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**Datasheet for the decision
of 3 February 2023**

Case Number: T 2831/19 - 3.5.02

Application Number: 13720894.8

Publication Number: 2867970

IPC: H02J4/00, H02J3/38, H02J3/18

Language of the proceedings: EN

Title of invention:

Method and controller for continuously operating a plurality of electric energy generating machines during a high voltage condition

Patent Proprietor:

Siemens Gamesa Renewable Energy A/S

Opponent:

Vestas Wind Systems A/S

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (no)



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Case Number: T 2831/19 - 3.5.02

D E C I S I O N
of Technical Board of Appeal 3.5.02
of 3 February 2023

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
16 August 2019 concerning maintenance of the
European Patent No. 2867970 in amended form.**

Composition of the Board:

Chairman R. Lord
Members: C.D. Vassoille
R. Cramer

Summary of Facts and Submissions

- I. The patent proprietor and the opponent filed appeals against the interlocutory decision of the opposition division concerning maintenance of the European patent no. 2 867 970 in amended form on the basis of auxiliary request 1 filed during the oral proceedings.
- II. The following document is relevant for the present decision:
- D5: US 2012/0035774 A1
- III. In the decision under appeal, the opposition division *inter alia* came to the conclusion that auxiliary request 1 fulfilled the requirements of the EPC and in particular, that the subject-matter of claim 1 involved an inventive step in view of document D5.
- IV. The parties were summoned to oral proceedings. In a communication under Article 15(1) RPBA 2020 annexed to the summons, the board set out their preliminary observations on the appeal, concluding *inter alia* that the question whether the subject-matter of claim 1 of the patent proprietor's fifth auxiliary request, corresponding to the auxiliary request 1 underlying the decision under appeal, involved an inventive step might become a point for discussion at the oral proceedings.
- V. Oral proceedings before the board took place on 3 February 2023.

At the end of the oral proceedings, the patent proprietor withdrew their appeal, thus acquiring the status of respondent to the opponent's appeal. They

also withdrew their main request and auxiliary requests 1 to 4, so that their final request was that the appeal of the opponent be dismissed.

The appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

VI. Claim 1 of the respondent's sole request, which corresponds to auxiliary request 1 found by the opposition division to fulfil the requirements of the EPC, has the following wording:

"A method (100) for continuously operating a plurality of electric energy generating machines during a high voltage condition at a point of common coupling of the plurality of electric energy generating machines, the method comprising the following steps in a chronological order of:

sensing (102) a voltage level at the point of common coupling exceeding a permitted voltage level;

curtailing (104) an active power output of the plurality of electric energy generating machines to increase a reactive capability of the plurality of electric energy generating machines;

establishing (106) a set point of an electric quantity being present at the point of common coupling ensuring that a reactive electric component providable by the plurality of electric energy generating machines is increased; and

controlling (108) at least one of the plurality of electric energy generating machines based on the

established set point of the electric quantity to at least partially remedy the high voltage condition at the point of common coupling."

- VII. The arguments of the appellant, as far as they are relevant for the present decision, can be summarised as follows:

The subject-matter of claim 1 of the respondent's only request did not involve an inventive step in view of document D5. The only distinguishing feature between the subject-matter of claim 1 and document D5 was the chronological order of the claimed method steps.

Curtailing an active power output before establishing a set point of an electric quantity, as defined in claim 1, did not have a technical effect. In particular, there was no connection between the two method steps to imply that curtailing the active power would result in the establishment of a different set point. Rather, the order of these method steps was arbitrary and consequently did not involve an inventive step in the sense of Article 56 EPC.

- VIII. The arguments of the respondent, as far as they are relevant for the present decision, can be summarised as follows:

The subject-matter of claim 1 of the request found to be allowable by the opposition division involved an inventive step in view of document D5. Curtailing the active power output before establishing the set point, as defined in claim 1, resulted in the technical effect of a more effective control. The reason for this was that controlling a reactive power component during a high voltage condition was more efficient than

controlling an active component. Changing the sequence of the method steps in question led to the establishment of a different set point. Furthermore, there was a clear dependency between the two method steps in question. In particular, establishing the set point took account of the curtailed active power output and the providable reactive power. Changing the order of the method steps in question thus was not arbitrary, since a technical effect arose from the claimed chronological order of the steps.

Reasons for the Decision

1. The appeal is admissible.
2. *Respondent's request found to be allowable by the opposition division - Inventive step (Article 56 EPC)*
 - 2.1 The subject-matter of claim 1 of the request found to be allowable by the opposition division does not involve an inventive step under Article 56 EPC in view of document D5.
 - 2.2 Claim 1 of the request under consideration differs from claim 1 of the patent as granted only in that it specifies that the method comprises the claimed steps in a chronological order.

Consequently, according to claim 1 under consideration, the active power output of the plurality of electric energy generating machines are first curtailed to increase a reactive capability of the plurality of electric energy generating machines and only after that, a set point of an electric quantity being present

at the point of common coupling is established, ensuring that a reactive electric component providable by the plurality of electric energy generating machines is increased.

- 2.3 It was undisputed that document D5 was the prior art closest to the subject-matter of claim 1.
- 2.4 The decision under appeal establishes that document D5 discloses all features of D5 except the specific order of the method steps. As the patent proprietor has withdrawn their appeal, this finding of the opposition division is considered to be no longer contested by the proprietor/respondent.
- 2.5 There was agreement between the parties that document D5 does not disclose the claimed specific order of the method steps, in particular not first curtailing the active power output and then establishing a set point of an electric quantity as defined in claim 1.
- 2.6 In the decision under appeal, the opposition division held that document D5 disclosed first establishing the set point and then curtailing the active power. They concluded that the person skilled in the art would have to change the order given in D5 in order to arrive at the claimed subject-matter and that there was no document on file that provided a motivation to the skilled person to reverse the order of the two steps. In light of this, an inventive step was acknowledged (see point 2.4 of the reasons for the decision).
- 2.7 Given that the opposition division considered the specific order of the method steps according to claim 1 to involve an inventive step, it appears that they must have attributed a technical effect to the claimed order

of method steps. The opposition division's reasoning, however, does not contain any consideration of a potential technical effect of the distinguishing feature (i.e. the specific order of first curtailing the active power output and then establishing a set point).

- 2.8 The board is not convinced that the specific sequence of steps of first curtailing the active power output and then establishing a set point results in a technical effect which could in any way be regarded as contributing to a technical problem to be solved.
- 2.9 The respondent essentially argued that establishing the set point before curtailing the active power output would have an impact on the establishment of the set point and in particular, would result in a different set point than if curtailing the active power output were performed first. In particular, given that controlling the reactive power was more efficient than controlling the active power, the overall method was more efficient with the claimed chronological order of the method steps. Furthermore, the respondent saw a connection between the two steps in question such that the curtailment of the active power output first would have the advantageous technical effect on the step of establishing the set point of an electrical component at the point of common coupling.
- 2.10 The board is not convinced by these arguments. As far as the respondent argued that the curtailment of the active power output prior to the establishment of the set point had a technical effect compared to the establishment of the set point before the curtailment of the active power output, the board notes that a corresponding connection between the two steps is not

apparent from the wording of the claim. The respondent's explanations with reference to dependent claim 7 of the patent under appeal are not relevant against this background (see the board's observations under point 2.15 below).

2.11 In particular, there is nothing in claim 1 that implies that the step of establishing the set point took account of or otherwise considered the curtailed active power and the providable reactive power, as was argued by the respondent. For the sake of clarity, the features in question are again recited below:

(1) curtailing an active power output of the plurality of electric energy generating machines to increase a reactive capability of the plurality of electric energy generating machines

(2) establishing a set point of an electric quantity being present at the point of common coupling ensuring that a reactive electric component providable by the plurality of electric energy generating machines is increased

2.12 Consequently, the step of establishing a set point of an electric quantity being present at the point of common coupling is functionally defined to be such that an increase in a reactive electric component providable by the plurality of electric energy generating machines is to be ensured. This feature, however, does not in any way imply a dependency on the specific amount of curtailed active power or the resulting increased reactive power capability of the electric energy generating machines.

2.13 The board acknowledges that, considering the wording of claim 1, curtailing the active power output serves to increase the reactive capability of the plurality of electric energy generating machines. However, the board is not convinced that this in any way influences the establishment of a set point within the meaning of claim 1.

2.14 The board is also not convinced by the respondent's further argument that there is a link between the curtailing of the active power output and the demand on the grid side, which in turn had an influence on the set point establishment. Even if there were a connection between the curtailing of the active power output and possible grid demand, a corresponding feature is not apparent from claim 1, nor has the respondent convincingly shown how this connection would require the particular sequence of first curtailing the active power output and then establishing the set point in order to achieve the claimed technical effect. In particular, the set point establishing step in claim 1 is neither explicitly nor implicitly related to any grid-side requirements that would explain a more efficient control by the claimed sequence of process steps. More specifically, it is not apparent either from the wording of claim 1 or from the description that a corresponding dependency exists indirectly by the fact that the step of curtailing an active power output is performed first.

2.15 Claim 7, which was referred to by the respondent, also does not contain any information that would justify the existence of a technical effect of the specific order as claimed. Claim 7 specifies that the reactive current capability I_q is increased in accordance with a specific relation of I_q^{\max} or that the leading reactive

power capability is increased in accordance with a specific relation of Q_{\max} . The board does not see how a reactive power capability within the meaning of claim 7 could establish that the claimed technical effect of a more efficient control results from the fact that the step of establishing the set point occurs only after the step of curtailing the active power output.

2.16 In this context, the board points out again that the establishing step of claim 1 does not define anything more than that the set point of an electric quantity being present at the point of common coupling is established to ensure that a reactive electric component providable by the plurality of electric energy generating machines is increased. In particular, nothing in claim 1 implies that establishing the set point takes account of the curtailed active power and/or the reactive capability of the electric energy generating machines.

2.17 Finally, the board notes that even if the respondent was right in arguing that controlling the reactive component was more efficient than controlling an active component, it is not apparent how this could justify a corresponding technical effect resulting from the claimed specific order of first curtailing the active power output and subsequently establishing a set point. In this context, it is noted that the claimed step of controlling at least one of the plurality of electric energy generating machines based on the established set point undisputedly follows the steps of curtailing the active power output and establishing the set point of the corresponding controlling step.

2.18 In light of the above, the alleged technical effect of the specific order of steps is considered not to arise,

in particular not in light of the patent as a whole. Nor did the respondent provide convincing arguments as to why a more efficient control would result from the specific sequence of method steps according to claim 1. The board therefore considers the sequence to be arbitrary and the technical effect claimed by the respondent to be non-existent.

2.19 It follows that the specific order of steps does not contribute to the solution of a technical problem and thus cannot contribute to an inventive step. Consequently, the subject-matter of claim 1 does not involve an inventive step in view of document D5 within the meaning of Article 56 EPC.

3. *Result*

Given that the subject-matter of claim 1 of the respondent's sole request does not involve an inventive step, the board had to accede to the appellant's main request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



U. Bultmann

R. Lord

Decision electronically authenticated