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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT B. USELTON

Appeal 2018-000386
Application 13/269,246
Technology Center 2800

Before TERRY J. OWENS, LINDA M. GAUDETTE, and
SHELDON M. McGEE, *Administrative Patent Judges*.

McGEE, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ seeks our review of the Examiner's decision to reject claims 1–3, 9–12, 18–24, and 29–35 under 35 U.S.C. § 101.

We have jurisdiction over this appeal. 35 U.S.C. § 6.

¹ Appellant identifies the real party in interest as Lennox Industries, Inc. App. Br. 1.

BACKGROUND

According to the disclosure, renewable energy systems, such as those designed to capture solar or wind energy, “typically connect straight back to the electrical distribution panel near the electrical service entrance and kilowatt-hr meter.” Spec. ¶ 2. In such installations, a Renewable Energy Credit (REC) meter, also known as a “revenue grade meter,” is also “installed and captures the amount of renewable energy generated” by the system. *Id.* Reading the REC meter concurrently with a “kilowatt-hr meter” is not problematic if such meters are co-located, but is inconvenient if the meters are separated by distance, or, in larger systems requiring multiple REC meters, the meters are widely distributed. *Id.* ¶ 3.

The invention is said to improve upon the state of the art by providing “a distributed energy metering module, a method of measuring distributed renewable energy[,], and a distributed renewable energy system.” *Id.* ¶¶ 3–4. The claimed module, method, and system are purported to “provide a revenue grade renewable energy metering capability for a population or collection of distributed power inverters that generate renewable energy output power and provide corresponding output energy data thereby qualifying for electric utility Performance Based Incentives (PBIs).” *Id.* ¶ 17. Such metering “eliminates a need for a separate, dedicated, high-accuracy REC kilowatt-hour meter.” *Id.*

Independent claim 1, directed to a distributed energy metering module, is illustrative of the claimed subject matter and is copied below with key limitations emphasized:

1. A distributed energy metering module, comprising:
a data aggregating unit configured to receive output energy data from a population of distributed power inverters

connected to an array of renewable energy generators, the data aggregating unit employing an input power data connection coupled to the population of distributed power inverters through associated branch circuit distribution wiring of an electrical service entrance and corresponding renewable distribution energy wiring;

a data processing unit configured to *calculate a revenue grade output energy* for the population of distributed power inverters *based on a tolerance probability characteristic of the output energy data*; and

a display unit operable to display the revenue grade output energy; and

wherein *the tolerance probability characteristic of an accuracy of the output energy data* corresponds to applying the Central Limit Theorem to predict a mean and standard deviation of the accuracy of the output energy data from 30 or more distributed power inverters.

App. Br. 13 (emphases added).

OPINION

On appeal, the Examiner maintains the rejection of claims 1–3, 9–12, 18–24, and 29–35 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Ans. 2–15; Final 2–5.

Claims 1–3, 9–12, 18–24, 30, 33, and 34

We begin with claim construction. Each of independent claims 1, 9, and 21 requires the calculation of revenue grade energy in the data processing unit to be “based on a tolerance probability characteristic of the output energy.” App. Br. 13–15. These independent claims then go on to recite – in a “wherein” clause – a mathematical calculation corresponding to “the tolerance probability characteristic *of an accuracy* of the output energy data.” *Id.* (emphasis added). There is no antecedent basis in independent claims 1, 9, and 21, however, for this phrase. Thus, it is unclear what “the

tolerance probability characteristic of an accuracy of the output energy data” recited in the wherein clauses of claims 1, 9, and 21 has to do with the other limitations recited in these claims.

Under these circumstances, independent claims 1, 9, and 21 fail to specifically recite how the revenue grade output energy is calculated, i.e., what precise mathematical calculation the “tolerance probability characteristic of the output energy data” is based upon. As such, claims 1, 9, and 21 do not reasonably apprise the skilled artisan of their scope.

Thus, we determine that claims 1, 9, and 21 are indefinite under 35 U.S.C. § 112, second paragraph, and newly reject these claims, as well as claims 2, 3, 10–12, 18–20, 22–24, 30, 33, and 34, dependent therefrom.

Because claims 1–3, 9–12, 18–24, 30, 33, and 34 are indefinite, we are unable to reach the Examiner’s subject matter eligibility rejection under 35 U.S.C. § 101 for these claims.

Claims 29, 31, 32, and 35

Claim 29 recites:

A distributed renewable energy system, comprising:

 a renewable energy generating module including an array of renewable energy generators connected to a population of distributed power inverters; and

 a distributed energy metering module, including:

 a data aggregating unit that receives output energy data from the population of distributed power inverters, and

 a data processing unit that *calculates a revenue grade output energy* from the output energy data *based on a tolerance probability characteristic* of the output energy data;

 wherein the *tolerance probability characteristic of the output energy data for a summation sample set size of at least 250 distributed power inverters* corresponds to a probability

distribution having about a 95 percent confidence level of not over reporting the revenue grade output energy by more than [sic, than] 0.2 percent based on 99 percent of the population of distributed power inverters having an accuracy of 5 percent of nominal.

App. Br. 15–16 (emphases added).

We determine claim 29 is also indefinite under 35 U.S.C. § 112, second paragraph, but for different reasons than those provided for claims 1, 9, and 21. Namely, the “wherein” clause only provides “the tolerance probability characteristic of the output energy for a summation sample size of at least 250 distributed power inverters.” App. Br. 16. The body of the claim, however, does not require the presence of “at least 250 distributed power inverters,” but rather recites a “population” of such inverters. *Id.* at 15. Thus, in the event that there are less than 250 distributed power inverters in the energy system recited in claim 29, the claim fails to specifically recite what precise mathematical calculation the “tolerance probability characteristic of the output energy data” is based upon.

Furthermore, even assuming that at least 250 distributed power inverters were required in the energy system, it is not clear what mathematical calculation is encompassed by the language “a probability distribution having about a 95 percent confidence level of not over reporting the revenue grade output energy by more than [n] 0.2 percent based on 99 percent of the population of distributed power inverters having an accuracy of 5 percent of nominal” as recited in claim 29. Based on the discussion in the Specification, having approximately 250 distributed power inverters alone is sufficient to “achieve a 95 percent probability that the system does not over report by more than . . . 0.2 percent” the reported energy output. Spec. ¶ 51 (explaining “[f]or larger populations of distributed power

inverters, there is a sample size [i.e., ‘around 250’] for which it is no longer necessary to derate (i.e., under report) the reported energy output”). *See also id.* ¶ 52 (“At a sample size of 250, the probability of meeting the revenue grade requirement approaches 95 percent.”).

Thus, we determine that independent claim 29 is indefinite under 35 U.S.C. § 112, second paragraph, and newly reject this claim, as well as claims 31, 32, and 35, dependent therefrom.

Because claims 29, 31, 32, and 35 are indefinite, we are unable to reach the Examiner’s subject matter eligibility rejection under 35 U.S.C. § 101 for these claims.

DECISION

We newly reject claims 1–3, 9–12, 18–24, and 29–35 under 35 U.S.C. § 112, second paragraph as being indefinite.

Because these claims are indefinite, we are unable to reach the 35 U.S.C. § 101 subject matter eligibility rejection.

37 C.F.R. § 41.50(b)

TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) also provides:

When the Board enters such a non-final decision, the appellant, **within two months** from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.