSEDR program in the APC-Tariff without engaging the substance of the PSEDR program's teachings. As a result, the Petition and Carvallo Declaration incorrectly allege and misunderstand the PSEDR program

as teaching “minimum power consumption requirements” based on quotes from the APC-Tariff describing customers “contract[ing] for a definite amount of PSEDR capacity, not to exceed the customer’s normal demand capable of being curtailed” (EX1005, 221) and the “minimum PSEDR capacity contracted for under this Rider will be 100 kW” (EX1005, 222). Pet. 15; EX1003, ¶81; *see also* Pet, 8-9, 13, 29-30, 35-36; EX1003, ¶¶58-59, 109, 121; EX2001, ¶¶65-77.

Contrary to the misunderstandings in the Petition and Carvallo Declaration, the APC-Tariff’s PSEDR program does not impose minimum power consumption requirements on customers. EX2001, ¶¶65, 70, 76. The Petition and Carvallo Declaration incorrectly assume the minimum/contracted “PSEDR capacity” described in the APC-Tariff corresponds to a minimum load required for customers to persistently maintain. However, the PSEDR capacity is, instead, a value that is used to determine a **maximum load level** for a customer during a curtailment event. EX1005, 221-223; EX2001, ¶¶68-73; *supra*, Sec. III.B.

For example, as discussed above, the PSEDR program’s two curtailment demand methods (GLD method and FSL method) both subtract a PSEDR capacity value (GLD in GLD method, ACD in FSL method) from historical load levels for the customer (CBL in GLD method, PLC in FSL method) to arrive at a **maximum load level** for the customer during a curtailment event. EX1005, 221-223; EX2001,

¶¶68-76; *supra*, Sec. III.B. There is no requirement under either of these programs for customers to maintain their load at or above the PSEDR capacity level (GLD in GLD method, ACD in FSL method) during normal operation (no curtailment event). EX1005, 222-223; EX2001, ¶¶70-71, 76; *supra*, Sec. III.B. And since compliance with PSEDR load curtailment requirements are determined against historical loads for a customer, the customer may, depending on the customer's current load level relative to the their historical load levels (CBL in GLD method, PLC in FSL method), still comply with a curtailment event even though they are operating below the PSEDR capacity level (GLD in GLD method, ACD in FSL method) when the event occurs. EX1005, 222-223; EX2001, ¶¶71-76; *supra*, Sec. III.B.

Accordingly, the Petition and Carvallo Declaration's allegation that the PSEDR program imposes minimum power consumption requirements on customers is wrong, and is based on a reading of the APC-Tariff that fails to consider its teachings as a whole. EX2001, ¶¶65-77.

VII. WHEN THE ACTUAL TEACHINGS OF MONTALVO AND APC-TARIFF ARE CONSIDERED, A POSITA WOULD NOT HAVE COMBINED REFERENCES AS ALLEGED

The Petition and Carvallo Declaration's alleged motivations to combine the teachings of Montalvo and the APC-Tariff are premised on several of the misunderstandings of these references outlined above. *Supra*, Sec. VI; Pet. 12-16;

EX1003, ¶¶74-82; EX2001, ¶78. For example, the alleged motivations to combine rely on the misinterpretations that Montalvo's solution includes "minimum demand reduction requirements" for end users (*supra*, Sec. VI.A) and uses DR Agreements that set an amount of electrical load to be reduced and/or a minimum power threshold (*supra*, Sec. VI.B), and that the APC-Tariff imposes minimum power consumption requirements (*supra*, Sec. VI.D). Pet., 13-15, EX1003, ¶¶78, 81; EX2001, ¶79. Accordingly, the Petition and Carvalho Declaration's asserted motivations to combine are not rooted in the actual teachings of the references and, as a result, are insufficient to carry the Petition's burden under 35 U.S.C. § 103. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987) (requiring "a prior patent must be considered in its entirety, i.e., as a whole, including portions that would lead away from the invention in suit"); *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1332 (Fed. Cir. 2016) (explicitly applying Panduit's requirements to the PTAB – instructing that the PTAB "must consider the prior art 'in its entirety, i.e., as a whole'").

Furthermore, a POSITA would not have been prompted to combine Montalvo and the APC-Tariff as alleged when the actual teachings of these references are considered because the references teach away from the combination. EX2001, ¶79. For example, Montalvo's solution provides a flexible DR system that permits

smaller, residential end users to participate without minimum load requirements, that dynamically determines demand reduction actions for a DR event based on real time load levels (with no prescribed load or reduction amounts) so as to minimize the impact on end users, and that permits end users to selectively opt out of reductions for specific DR events. *Supra*, Sec. III.A; EX2001, ¶80. In contrast, the APC-Tariff is limited to larger end users with a PSDER capacity of at least 100 kW, sets out specific requirements for end users to comply with curtailment events based on their historical power consumption levels, and imposes non-compliance charges when end users fail to meet those requirements. *Supra*, Sec. III.B; EX2001, ¶80.

Applying Montalvo and the APC-Tariff's actual teachings, which the Petition and Carvallo Declaration do not address, a POSITA would not have been motivated to combine these references as alleged because they teach away from each other. EX2001, ¶81. For example, the lack of minimum load requirements to participate in Montalvo's DR program, which permits residential end users to participate, is inconsistent with the APC-Tariff's requirement of a larger PSDER capacity for participants, where the Petition does not point to any aggregation considerations under the cited APC-Tariff documents. EX2001, ¶81. In another example, Montalvo's allowance of end users to "partially or fully opt out of a DR event" before or during the course of the DR event and use of hierarchies of demand

reductions to minimize the impact of demand reductions on end users is inconsistent with APC-Tariff's imposition of penalties for non-compliance with the PSEDR program. EX2001, ¶81.

Based on at least these differences, a POSITA would not have been motivated to combine the teachings of Montalvo and the APC-Tariff with each other. EX2001, ¶¶80-82. Additionally, a POSITA would have understood and appreciated that modifying Montalvo based on the teachings of the APC-Tariff would have necessarily frustrated the purpose of Montalvo—rendering it more like the conventional DR systems described in Montalvo's background section, which Montalvo disparages, where the Petition does not point to any aggregation considerations under the cited APC-Tariff documents. EX2001, ¶83. Furthermore, given these differences, a POSITA would have understood and appreciated that modifying Montalvo based on the teachings of the APC-Tariff would not have amounted to a substitution of known elements and would not have yielded predictable results. EX2001, ¶83.

Accordingly, for at least the foregoing reasons, a POSITA informed of the actual teachings of Montalvo and the APC-Tariff would not have been prompted to modify Montalvo in view of the APC-Tariff. EX2001, ¶¶78-81, 85. Moreover, the Petition and Carvalho Declaration do not address or apply the actual teachings of

Montalvo and the APC-Tariff to the '433 Patent, let alone detail how they would be combined or a POSITA's motivations to do so. EX 2001, ¶¶78-85; *Panduit Corp.*, 810 F.2d at 1568; *Warsaw Orthopedic, Inc.*, 832 F.3d at 1332; *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1366 (Fed. Cir. 2015) (requiring the Petition to show "how a skilled artisan would have used what it show[n] in combining or modifying the prior art references or how it tended to show that a skilled artisan would have had a reasonable expectation of success in achieving the suggested combination and modification"); *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362 (Fed. Cir. 2016) (reiterating the Petitioner's "obligation to explain all material facts relating to a motivation to combine"); *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1337 (Fed. Cir. 2016) ("The real question is whether that skilled artisan would have plucked one reference out of the sea of prior art [] and combined it with conventional [] elements to address some need present in the field. Whether a skilled artisan would be motivated to make a combination includes whether he would select particular references in order to combine their elements").

The Board should deny institution because the Petition has failed to carry its burden for all Grounds, which each allege obviousness based on Montalvo in view of the APC-Tariff.

**VIII. GROUND 1 FAILS TO ESTABLISH A REASONABLE
LIKELIHOOD OF PREVAILING AGAINST ANY CHALLENGED
CLAIM**

**A. MONTALVO DOES NOT DISCLOSE ELEMENTS [1.2.1],
[17.2], [20.2]**

Contrary to the Petition's allegations (Pet., 25-28), Montalvo does not disclose or suggest Elements [1.2.1], [17.2], or [20.2]. EX2001, ¶¶86-91. For example, Montalvo does not disclose "receiv[ing] power option data based, at least in part, on a power option agreement" of Element [1.2.1] at least because it does not disclose or teach the claimed power option agreement.

Per the Petition's applied construction, a "power option agreement" is "an agreement between a power entity associated with delivery of power to a load and the load, wherein the load provides the power entity with the option to reduce the amount of power delivered to the load up to an agreed amount of power during an agreed upon time interval such that the load must use at least the amount of power subject to the option during the time interval unless the power entity exercises the option." Pet., 11. The power option agreement is fundamental to the '433 Patent's methods and systems for ensuring that a load is available to be reduced or curtailed when there is a shortage of power available, thereby freeing up power for other loads to use. Indeed, the '433 Patent explains that "[i]n order to provide the power entity" with the option in the power option agreement "the load needs to be using at least

the amount of power subject to the option (e.g. a minimum power threshold).” EX1001, 43:57-60. As such, for example, “[t]he power option agreement may be used by the power entity 1140 to reserve the right to reduce the amount of grid power delivered to the load during a set time frame” allowing the power entity to “exercise power option agreements to balance loads coupled to the power grid.” EX1001, 44:3-12. Thus, the power option agreement’s mandatory requirement that a load use at least the amount of power equal to the minimum power threshold for a specific time interval is crucial to the ability of the power entity to be able to have the option to reduce or curtail the load by this amount in order to free up this amount of power for others and balance supply of power with demand. EX2001, ¶¶87-88.

Nonetheless, in its discussion of Elements [1.2.1], [17.2], and [20.2] the Petition does not identify any alleged disclosure in Montalvo as disclosing the claimed power option agreement construed as the Petition proposes. *Id.*, ¶89 Although the Petition asserts that Montalvo’s “DR agreement” is the claimed power option agreement and that “end users in Montalvo have entered into DR Agreements with ISOs, ECSPS, and/or utility companies, to automatically reduce KW demand for DR event(s) per the terms of the DR Agreements,” it provides no explanation of how Montalvo’s DR agreement meets the requirements of the claimed power option

agreement. Pet., 25, 27. To the contrary, the Petition acknowledges that “Montalvo does not provide sample agreement terms.” Pet., 14.

Moreover, Montalvo is fundamentally incompatible with the claimed power option agreement because participation in its DR Agreements is *optional*. Montalvo repeatedly emphasizes that its system permits end users (i.e., loads) to “partially or fully opt out of a DR event.” EX1004, [0070], [0085], [0137]-[0138]; EX2001, ¶90. Furthermore, Montalvo only addresses reducing power consumption by end users during DR events, not maintaining a mandatory minimum power consumption level before a DR event occurs or at any other specified time. The Petition does not and cannot point to any disclosure in Montalvo as disclosing an agreement requiring a load to use at least an agreed upon amount of power during a specific time interval. The Petition's only discussion of Montalvo's non-prior art DR Agreements with respect to these Elements is in the context of Paragraphs [0041], [0068], [0073], and [0076], which are silent on the issue or concern determining demand reduction actions. Pet., 25-28. Montalvo does not disclose any mechanism for maintaining a specific minimum amount of load. Thus, the Petition does not explain how Montalvo's DR Agreements meet the requirements of the claimed power option agreement and thus does not meet its burden of establishing how Montalvo discloses “receiv[ing] power option data based, at least in part, on a power option agreement.”

As further set forth below, this is unsurprising because neither Montalvo, APC-Tariff, nor the proposed combination of the two disclose the claimed power option agreement. EX2001, ¶¶90-91.

For at least the foregoing reasons, Ground 1 of the Petition fails because the Montalvo reference does not disclose Elements [1.2.1], [17.2], or [20.2]. EX2001, ¶¶87-91.

B. MONTALVO COMBINED WITH APC-TARIFF DOES NOT DISCLOSE ELEMENTS [1.2.2], [17.3], [20.3]

Contrary to the Petition's allegations (Pet., 28-32), Montalvo combined with APC-Tariff does not disclose or suggest Elements [1.2.2], [17.3], or [20.3]. EX2001, ¶¶92-101. For example, neither Montalvo nor APC-Tariff nor the combination thereof disclose or render obvious the claimed control system receiving power option data "wherein the power option data specify: (i) a set of minimum power thresholds, and (ii) a set of time intervals, wherein each minimum power threshold in the set of minimum power thresholds is associated with a time interval in the set of time intervals." Element [1.2.2]. Neither Montalvo nor APC-Tariff disclose "a minimum amount of power a load must use during an associated time interval," which the Petition applies as the proper construction of "minimum power threshold." Pet., 11; EX2001, ¶93.

As an initial matter, the Petition inconsistently applies different features from Montalvo, alone or in combination with the APC-Tariff, to the “power option data” limitation. For example, with regard to related Elements [1.2.1], [17.2], and [20.2], the Petition alleges that the “power option data” is satisfied by Montalvo’s DR event electronic message data being received at the DR server 14, and alleges that Montalvo’s DR Agreement discloses the “power option agreement” element. Pet., 25-28, *supra*, VIII.A. However, with regard to the instant Elements [1.2.2], [17.3], and [20.3], which further define the “power option data” element, the Petition switches between alleging that Montalvo’s DR events (Pet., 28-29) and DR Agreements, alone or as modified based on the APC-Tariff (Pet., 29-32), teach the “power option data” recited in Elements [1.2.2], [17.3], and [20.3]. EX2001, ¶94.

As to Montalvo, the Petition asserts that it discloses “minimum demand reduction requirements”—a term not used in Montalvo—but references only the disclosure in Paragraph [0022] that “ISOs, utility companies and/or ECSPs typically require that an end user have the *capability* of reducing at least about 100 KW-200KW demand during a DR event” in support. Pet., 29. But Montalvo does not provide any details for what this “typically” required “capability” actually requires of an end user. Indeed, the Petition acknowledges that “Montalvo does not provide sample agreement terms citing specific tariffs, for example.” Pet., 14. And again,

rather than disclose required power usage levels, much less the claimed minimum power thresholds, Montalvo explains that participation in its DR Agreements is *optional* by repeatedly emphasizing that its system permits end users (i.e., loads) to “partially or fully opt out of a DR event.” EX1004, [0070], [0085], [0137]-[0138]; EX2001, ¶95.

In light of Montalvo's silence on what a DR Agreement actually requires of a load or an end user, the Petition next asserts that “APC-Tariff's teaching combined with Montalvo's further renders obvious requiring a minimum amount of power consumption corresponding to the promised curtailment amount,” which it equates to the claimed minimum power thresholds. Pet., 14. In particular, the Petition points to the “PSEDR capacity” amount as purportedly disclosing minimum power thresholds. But the APC-Tariff does not cure the shortcomings of Montalvo and does not disclose “a set of minimum power thresholds” that are each “a minimum amount of power a load must use during an associated time interval,” according to the Petition's proposed construction (Pet., 11). EX2001, ¶ 96.

Significantly, the Petition does not address or discuss the actual requirements of the APC-Tariff's PSEDR program or how it determines compliance with the PSEDR program. This is unsurprising because as discussed above, the APC-Tariff's PSEDR capacity is a value that is used to determine a *maximum load level* for a

customer during a curtailment event under both the Guaranteed Load Drop (GLD) and Firm Service Level (FSL) calculation methods for determining compliance with the PSEDR program. *Supra*, Secs. III.B, VI.D; EX2001, ¶¶65-77, 97-98. Under GLD method, a load need only operate at or below the GLD amount during a curtailment event. *Supra*, Secs. III.B, VI.D; EX2001, ¶¶67-73, 97. And the APC-Tariff is explicit that under the FSL method, “[i]f a customer is operating at or below their designated FSL during an event, it will be understood that they have no PSEDR capacity available with which to comply and will not be charged a non-compliance penalty.” EX1005, 223; *supra*, Secs. III.B, VI.D; EX2001, ¶¶74-75, 99.

The APC-Tariff never requires a participant in the PSEDR program to use at least a minimum amount of power at any time, much less before a curtailment or DR event occurs, as in the systems and methods claimed in the '433 Patent. *Supra*, Secs. III.B, VI.D; EX2001, ¶¶76, 100. Rather, the APC-Tariff only requires that during a curtailment or DR event, a load ensure that it is operating below a certain maximum level.

Accordingly, whether taken alone or in combination, the asserted references do not disclose or suggest “a set of minimum power thresholds” where each “minimum power threshold” is construed as “a minimum amount of power a load

must use during an associated time interval,” according to the Petition’s proposed construction (Pet., 11). EX2001, ¶¶93-101.

For at least the foregoing reasons, Ground 1 of the Petition fails because the Montalvo reference does not disclose or suggest Element [1.2.2], [17.3], or [20.3].

C. MONTALVO COMBINED WITH APC-TARIFF DOES NOT DISCLOSE ELEMENTS [1.2.3]-[1.2.4], [17.4]-[17.5], [20.4]-[20.5]

Contrary to the Petition’s allegations (Pet., 32-35), Montalvo combined with APC-Tariff does not disclose or suggest Elements [1.2.3], [17.4], or [20.4]. EX2001, ¶¶102-108. And Montalvo does not render obvious Elements [1.2.4], [17.5], or [20.5]. EX2001, ¶¶102-108.

As an initial matter, as discussed above with regard to Elements [1.2.1]-[1.2.2], [17.2]-[17.3], and [20.2]-[20.3], Montalvo alone or in combination with the APC-Tariff does not disclose the “power option agreement,” “the power option data,” or “minimum power thresholds” as used in the claims and with applied constructions proposed in the Petition. *Supra*, VIII.A-B. Accordingly, for at least these same reasons, the limitations of Elements [1.2.3], [17.4], and [20.4], which require determining “a performance strategy for the set of computing systems based on a combination of *at least a portion of the power option data* and at least one condition in the set of conditions” (emphasis added), are also not met by Montalvo alone or in combination with the APC-Tariff. EX2001, ¶104.

Moreover, the Petition fundamentally misunderstands the claimed “performance strategy,” which as claimed “comprises a power consumption target for the set of computing systems for each time interval in the set of time intervals, wherein each power consumption target is equal to or greater than the minimum power threshold associated with each time interval.” Elements [1.23]-[1.2.4]. Thus, the claimed performance strategy includes a strategy for achieving power consumption targets that meet or exceed the minimum power thresholds. Regarding Elements [1.2.3], [17.4], and [20.4], however, the Petition specifically asserts that Montalvo’s “one or more DR actions” are the claimed performance strategy. Pet., 33. This is fundamentally wrong because Montalvo explains that a DR action is “[a]n action taken to implement demand load *reduction* at an end user.” EX1004, [0054]. Thus, Montalvo’s DR actions, which seek to reduce power consumption, do not comprise a strategy to achieving power consumption targets that meet or exceed minimum power thresholds for specified time intervals. EX2001, ¶105.

The Petition also inconsistently switches its position on the “performance strategy.” Later in the Petition, addressing Element [1.2.4], [17.5], and [20.5] the Petition asserts that the “power consumption target” is a “commitment for the minimum amount of power the end user will use in order to curtail the promised amount.” Pet., 35-36. Even under this different interpretation, however, the Petition

fails. Contrary to the Petition's assertion that based on Montalvo combined with APC-Tariff "[i]t would have been obvious to a POSA that the minimum demand requirements imposed for an end user to enter into a DR agreement corresponds to a commitment for the minimum amount of power the end user will use in order to curtail the promised amount" (Pet., 35-36), there is simply no disclosure or suggestion in Montalvo or the APC-Tariff for such a commitment. *Supra*, Secs. III.A-B, VI.A-B, VI.D, VIII.B; EX2001, ¶106.

Such a commitment also runs counter to Montalvo's flexible DR system that is designed to minimize the impact of demand reduction actions on end users and to permit end users to opt out of participating in DR events. *Supra*, Secs. III.A, VI.A-B, VII. Furthermore, such a commitment is not taught by the APC-Tariff's PSEDR capacity, which is a value that is used to determine a ***maximum load level*** for a customer during a curtailment event under both the GLD and FSL calculation methods. *Supra*, Secs. III.B, VI.D; EX2001, ¶107. As discussed above, the APC-Tariff does not impose minimum power consumption requirements on a load at any time, much less before a curtailment or DR event occurs. It only requires that a load use less than a maximum load level during a curtailment event, and that maximum load level is determined by comparing historical load values against the PSEDR

capacity value (GLD for GLD method, ACD for FSL method). *Supra*, Secs. III.B, VI.D; EX2001, ¶¶107-108.

For at least the foregoing reasons, Ground 1 of the Petition fails because the Montalvo combined with APC-Tariff does not disclose or render obvious Elements [1.2.3]-[1.2.4], [17.4]-[17.5], or [20.4]-[20.5]; EX2001, ¶¶104-108.

D. MONTALVO DOES NOT RENDER OBVIOUS ELEMENTS [1.2.5], [17.6], [20.6]

Contrary to the Petition's allegations (Pet., 37-39), Montalvo does not render obvious Elements [1.2.5], [17.6], or [20.6]. EX2001, ¶¶109-117. In context, Elements [1.2.3]-[1.2.5] together disclose (and Elements [17.4]-[17.6] and [20.4]-[20.6] have substantially similar scope):

[1.2.3] responsive to receiving the power option data, determine a performance strategy for the set of computing systems based on a combination of at least a portion of the power option data and at least one condition in the set of conditions, wherein the performance strategy comprises a power consumption target for the set of computing systems for each time interval in the set of time intervals,

[1.2.4] wherein each power consumption target is equal to or greater than the minimum power threshold associated with each time interval; and

[1.2.5] provide instructions to the set of computing systems to perform one or more computational operations based on the performance strategy.

Elements [1.2.5], [17.6], and [20.6] require that instructions be provided to the set of computing systems based on the performance strategy, wherein the performance strategy requires that each power consumption target for the set of computing systems is equal to or greater than the minimum power threshold associated with each time interval. As described in the '433 Patent, this relates directly to ensuring that the computing system load is operating at a level at least sufficiently large to respond to a curtailment event during a specific time interval. *See, e.g.*, EX1001, 43:46-44:16, 45:5-21. The Petition correspondingly describes this as “ensuring sufficient load for reduction.” Pet., 38. Importantly, however, Montalvo at best teaches only *sending instructions to reduce end user loads* (e.g., during curtailment or at other times). Montalvo does not teach or disclose sending instructions to maintain end user loads at or above a minimum power threshold. Tellingly, the Petition likewise fails to identify anywhere in Montalvo that discloses the instructions contextually required in Element [1.2.5]. EX2001, ¶¶110-112.

The Petition alleges only that:

“Montalvo teaches the DR server 14 determining a “performance strategy” (the DR actions to be taken, and corresponding commitment to consume load

to be able to take those DR actions, such as for day-ahead and/or day-of events, see EX1004, ¶¶[0015]-[0016]). Montalvo further teaches that the DR server 14, after generating the DR actions to take, ***generates “demand reduction action signals to be transmitted by the communications device 108 ... to ... a DR client 16*** to provide for control operation of appliances at an end user... ***during the course of a DR event.”***

Pet., 37 (emphasis added).

The Petition then incorrectly alleges that Montalvo discloses providing these signals for “ensuring sufficient load for reduction.” Pet., 38-39 (citing EX1004, ¶[0077], ¶[0087], ¶[0124], Figure 4, and ¶[0126]). However, the portions of Montalvo on which the Petition relies for these assertions do not teach or suggest providing instructions to perform the claimed performance strategy for maintaining power consumption at or above minimum power thresholds. Montalvo Paragraph [0077] specifically discloses only that “the instructions 104 may include instructions that the processor 100 may execute to generate ***demand reduction action signals*** to be transmitted by the communications device 108.” Montalvo explicitly defines a Demand Reduction Action as “[a]n action taken to ***implement demand load reduction at an end user***, in accordance with a DR event and the provisions of a DR Agreement, or alternatively at a time other than during a DR event.” EX1004,

[0054]. Thus, the Montalvo instructions in Paragraph [0077] explicitly relate only to instructions to reduce load, not instructions causing the load to operate at or above a minimum power threshold (e.g., prior to a load curtailment). EX2001, ¶¶113-114.

Likewise, Montalvo Paragraph [0087] specifically discloses only: “instructions [of the DR client 16] that the processor 130 may execute to process data included in *demand reduction* action signals received from the DR server.” EX1004, [0087]. Montalvo Paragraph [0124] also specifically discloses only that, “the DR client 16 may generate ... control signals, based on the *demand reduction action signal* received from the DR server 14, *to implement the demand reduction action(s)* indicated by the received demand reduction signal.” Similarly, Montalvo Figure 4 specifically discloses that INSTRUCTIONS 134 include only, in relevant part, “PROCESS **DEMAND REDUCTION SIGNALS**.” And again, Montalvo Paragraph [0126] specifically discloses only that, “[c]ontrol signals are transmitted ... to implement the determined *demand reduction action(s)*, and thus *reduce KW demand during a DR event*.”

The Petition's total arguments regarding Elements [1.2.5], [17.6], and [20.6] further include only the following additional citation: EX1004, ¶¶ [0116]-[0120]. Pet., 39. Each of those paragraphs is likewise explicitly directed to demand reduction actions only. EX2001, ¶¶115-116.

Because every Montalvo instruction and signal relied on in the Petition (i.e., in Paragraphs [0077], [0087], [0124], Figure 4, and Paragraph [0126]) explicitly relates only to instructions to reduce load, and not instructions to cause the load to operate at or above a minimum power threshold (e.g., prior to a load curtailment), the Petition has failed to show that “Montalvo renders obvious the control system configured to provide instructions to the set of computing systems to perform one or more computational operations based on the performance strategy,” as alleged. Pet., 37; EX2001, ¶¶110-117. Montalvo has no disclosure of any mechanism or capability for providing instructions to its system to operate at or above a minimum power threshold, and thus does not render Elements [1.2.5], [17.6], or [20.6] obvious.

IX. GROUNDS 2-3 FAIL FOR SAME REASONS AS GROUND 1

Grounds 2-3, which rely on the same combination of Montalvo and the APC-Tariff as Ground 1, similarly fail for at least the same reasons articulated above. *Supra*, Secs. VI-VIII.

X. THE CARVALLO DECLARATION (EX1003) IS LARGELY A VERBATIM COPY OF PETITION THAT PROVIDES INSUFFICIENT EVIDENCE TO SUPPORT OBVIOUSNESS

As noted above, the Carvallo Declaration is largely a *verbatim* copy of the text from the Petition. For example, the Carvallo Declaration's analysis of Elements

[1.2.1]-[1.2.4], [17.2]-[17.5], and [20.2]-[20.5], which are contested above, is essentially a *verbatim* copy (with a few minor variations) of the Petition's assertions regarding those same Elements. Compare EX1003, ¶¶99-123 with Pet. 25-36; EX2002, 78-92 (comparison of Petition against Carvallo Declaration).¹ The Petition makes several conclusory statements about the teachings of Montalvo and the APC-Tariff meeting these Elements, the purported combination of these references, and a POSITA's opinion regarding these allegations, which the Carvallo Declaration repeats, in most instances, with no additional supporting explanation, analysis, or evidence. And where the Carvallo Declaration deviates from the *verbatim* text of the Petition, those differences amount to either non-substantive differences or additional unsupported and conclusory statements. Compare, e.g., Pet. 31 with

¹ EX2002 is a comparison of the Petition against the Carvallo Declaration (i.e., Corrected EX1003), in which the Petition is treated as the original document and the Carvallo Declaration is treated as the revised document. Per the Legend shown on page 157 of EX2002, text that appears in the Carvallo Declaration that does not appear in the Petition is shown in blue, text that appears in the Petition but not in the Carvallo Declaration is shown in red, and text that appears in both the Petition and Carvallo Declaration but in different locations is shown in green. See EX2002, 157.

EX1003, ¶108. As discussed above, the Petition does not sufficiently support many of its allegations for these Elements (*supra*, Sec. VIII), and the Carvallo Declaration adds nothing because it is a nearly *verbatim* copy of the Petition.

Additionally, while other portions of the Carvallo Declaration do deviate more substantially from the direct text of the Petition, those portions, in general, merely restate the same points being made in the Petition without additional substantive supporting evidence or analysis. *Compare, e.g.*, Pet., 12-16 with EX1003, ¶¶74-82.

Like the declaration in *Xerox v. Bytemark* (IPR2022-00624) (precedential), the Carvallo Declaration “merely repeats, *verbatim*, the conclusory assertions for which it is offered to support” and “does not cite to any additional supporting evidence or provide any technical reasoning to support [its] statement.” *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (PTAB Aug. 24, 2022) (precedential). As in *Xerox*, the Carvallo Declaration is “conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight.” *Id.* (citing 37 C.F.R. § 42.65(a); *Upjohn Co. v. Mova Pharm. Corp.*, 225 F.3d 1306, 1311 (Fed. Cir. 2000); *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 138 (Fed. Cir. 1986)).

Furthermore, as with the declaration in *Xerox*, this largely *verbatim* copying in the Carvallo Declaration “is particularly problematic” because the “expert

testimony is offered not simply to provide a motivation to combine prior-art teachings, *but rather to supply a limitation missing from the prior art.*” *Id.*, 16 (citing *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007); *Arendi S.A.R.L. v. Apply, Inc.*, 832 F.3d 1355, 1361–62 (Fed. Cir. 2016)) (emphasis added). The Carvallo Declaration *verbatim* copies the conclusory statements from the Petition regarding several missing elements in independent claims 1, 17, and 20, which are not “unusually simple” with “technology [that] is particularly straightforward.” *Id.*; Pet. 25-36; EX1003, ¶¶99-123.

Accordingly, the Petition should be denied institution because Grounds 1-3 additionally fail because they rely upon conclusory assertions that are not supported by sufficient evidence with the Carvallo Declaration.

XI. THE PETITION FAILS TO ESTABLISH PUBLIC ACCESSIBILITY OF THE APC-TARIFF REFERENCE

The Petition has not carried its burden to establish, with particularity, that the APC-Tariff was publicly accessible as of the publication date alleged in the Petition. In particular, the supporting evidence of public availability presented by the Petition, at best, provides a possibility and probability of public accessibility. However, this is not sufficient for the Petition to carry its burden to demonstrate public accessibility with particularity.

Under the precedential *Hulu* standard, “[t]here is no presumption in favor of finding a reference to be a ‘printed publication’” and “the burden is on the petitioner” to sufficiently establish the public accessibility for a reference. *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 16 (PTAB Dec. 20, 2019) (precedential). *Hulu* further requires that, “at the institution stage, the petition must identify, with particularity, evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent and therefore that there is a reasonable likelihood that it qualifies as a printed publication.” *Id.*, 13.

The Petition alleges that the APC-Tariff (EX1003) was publicly accessible as of January 14, 2015. Pet., 7-8. However, the Petition does not present any supporting evidence of the *specific* APC-Tariff document being published or otherwise publicly accessible on the alleged publication date. Instead, the supporting documentation presented in the Petition, the majority of which is dated *before* the alleged publication date, supports the existence of the case number PUE-2014-00026 (corresponding to the APC-Tariff, EX1005), but not the public availability of the *specific* APC-Tariff document on the alleged publication date. See, e.g., EX1016, 1 (dated Dec. 1, 2014); EX1017, 2 (dated Sep. 8, 2014); EX1018, 7 (dated May 13, 2014); EX1033 (dated July 4, 2014).

While the Final Order for PUE-2014-00026 indicates the “Company shall forthwith file revised tariffs . . . with the Clerk of the Commission” and that “[t]he Clerk of the Commission shall retain such filing for public inspection in person and on the Commission’s website,” there is no evidence to demonstrate that this actually occurred. EX1019, 47. Instead, the document the Petition submitted from the “Clerk of Commission,” which appears to be a webpage, generically states that “[*m*]ost *filings* are made available within 24-28 hours of filing.” EX1032, 1 (emphasis added). There is no evidence regarding what “most filings” means, and this assertion would be technically true if only slightly more than 50% of filings were made available in that time frame. Moreover, there is no indication of how reliable this assertion is or how it was determined. There is no evidence to indicate whether this statement even applies to the APC-Tariff or if it was instead handled in another way.

Furthermore, the Petition provides no explanation or supporting evidence to indicate whether any of the various dates that are printed on the APC-Tariff correspond to a date of public availability. For example, the APC-Tariff includes a first date on page 1 (Sept. 6, 2023), two more dates on page 2 (Jan. 14, 2014, and Jan. 14, 2015), and then two more dates on page 4 (Nov. 26, 2014, and Jan. 25, 2015). These multiple dates without any clear indicia of publication or other

supporting evidence are insufficient to establish public availability. *See Adam Agan Ltd. v. Bayer Cropscience LP*, PGR2022-00057, Paper 9, 31–32 (PTAB Feb. 13, 2023) (denying institution where reliance on a “dc.date.available” (sic) for a dissertation was insufficient “[w]ithout any additional evidence such as testimonial evidence from someone with knowledge about what this electronic record means in terms of the public accessibility of the reference”).

Accordingly, the Petition has not demonstrated with particularity that the specific APC-Tariff document was actually publicly available as of the purported publication date, and the Board should deny institution of the Petition.

XII. CONCLUSION

For at least the reasons articulated above, the Petition fails to establish a reasonable likelihood of success of prevailing on any of its obviousness challenges against claims 1-18 of the '433 Patent. Accordingly, the Board should deny institution of the Petition in IPR2023-01407.

Patent Owner does not concede any issues not addressed or raised in this Preliminary Response.

Respectfully submitted,

Date: December 20, 2023

/Christopher C. Hoff, Reg. No. 67,738/
Christopher C. Hoff, Reg. No. 67,738
Kurt W. Rohde, Reg. No. 62,923
Mark C. Nelson, Reg. No. 43,830
Adam M. Kaufmann, Reg. No. 66,276

BARNES & THORNBURG LLP
11 South Meridian Street
Indianapolis, Indiana 46204

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing
PATENT OWNER LANCIUM LLC'S PRELIMINARY RESPONSE TO
PETITION contains 13,455 words, which is less than the 14,000 word limit, as
determined by the word count feature of the word-processing system used to prepare
this paper.

/Christopher C. Hoff, Reg. No. 67,738/
Christopher C. Hoff
Reg. No. 67,738

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on December 20, 2023, I caused a true and correct copy of the foregoing PATENT OWNER LANCIUM LLC'S PRELIMINARY RESPONSE TO PETITION, together with all exhibits filed therewith, to be served via e-mail on the following counsel of record for Petitioners:

Rodney Miller, rodney.miller@wbd-us.com

Preston Heard, preston.heard@wbd-us.com

James Dority, james.dority@wbd-us.com

David McCombs, david.mccombs.ipr@haynesboone.com

Adam Fowles, adam.fowles.ipr@haynesboone.com

/Christopher C. Hoff, Reg. No. 67,738/
Christopher C. Hoff
Reg. No. 67,738