Unified Patent Court
Einheitliches Patentgericht
Juridiction unifiée du brevet

**Copenhagen — Local Branch**
**UPC _CFI_560/2024**
**UPC _CFI_89/2025**

# Decision delivered by the Local Division of the Unified Patent Court in Copenhagen on 29 May 2026 concerning EP 4 238 202 B1

HEADNOTES:

An invention is sufficiently disclosed if the patent specification shows the skilled person at least one way – and in the case of functional features: one technical concept – of carrying out the claimed invention. The disclosure of one way of carrying out the invention is only sufficient if it allows the invention to be carried out across the entire scope claimed. More precisely, the disclosure shall enable a person skilled in the art to carry out the invention without undue burden across the full scope of protection.

KEYWORDS:

Counterclaim for revocation, person skilled in the art, inventive step, sufficiency of disclosure, novelty, infringement.

**Hybridgenerator ApS**

Nørrevang 15 Nørre Lyndelse 5792 Årslev, Denmark

(Solicitor Mikkel Kleis and European Patent Attorney Lasse Rosenlund Lauridsen) v

**HGSystem ApS**

Røjlevej 24, Nørre Søby, 5792 Årslev, Denmark

(Solicitor Allan Christensen, Solicitor Kenneth Kvistgaard-Aaholm, European Patent Attorney Jacob Karstad Meyland and European Patent Attorney Christian Espersen)

**Infotech Concept ApS**

Røjlevej 24, Nørre Søby, 5792 Årslev, Denmark

(Solicitor Allan Christensen, Solicitor Kenneth Kvistgaard-Aaholm, European Patent Attorney Jacob Karstad Meyland and European Patent Attorney Christian Espersen)

**Rune Eilertsen**

[redacted]

(Solicitor Allan Christensen, Solicitor Kenneth Kvistgaard-Aaholm, European Patent Attorney Jacob Karstad Meyland and European Patent Attorney Christian Espersen)

**The contested patent**

Patent No. EP 4 238 202 B1

**Patent holder**

Hybridgenerator ApS

**Judges**

The decision was delivered by the President of the Court, Peter Agergaard, the legally qualified judge Dr Stefan Schilling, the legally qualified judge Stefan Johansson and the technically qualified judge Dr Anders Hansson.

**Language of the proceedings**

Danish

**Date of the main hearing**

Monday 13 April 2026, 09.30–16.00.

**Case details**

The claimant, Hybridgenerator ApS, is a Danish private limited company incorporated on 16 March 2017. Hybridgenerator is engaged in the manufacture of generators for the production of electricity.

Customers use the generators, among other things, in connection with the construction of real estate, the installation or servicing of wind turbines and wind farms, etc. The generators are used, among other things, extensively to generate electricity for cranes used to build and service wind turbines. The market price for a generator is between DKK 800,000 and DKK 1,000,000 excluding VAT.

Rune Eilertsen (Defendant 3) was previously employed as director of Hybridgenerator ApS.

HGSystem ApS (Defendant 1) is a Danish company based in Ryslinge on Funen, founded in 2023. They design, develop and manufacture mobile hybrid generator systems and green mobile power units (Green Mobile Power Units). They focus on providing user-friendly and energy-saving solutions within the field of electric motors and generators. Rune Eilertsen is the managing director of the company.

InfoTech Concept ApS (Defendant 2) is a Danish limited liability company established on 25 May 2009. Rune Eilertsen (Defendant 3) is the founder and managing director of the company.

The patent in dispute relates to a mobile hybrid generator system for the supply of electrical power. Rune Eilertsen is named as the inventor.

The patent in dispute was granted on 14 August 2024. The patent in dispute was filed on 28 October 2021 with application number 21802306.7 and claims priority from a European patent application filed on 28 October 2020.

The notice of grant of the patent was published in the European Patent Bulletin of 14 August 2024. The patent holder is Hybridgenerator ApS.

The invention in the patent relates to a mobile hybrid generator system for supplying grid-like alternating current output, which can be controlled in such a way that a significantly reduced consumption of fossil fuel can be achieved – resulting in better quality of the electricity supplied, reduced energy consumption and significantly lower CO2 emissions.

On 13 May 2025, HGSystem ApS filed an opposition against the grant of the patent with the EPO. HGSystem ApS has requested the EPO to revoke the patent in its entirety pursuant to Article 101(2) EPC, first sentence. Hybridgenerator ApS has requested that the patent be maintained as granted.

The EPO issued a preliminary opinion on 2 January 2026. The Opposition Division's final decision is not yet available.

Hybridgenerator ApS contends that the contested products, the hybrid generators models MPU 1000 and MPU 2000, infringe Hybridgenerator ApS's patent rights, as there is a well-founded presumption that the contested products incorporate all the technical features of independent claim 1 of the patent.

Breakdown of claim 1 of the contested patent:

1.1 A mobile hybrid generator system for providing grid-like AC power output to a load at off-grid locations,

1.2 the hybrid generator system comprising a housing accommodating:

1.3 - a rechargeable electrical energy storage unit, such as a battery, configured to provide a DC power output,

1.4 - at least a first primary energy source, such as a combustion engine, for charging the rechargeable energy storage unit, and

1.5 - an inverter unit configured to convert the DC power output from the rechargeable energy storage unit into the grid-like AC power output, wherein the mobile hybrid generator is configured such that

1.6 1) the grid-like AC power output is provided only from the rechargeable energy storage unit via the inverter unit, and

1.7 2) the output from the primary energy source is used only to charge the rechargeable energy storage unit, Page 6 26373642.3

1.8 both during normal mode operation, having normal mode power requirements, and during peak power operation, having peak power requirements,

1.9 the mobile hybrid generator system characterised in that the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements.

**Claims:**

**UPC _CFI_560/2024: Infringement case**

**Hybridgenerator ApS** has made the following claims:

1. The defendants are to be prohibited, pursuant to Article 63(1) of the UPC Agreement, for as long as European patent No 4238202 is valid and within the territories where this patent has effect under the jurisdiction of the Unified Patent Court, from manufacturing, storing, importing, export, sell, market and use the hybrid generators models MPU 1000 and MPU 2000.

2. Pursuant to Article 63(2) of the UPC Agreement, the defendants shall be subject to periodic penalty payments in the event of a breach of the prohibitions issued in accordance with claims 1 and 2.

3. Pursuant to Article 69(1) of the UPC Agreement, the defendants shall bear the costs of the proceedings and the costs in Case No. ACT_47484/2024 UPC_CFI_492/2024, including reimbursement of Hybridgenerator ApS's legal costs and other expenses incurred by Hybridgenerator ApS.

**HGSystem ApS, Infotech Concept ApS and Rune Eilertsen** have made the following claims:

Dismissal of claims 1, 2 and 3 brought by Hybridgenerator.

Hybridgenerator is ordered to pay the costs of the proceedings, including the costs of the proceedings for the preservation of evidence (ACT_47484/2024 – UPC_CFI_492/2024 ("the proceedings for the preservation of evidence")), which, following the order of the Local Division of 3 March 2025 (ORD_10371/2025 in ACT_47484/2024 – UPC_CFI_492/2024) are deferred until the main proceedings, and the injunction proceedings (ACT_49120/2024 – UPC_CFI_501/2024 ("Injunction Proceedings")).

**UPC _CFI_89/2025: Counterclaim for invalidity:**

**HGSystem ApS, Infotech Concept ApS and Rune Eilertsen** have made the following claims:

Hybridgenerator's patent EP 4 238 202 B1 is declared invalid.

Hybridgenerator's alternative claims for the maintenance of patent EP 4 238 202 B1 in any of the proposed amended forms (see Annexes 86, 87, 88 and 89) are dismissed.

Hybridgenerator be ordered to pay the costs of the proceedings.

**Hybridgenerator ApS** has made the following claims:

Principally: dismissal of the defendant's claim for invalidation of EP 4 238 202 B1.

In the alternative to the principal claim, Hybridgenerator ApS submits the following claims in order of priority:

In the alternative 1: dismissal of the claim for revocation of EP 4 238 202 B1 in the amended form, as set out in Annex 86.

In the alternative 2: acquittal against upholding of EP 4 238 202 B1 in the the amended form, as set out in Annex 87.

In the alternative 3: acquittal against upholding of EP 4 238 202 B1 in the the amended form, as set out in Annex 88.

In the alternative 4: acquittal against upholding of EP 4 238 202 B1 in the the amended form, as set out in Annex 89.

**Key procedural steps**

On 16 August 2024, Hybridgenerator ApS filed an application with the UPC for the immediate preservation of evidence and inspection of premises without prior notice (UPC_CFI_492/2024).

On 28 August 2024, Hybridgenerator ApS filed an application with the UPC for a provisional injunction and seizure without prior notice (UPC_CFI_501/2024). On 26 January 2026, Hybridgenerator ApS announced that it was withdrawing its application for a provisional injunction and seizure.

On 26 August 2024, the Copenhagen Local Division of the Court issued an order for the preservation of evidence in accordance with Hybridgenerator ApS's application of 16 August 2024 concerning European patent No. 4 238 202 B1 for the immediate preservation of evidence and inspection of property without prior notice.

Hybridgenerator ApS was thus granted permission to immediately secure evidence demonstrating the existence and extent of infringements of the rights to European patent No. 4 238 202 B1 by gaining access to the address Røjlevej 24, Nørre Søby, 5792 Årslev, through the Bailiff's Court in Svendborg, Denmark, in order to:

- Inspect the hybrid generators models MPU 1000, MPU 2000 and MPU 3000 and prepare a detailed description of these products.
- Take stock of any inventory of the hybrid generators, models MPU 1000, MPU 2000 and MPU 3000.
- Copy IT systems, electronic storage media and physical material containing financial information and invoicing records,

- Copy email correspondence and other documents, including those relating to product development, manufacturing, import, any export, sales and marketing.

The Court appointed an IT expert to assist the Enforcement Court in carrying out the investigation, to prepare a report on the investigation and to send this report to the Court's local division in Copenhagen no later than 14 days after the preservation of evidence had been carried out.

The order further stated that if the defendants failed to comply with the conditions set out in the order, they could be subject to penalty payments payable to the Court.

The Court's order was enforced by the Bailiff's Court in Svendborg, Denmark, on 30 August 2024. The preservation of evidence was not completed, as access to the cloud-based solution and the data therein was lacking. Contrary to the Court's order, the defendant thus refused to disclose the username and password for the e-conomic accounting system and the defendant's email account. Furthermore, the defendant refused to disclose the relevant codes for the encrypted Apple laptop that was seized during the preservation of evidence. The independent IT expert was therefore also unable to access the contents of this computer.

Against this background, the Court ruled by order of 4 September 2024 that the defendants, jointly and severally, were to pay daily penalty payments of 5,000 euros to the Court until the defendants provided the Court with the username and password for the e-conomic accounting system-conomic and Microsoft 365, the username and password for the defendant's email account, and the relevant codes for the encrypted laptop seized during the preservation of evidence, so that the independent IT expert could gain access to it.

On 30 September 2024, the defendant requested, pursuant to Rule 197(3) of the Rules of Procedure, a review of the order for the preservation of evidence issued by the Court's local division in Copenhagen on 26 August 2024.

By order of 19 December 2024, the Local Division of the Court in Copenhagen ruled that the order of 26 August 2024 to grant Hybridgenerator ApS's application concerning European patent No 4 238 202 B1 for the immediate preservation of evidence and inspection of property without prior notice to the defendant, pursuant to Article 60 of the UPC Agreement and Rule 196 of the Rules of Procedure, should be upheld.

The preliminary report drawn up by the appointed independent IT expert was handed over to the representatives of the parties to the proceedings. The representatives were required to keep confidential any trade secrets and other confidential information that might come to their knowledge through this process.

The Court informed the parties on 15 January 2025 that the IT expert had gained access to the Apple computer, including the relevant codes, so that he could draw up a report on the preservation of evidence in this regard.
On 27 February 2025, the IT expert announced that the supplementary evidence preservation report, based on the agreed search terms, had been provisionally completed and would be sent to the court immediately thereafter. The IT expert further stated that he had now finished with the seized Apple computer, so that it could be returned.

Hybridgenerator ApS subsequently requested that all the secured CAD files be handed over.

Hybridgenerator ApS further requested the Court to commence collection of the determined penalty payments and requested that collection proceedings continue until the defendant had complied with the court's order.

The Copenhagen Local Division of the Court, sitting with a single judge, Presiding Judge Peter Juul Agergaard, pursuant to Rule 194(3) of the Rules of Procedure, issued an order on 3 March 2025 that the CAD files secured as evidence could be handed over to the representatives of Hybridgenerator ApS, and that
the representatives were obliged to keep secret any trade secrets and other confidential information that might come to their knowledge through this. The Court further ruled that, on the basis of the evidence available, the defendants could not be ordered to pay the periodic penalty payments set by the Court in its order of 4 September 2024, as the requested information had been handed over by the defendants.

Hybridgenerator ApS subsequently appealed to the Court of Appeal of the Unified Patent Court against that part of the Court's order which held that, on the basis of the evidence available, the defendant should not be ordered to pay the periodic penalty payments.

On 4 June 2025, the Court of Appeal issued a ruling setting aside that part of the decision of the Court's local division in Copenhagen which held that, on the basis of the evidence available, the defendant should not be ordered to pay the fixed periodic penalty payments. The Court of Appeal stated as grounds for this that the decision of the local division should have been delivered by a full panel of judges in accordance with Rule 354(4) of the Rules of Procedure, and therefore referred the case back for reconsideration (UPC_CoA 233/2025, APL_ 13146/2025).

On 5 December 2025, the Court's local division in Copenhagen issued a ruling that
HGSystem ApS, HGSystem Holding ApS, Infotech Concept ApS, Infotech Holding ApS and Rune Eilertsen, jointly and severally, were to pay a penalty payment of EUR 67,500 to the Court. The penalty payment was subsequently paid.
The decision on costs was deferred until the decision in the main proceedings.

On 22 May 2025, Hybridgenerator filed a conditional request for amendment of the contested patent.

In that connection, Hybridgenerator argued that if the contested patent cannot
be maintained as granted in case CC_5643/2025 UPC_CFI_89/2025, the contested patent must be maintained in an amended, narrowed form in the order of priority set out in Annexes 86–89.

The following, inter alia, is apparent from the annexes in question:

**Annex 86:**

Claims
1. A mobile hybrid generator system for providing grid-like AC power output to a load at off-grid locations, the hybrid generator system comprising a housing accommodating:

- a rechargeable electrical energy storage unit, such as a battery, configured to provide a DC power output,

- ***at*** least a first primary energy source, ~~**such as**~~ a combustion engine, for charging the rechargeable energy storage unit, and

- an inverter unit configured to convert the DC power output from the rechargeable energy storage unit into grid-like AC power output,

wherein the mobile hybrid generator is configured such that 1) the grid-like AC power output is provided only from the rechargeable energy storage unit via the inverter unit, and …

**Annex 87:**

Claims

1. A mobile hybrid generator system for providing grid-like AC power output to a load at off-grid locations, the hybrid generator system comprising a housing accommodating:

- a rechargeable electrical energy storage unit, such as a battery, configured to provide a DC power output, - at least a first primary energy source, ~~**such**~~ ***as*** a combustion engine, for charging the rechargeable energy storage unit, and

– an inverter unit configured to convert the DC power output from the rechargeable energy storage unit into grid-like AC power output,

wherein the mobile hybrid generator is configured such that

1) the grid-like AC power output is provided solely from the rechargeable energy storage unit via the inverter unit, and

2) the output from the primary energy source is used only to charge the rechargeable energy storage unit,

both during normal mode operation, with normal mode power requirements, and during peak power operation, with peak power requirements,

the mobile hybrid generator system **characterised in that** the at least first primary energy source is dimensioned to meet the normal mode power requirements, i.e. much smaller than for the peak power requirements, **and wherein the inverter unit is configured to match the peak power requirement.**

2. The mobile hybrid generator system according to claim 1, configured to control the start and stop of charging of the rechargeable energy storage unit by the primary energy source based on a power status of the rechargeable energy storage unit and/or based on the requirements of the load.

3. The mobile hybrid generator system according to any of the preceding claims, wherein the inverter unit is configured such that the AC power output matches a peak power requirement of

the load and wherein the primary energy source is configured to match a normal mode requirement of the load.

**43.** The mobile hybrid generator system according to any of the preceding claims, wherein the rechargeable energy storage unit is configured to match a predefined charging cycle and wherein the rechargeable energy storage unit is a low-voltage unit operating at less than 50 volts, such as 48 volts.

**54.** The mobile hybrid generator system according to any of the preceding claims, comprising a fuel tank, for holding liquid fuel, integrated into the housing, the fuel tank preferably configured to hold at least 500 litres of fuel, and wherein the primary energy source is a combustion engine powered by the liquid fuel.

**65.** The mobile hybrid generator system according to any of the preceding claims, comprising at least a second primary energy source, such as an AC grid connection, and/or wherein the rechargeable energy storage unit is a lithium-titanate battery unit.

**76.** The mobile hybrid generator system according to any of the preceding claims, configured to integrate a renewable AC power source at the AC power output side of the inverter unit and configured such that when the requirements from the load are less than the power output from the renewable AC power source, surplus power is used to charge the rechargeable power storage unit.

**87.** The mobile hybrid generator system according to any of the preceding claims, configured to integrate a renewable DC power source at the input of the rechargeable power storage unit for charging the rechargeable power storage unit.

**98.** The mobile hybrid generator system according to any of the preceding claims **54–87**, configured to start the engine a certain time before charging of the rechargeable storage unit begins, such that the engine is warmed up before the engine is loaded.

**109.** The mobile hybrid generator system according to any of the preceding claims **54–98,** comprising a generator unit driven by the engine for generating AC power and a rectifier for converting the AC power from the generator unit to DC power for charging the rechargeable energy storage unit, and wherein the frequency of the AC power output from the generator unit is different, such as 60 Hz, and independent from the frequency of the AC power output from the inverter, such as 50 Hz, and selected to optimise operation of the engine, which optionally can be driven at 1850 RPM.

**1110.** The mobile hybrid generator system according to any of the preceding claims **54–109,** configured such that air intake to the engine is provided in the vicinity of the location in the housing of the inverter unit and the rechargeable energy storage unit, such that a flow of air is provided around the inverter unit and the rechargeable energy storage unit when the engine is running.

**1211.** The mobile hybrid generator system according to any of the preceding claims, wherein the housing is (primarily) manufactured from plastics, such as high-density polyethylene, which is cut into parts and welded together to form the housing such that the housing acts as an electrical insulator.

**1312**. The mobile hybrid generator system according to any of the preceding claims, comprising a wheeled chassis, such as a trailer, for holding the housing.

**1413.** The mobile hybrid generator system according to any of the preceding claims, wherein the at least first primary energy source comprises at least one DC voltage generator, such that the output from the first primary energy source is DC power.

**1514.** The mobile hybrid generator system according to claim **1413,** wherein the DC voltage generator is a permanent magnet-assisted synchronous reluctance motor used as a generator, and/or

wherein the DC voltage generator is configured to provide an output voltage of less than 100 Volts DC, preferably less than 75 Volts DC, more preferably less than 50 Volts DC, most preferably 48 volts DC, and/or

wherein the DC power output from the primary energy source is configured for direct charging of the rechargeable electrical energy storage unit without a rectifier, and/or

wherein the DC voltage generator is driven by a combustion engine and/or

wherein the DC voltage generator is configured to provide a constant nominal power output of at least 30 kW, more preferably at least 35 kW, even more preferably at least 45 kW, most preferably at least 50 kW

and/or wherein the DC voltage generator is configured to provide a peak power output of at least 45 kW, more preferably at least 50 kW, even more preferably at least 70 kW, most preferably at least 80 kW.

**Annex 88:**

Claims

1. A mobile hybrid generator system for providing grid-like AC power output to a load at off-grid locations, the hybrid generator system comprising a housing accommodating:
- a rechargeable electrical energy storage unit, such as a battery, configured to provide a DC power output,

- **at** least a first primary energy source~~**, such as**~~ a combustion engine, for charging the rechargeable energy storage unit, and

- an inverter unit configured to convert the DC power output from the rechargeable energy storage unit into grid-like AC power output,

wherein the mobile hybrid generator is configured such that

1) the grid-like AC power output is provided solely from the rechargeable energy storage unit via the inverter unit, and

2) the output from the primary energy source is used only to charge the rechargeable energy storage unit,

both during normal mode operation, with normal mode power requirements, and during peak power operation, with peak power requirements,

the mobile hybrid generator system **characterised in that** the at least first primary energy source is dimensioned to meet the normal mode power requirements, i.e. much smaller than for the peak power requirements, **and wherein the inverter unit is configured to match the peak power requirement, and wherein the rechargeable energy storage unit is a lithium-titanate battery unit.**

2. The mobile hybrid generator system according to claim 1, configured to control the start and stop of charging of the rechargeable energy storage unit by the primary energy source based on a power status of the rechargeable energy storage unit and/or based on the requirements of the load.

3. The mobile hybrid generator system according to any of the preceding claims, wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load and wherein the primary energy source is configured to match a normal mode requirement of the load.

4. The mobile hybrid generator system according to any of the preceding claims, wherein the rechargeable energy storage unit is configured to match a predefined charging cycle and wherein the rechargeable energy storage unit is a low-voltage unit operating at less than 50 volts, such as 48 volts.

5. The mobile hybrid generator system according to any of the preceding claims, comprising a fuel tank, for holding liquid fuel, integrated into the housing, the fuel tank preferably configured to hold at least 500 litres of fuel, and wherein the primary energy source is a combustion engine powered by the liquid fuel.

6. The mobile hybrid generator system according to any of the preceding claims, comprising at least a second primary energy source, such as an AC grid connection~~**, and/or wherein the rechargeable energy storage unit is a lithium-titanate battery**~~ unit…

**Annex 89:**

Claims 1. A mobile hybrid generator system for providing grid-like AC power output to a load at off-grid locations, the hybrid generator system comprising a housing accommodating:

- **a** rechargeable electrical energy storage unit, such as a battery, configured to provide a DC power output, - at least a first primary energy source**, such as** a combustion engine, for charging the rechargeable energy storage unit, and

- an inverter unit configured to convert the DC power output from the rechargeable energy storage unit to grid-like AC power output,

wherein the mobile hybrid generator is configured such that

1) the grid-like AC power output is provided only from the rechargeable energy storage unit via the inverter unit, and

2) the output from the primary energy source is used only to charge the rechargeable energy storage unit,

both during normal mode operation, with normal mode power requirements, and during peak power operation, with peak power requirements,

the mobile hybrid generator system **characterised in that** the at least first primary energy source is sized to meet the normal mode power requirements, i.e. much smaller than for the peak power requirements, **and wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load, and the rechargeable energy storage unit is a lithium-titanate battery unit.**

2. The mobile hybrid generator system according to claim 1, configured to control the start and stop of charging of the rechargeable energy storage unit by the primary energy source based on a power status of the rechargeable energy storage unit and/or based on the requirements of the load.

**3. The mobile hybrid generator system according to any of the preceding claims, wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load and wherein the primary energy source is configured to match a normal mode requirement of the load.**

**43**. The mobile hybrid generator system according to any of the preceding claims, wherein the rechargeable energy storage unit is configured to match a predefined charging cycle and wherein the rechargeable energy storage unit is a low-voltage unit operating at less than 50 volts, such as 48 volts.

**54.** The mobile hybrid generator system according to any of the preceding claims, comprising a fuel tank, for holding liquid fuel, integrated into the housing, the fuel tank preferably configured to

holding at least 500 litres of fuel, and wherein the primary energy source is a combustion engine powered by the fluid fuel.

**65.** The mobile hybrid generator system according to any of the preceding claims, comprising at least a second primary energy source, such as an AC grid connection,
~~**and/or**~~
~~**wherein the rechargeable energy storage unit is a lithium-titanate battery unit.**~~

**76**. The mobile hybrid generator system according to any of the preceding claims, configured to integrate a renewable AC power source at the AC power output side of the inverter unit and configured such that when the requirements from the load are less than the power output from the renewable AC power source, surplus power is used to charge the rechargeable power storage unit.

**87.** The mobile hybrid generator system according to any of the preceding claims, configured to integrate a renewable DC power source at the input of the rechargeable power storage unit for charging the rechargeable power storage unit.

**98.** The mobile hybrid generator system according to any of the preceding claims **54-87**, configured to start the engine a period of time before charging of the rechargeable power storage unit begins, such that the engine is warmed up before the engine is loaded.

**109.** The mobile hybrid generator system according to any of the preceding claims **54-98**, comprising a generator unit driven by the engine for generating AC power and a rectifier for converting the AC power from the generator unit to DC power for charging the rechargeable energy storage unit, and wherein the frequency of the AC power output from the generator unit is different, such as 60 Hz, and independent from the frequency of the AC power output from the inverter, such as 50 Hz, and selected to optimise operation of the engine, which optionally can be driven at 1850 RPM.

**1110.** The mobile hybrid generator system according to any of the preceding claims **54–109,** configured such that air intake to the engine is provided in the vicinity of the location in the housing of the inverter unit and the rechargeable energy storage unit, such that a flow of air is provided around the inverter unit and the rechargeable energy storage unit when the engine is running.

**1211.** The mobile hybrid generator system according to any of the preceding claims, wherein the housing is (primarily) made of plastics, such as high-density polyethylene, which is cut into sections and welded together to form the housing, such that the housing acts as an electrical insulator.

**1312.** The mobile hybrid generator system according to any of the preceding claims, comprising a wheeled chassis, such as a trailer, for holding the housing.

**1413.** The mobile hybrid generator system according to any of the preceding claims, wherein the at least first primary energy source comprises at least one DC voltage generator, such that the output

from the first primary energy source is DC power. 1514. The mobile hybrid generator system according to claim **1413,** wherein the DC voltage generator is a permanent magnet-assisted synchronous reluctance motor used as a generator,
and/or

wherein the DC voltage generator is configured to provide an output voltage of less than 100 Volts DC, preferably less than 75 Volts DC, more preferably less than 50 Volts DC, most preferably 48 volts DC,
and/or

wherein the DC power output from the primary energy source is configured for direct charging of the rechargeable electrical energy storage unit without a rectifier,
and/or

wherein the DC voltage generator is driven by a combustion engine and/or wherein the DC voltage generator is configured to provide a constant nominal power output of at least 30 kW, more preferably at least 35 kW, even more preferably at least 45 kW, most preferably at least 50 kW and/or

wherein the DC voltage generator is configured to provide a peak power output of at least 45 kW, more preferably at least 50 kW, even more preferably at least 70 kW, most preferably at least 80 kW.

**Submissions by the parties**

**UPC _CFI_560/2024: Infringement case**

**In support of its claims, Hybridgenerator ApS has, inter alia, argued as follows:**

The defendants market the disputed products on the basis that they have a fuel efficiency that is up to 20% better than the defendants' previous models. The defendants' previous models are identical to the examples of the claimant's hybrid generators which Rune Eilertsen acquired from Hybridgenerator in connection with Rune Eilertsen's sale of his shares in Hybridgenerator. The defendants are thus marketing the disputed products on the basis that they have a fuel efficiency that is up to 20% better than the claimant's hybrid generators. The patent in dispute states that the technical advantage of the claimant's patented technology is, inter alia, improved fuel efficiency compared to the prior art.

The defendants' main argument is that the products in dispute contain a common DC bus, the function of which is to supply direct current from the internal combustion engine/DC generator to both the battery and the inverter. Thus, according to the defendants, there is no infringement of the patent in dispute.

The evidence secured does not support the claim that the MPU 1000 and MPU 2000 models are technically constructed as alleged by the defendants, or that the MPU 1000 and MPU 2000 models were not technically constructed in accordance with the contested patent at the time the evidence was secured.

Reference is made in this connection to the witness statement from [redacted] dated 15 November 2025 (Annex V), from which it appears that [redacted] declares “on my honour that there has been no fundamental mechanical development or modification to the MPU3000 machine since 30 August 2024”. In Hybridgenerator’s view, it must be concluded a contrario from this declaration that there has been a fundamental mechanical development and modification of the MPU 1000 and MPU 2000 models since the evidence-preservation proceedings were conducted. The evidence given by [redacted] during the main hearing cannot lead to a different conclusion.

Nor does the defendants’ account of the content of the statement in paragraph 68 of the statement of defence refute the claimant’s presumption that a redesign of the MPU 1000 and MPU 2000 models has taken place following the execution of the preservation order. It thus follows solely from this that the products in dispute (today) “operate on the same principle and with the same electrical connection from the motor/DC generator via two DC busbars to both the battery and the inverter.”

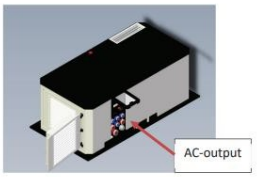
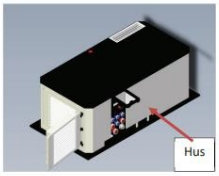
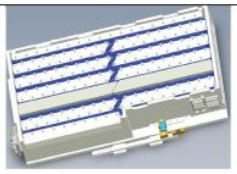
The defendants have therefore not taken this opportunity to refute the central presumption – which must also be assumed to have been decisive for the outcome of the order in the case concerning the review of the order for the preservation of evidence – that the defendants made a modification to the MPU 1000 and MPU 2000 models following the completion of the evidence preservation proceedings.

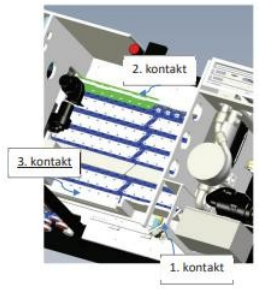
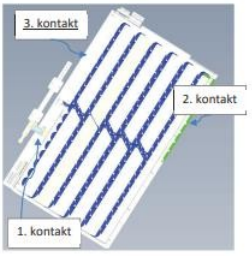
On the basis of the preserved evidence, it is maintained that the MPU 1000 incorporates all the technical features of claim 1 of the contested patent, and that the contested patent therefore infringes the claimant’s rights to the contested patent. It is apparent from the CAD drawings that the battery pack in the MPU 1000 has three outputs, which enables infringement of claim 1 of the contested patent in two different ways.

Furthermore, it is maintained that the infringing products also incorporate, at the very least, the features of sub-claim 5 (presence of a fuel tank and internal combustion engine), sub-claim 6 (presence of an LTO battery), sub-claim 7 (presence of solar cells) and sub-claim 13 (the hybrid system is mounted on a trailer). The report on the preservation of evidence does not contain documentation of the technical configuration of the MPU 2000. In light of the defendants’ statements in the statement of defence that the MPU 2000 is technically configured in the same way as the MPU 1000 as regards the relevant features, it is maintained on the basis of the above that the MPU 2000 also constitutes an infringement of the contested patent.

The existence of the infringement is illustrated in the following drawings:

Krænkelsessituation 1

| | Træk i krav 1 i EP 4238202 | Stridsprodukt MPU 1000 | Træk til stede? |
|---|---|---|---|
| 1.1 | A mobile hybrid generator system for providing grid-like AC power output to a load at off-grid locations, | Stridsproduktet har et AC-output som fremhævet på tegningen nedenfor.<br>  <br><br>Hybridgeneratoren er egent til at blive transporteret på en trailer, hvilket bl.a. fremgår af bilag 82.<br><br>Dermed er MPU 1000 beregnet til anvendelse på "off-grid locations". | Ja |
| 1.2 | the hybrid generator system comprising a housing accommodating: |  <br><br>Stridsproduktet har et hus som illustreret ovenfor. | ja |
| 1.3 | - a rechargeable electrical energy storage unit, such as a battery, configured to provide a DC power output, | Det genopladelige batteri fremgår af bilag 80 og 81: | ja |
| | |  <br>Batterier vil levere et DC-output. | |
| 1.4 | - at least a first primary energy source, such as a combustion engine, for charging the rechargeable energy storage unit, and |   <br>Ovenstående CAD-tegninger viser en Caterpillar motor, som også blev affotograferet under bevissikringsforretningen.<br>  <br>Motoren er ude til venstre tilkoblet en Zanardi PM5G generator, som genererer et DC-strøm output. | Ja |
| 1.5 | - an inverter unit configured for converting the DC power output from the rechargeable energy storage unit to the grid-like AC power output, |   <br>Tegningerne viser, at MPU1000 har tre invertere. I CAD-tegningen benævnes inverterne Victron-MP II | |

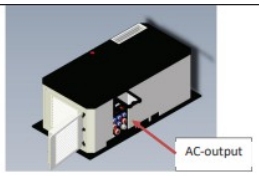
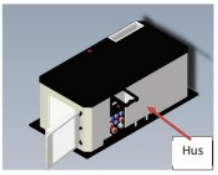
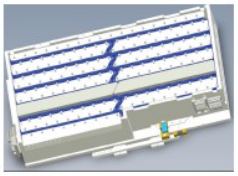
| | | | |
|---|---|---|---|
| | | 48V. Disse inverterer er designet til at omdanne DC strøm til et AC-strøm output. | |
| | wherein the mobile hybrid generator is configured such that | | |
| 1.6 | 1) the grid-like AC power output is provided only from the rechargeable energy storage unit via the inverter unit, and | De tre kontakter vist nedenfor opdeler batteripakken i to moduler, hvilket muliggør opladning af et batterimodul, mens det andet batterimodul aflader via inverterne.<br>  <br><br>  <br><br>Batteriopdelingen i to batterimoduler muliggør at primary energy source kan oplade det ene batterimodul | Ja |

| | | | |
|---|---|---|---|
| | | mens det andet batterimodul leverer al den netlignende strøm via inverterne. | |
| 1.7 | 2) the output from the primary energy source is only used to charge the rechargeable energy storage unit, | Se kommentarer under punkt 1.6 | Ja |
| 1.8 | - both during normal mode operation, having normal mode power requirements, and during peak power operation, having peak power requirements, | Se punkt 1.6 og 1.7. | Ja |
| 1.9 | the mobile hybrid generator system **characterized in that** the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements. | Præsentationen i bilag 82 viser på side 4, at peak power kan være 30 kW, mens nominal power er 18 kVA. Hvor ladningseffekten vurderes til at være 12,5 kW, hvilken ladningseffekt stammer fra den primære energikilde. Dermed er "primary energy source" dimensioneret til "normal mode power requirements" frem for "peak power requirements." | |

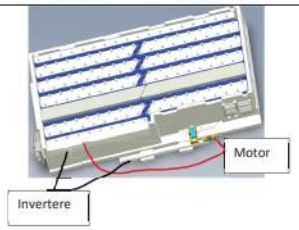
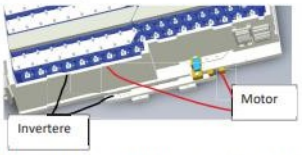
Hvis man vælger ikke at bruge 2. kontakt, som er en del af MPU 1000, hvilket vises i CAD tegningerne, vil MPU1000 stadig krænke stridspatentet baseret på den fortolkning af de tekniske træk 1.6-1.8, som den europæiske sagsbehandler lagde til grund for udstedelse af stridspatentet. Dette er anskueliggjort i den følgende kravmatrix:

Krænkelsessituation 2

| | **Træk i krav 1 i EP 4238202** | **Stridsprodukt MPU 1000** | **Træk til stede?** |
|---|---|---|---|
| 1.1 | A mobile hybrid generator system for providing grid-like AC power output to a load at off-grid locations, | Stridsproduktet har et AC-output som fremhævet på tegningen nedenfor. | Ja |

| | | | |
|---|---|---|---|
| | |  <br>Hybridgeneratoren er egent til at blive transporteret på en trailer, hvilket bl.a. fremgår af bilag 82.<br><br>Dermed er MPU 1000 beregnet til anvendelse på "off-grid locations". | |
| 1.2 | the hybrid generator system comprising a housing accommodating: |  <br>Stridsproduktet har et hus som illustreret ovenfor. | ja |
| 1.3 | - a rechargeable electrical energy storage unit, such as a battery, configured to provide a DC power output, | Det genopladelige batteri fremgår af bilag 80 og 81:<br>  <br>Batterier vil levere et DC-output. | ja |

| | | | |
|---|---|---|---|
| 1.4 | - at least a first primary energy source, such as a combustion engine, for charging the rechargeable energy storage unit, and |   <br>Ovenstående CAD-tegninger viser en Caterpillar motor, som også blev affotograferet under bevissikringsforretningen.<br>  <br>Motoren er ude til venstre tilkoblet en Zanardi PM5G generator, som genererer et DC-strøm output. | Ja |
| 1.5 | - an inverter unit configured for converting the DC power output from the rechargeable energy storage unit to the grid-like AC power output, |   <br>Tegningerne viser, at MPU1000 har tre invertere. I CAD-tegningen benævnes inverterne Victron-MP II 48V. Disse inverterer er designet til at omdanne DC strøm til et AC-strøm output. | |
| | wherein the mobile hybrid generator is configured such that | | |
| 1.6 | 1) the grid-like AC power output is provided only from the rechargeable energy storage unit via the inverter unit, and | Tilstedeværelsen af trækket er fremhævet ved følgende linjer op tegningerne af batteri og koblingerne til motor og invertere: | Ja |

| | | | |
|---|---|---|---|
| | |  <br>  <br>Linjerne på tegningerne viser, hvorledes motor og inverter vil være forbundet til batteripakken.<br><br>I de perioder, hvor primary energy source ikke er aktiv, vil grid-like output alene leveres fra batteripakken via inverterne. Det vil være gældende under både normal mode operation og peak power operation. | |
| 1.7 | 2) the output from the primary energy source is only used to charge the rechargeable energy storage unit, | Når primary energy source ikke er aktiv, vil outputtet være 0. Dermed vil punkt 1.7 være opfyldt under både normal mode operation eller peak power operation. | Ja |
| 1.8 | - both during normal mode operation, having normal mode power requirements, and during peak power operation, having peak power requirements, | Se punkt 1.6 og 1.7. | Ja |
| 1.9 | the mobile hybrid generator system **characterized in** | Præsentationen i bilag 82 viser på side 4 at peak power kan være 30 kW, mens nominal power er 18 kVA. Hvor ladningseffekten vurderes til at være 12,5 | Ja |

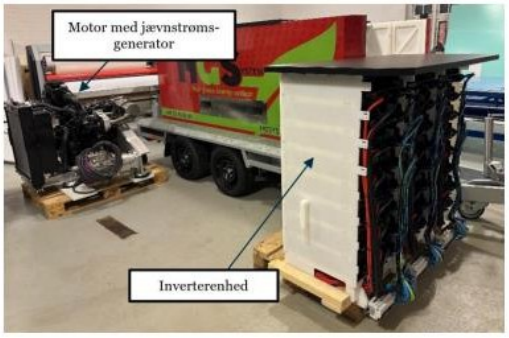
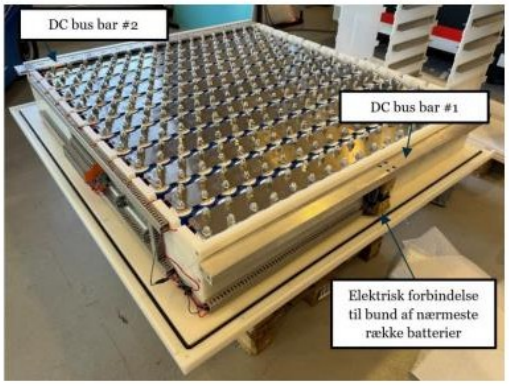
| | | | |
|---|---|---|---|
| | **that** the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements. | kW, hvilken ladningseffekt stammer fra den primære energikilde. Dermed er "primary energy source" dimensioneret til "normal mode power requirements" frem for "peak power requirements." | |

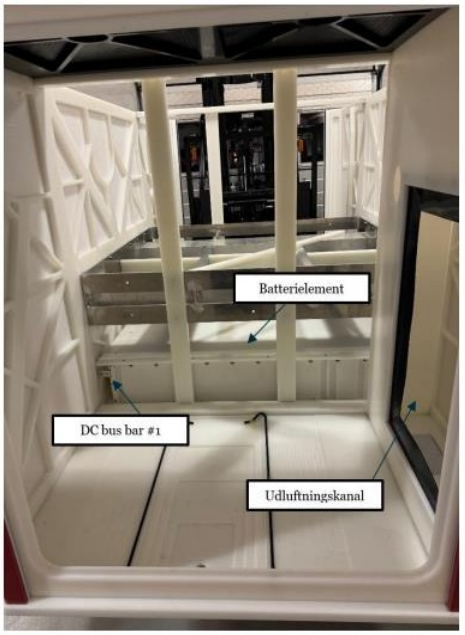
**HGSystem ApS, Infotech Concept ApS and Rune Eilertsen have, in support of their claim for acquittal, argued, inter alia, as follows:**

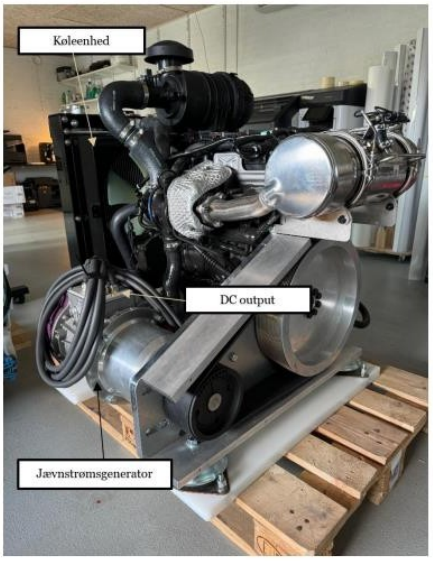
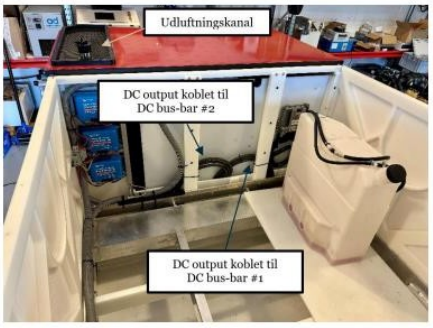
Features 1.6–1.8 are not exhibited by the infringing products. The infringing products are thus constructed in such a way that an internal combustion engine drives a direct current (DC) generator, which supplies direct current to a common through-going DC bus, to which both the batteries and the inverter are connected. There is therefore a
direct connection between the DC generator and the inverter. This is precisely the same principle as mentioned in both GB 631 (D1), where the engine can simultaneously supply power to both the load and for charging the batteries, and in GB 928, where the inverter is directly connected to both
the DC generator and the battery, and as in US 791, where excess power from the generator can be stored in the batteries, but where all the generator's output can be consumed by the inverter if the load is equal to or greater than the generator's output.

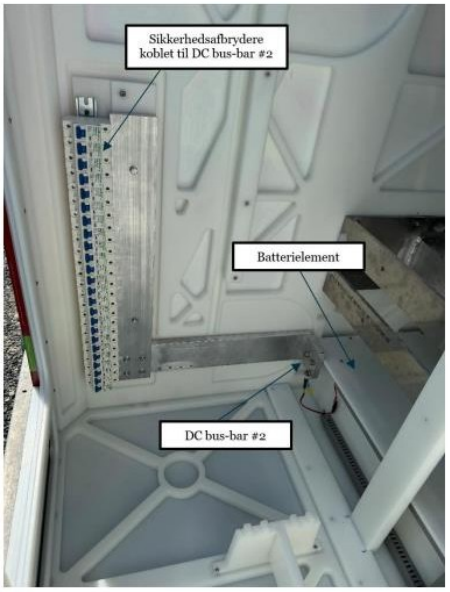
In other words, the DC generator, batteries and inverter in the contested products are connected in the same way as described in the three cited prior art documents mentioned above. The contested products thus function precisely

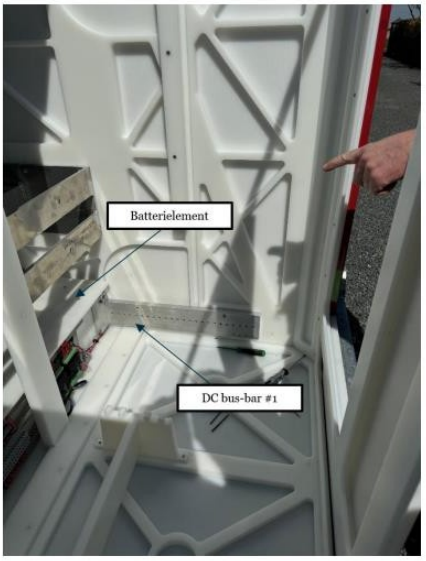
in the manner that Hybridgenerator deliberately excluded from the patent claim to ensure that the solution did not encompass the solution disclosed in the prior art. A manoeuvre intended to counter the EPO's
objections regarding the lack of novelty of Claim 1 of the Priority Application in the EPO's search report and thereby ensure the grant of the Disputed Patent. The connection between the DC generator, batteries and inverter in the Disputed Products can be seen in the following images of the Disputed Products (Annex Q and Annex R).

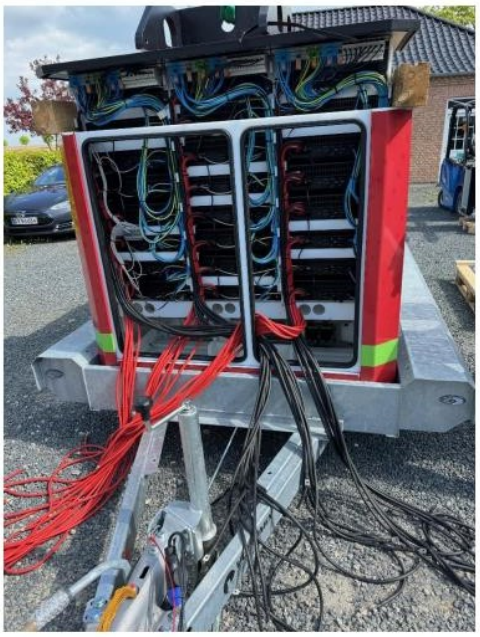
| Beskrivelse | Fotos af Stridsprodukterne |
|---|---|
| På dette billede ses det komplette Stridsprodukt – en trailerbaseret hybridgenerator. |  |
| På dette billede ses henholdsvis dieselmotoren og inverter-enheden inden de installeres på traileren, som ses i baggrunden. |  |
| Dette billede viser batterielementet inden den installeres i traileren, og uden monteret topdæksel.<br><br>Som det kan ses, er batterielementet monteret med én gennemgående DC bus-bar i den ene side, og en anden gennemgående DC bus-bar i den modsatte side. Disse er som det kan ses af billedet koblet til henholdsvis den negative og den positive pol af batterielementet. |  |

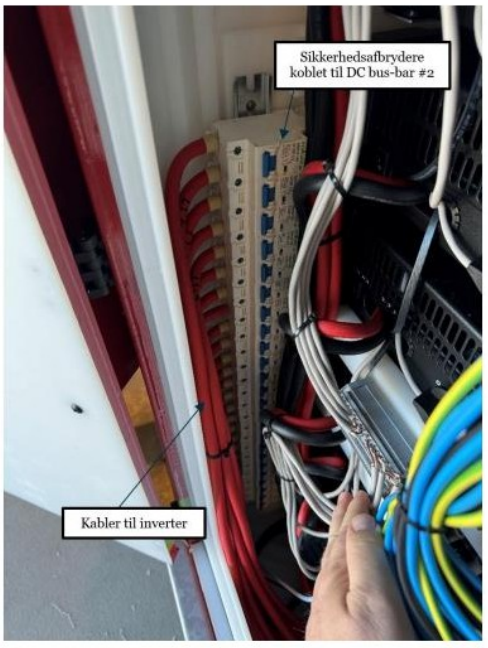
| | |
|---|---|
| Dette billede er taget langs med trailerens kørselsretning, inden motor, inverter og diesel-tank installeres. Billedet er taget fra rummet til isætning af motoren, hvilket bl.a. kan ses af udluftningskanalen til højre.<br><br>På billedet ses også batterielementet liggende nederst i det midterste rum. Desuden ses i venstre side af batteripakken den ene ende af den ene gennemgående DC bus-bar, hvortil motorens ene DC output-pol tilkobles. Den anden gennemgående DC bus-bar befinder sig bagved udluftningskanalen til højre, og er derfor ikke synlig på dette billede. |  |

| | |
|---|---|
| Dette billede viser dieselmotoren, med tilhørende DC-generator, til installering i motorrummet vist ovenfor. Som det kan ses, har motoren en firkantet køleenhed, som passer i udluftningskanalen som vist ovenfor.<br><br>Jævnstrømsgeneratoren leverer jævnstrøm (DC output) via seks kabler, tre med negativ polaritet og tre med positiv polaritet, som ved installation kobles til henholdsvis den ene og den anden DC bus-bar. |  |
| Dette billede er taget fra midten af traileren, hvor dieseltanken installeres, mod motorrummet. På billedet ses toppen af motorrummets udluftningskanal.<br><br>Af billedet kan ses de seks kabler der leverer jævnstrøm fra jævnstrømsgeneratoren, tre der går mod den ene (positive) DC bus-bar og tre der går mod den anden (negative) DC bus-bar. |  |

| | |
|---|---|
| Dette billede viser højre side (ift. kørselsretningen) af trailerens inverter-rum, hvori inverter-enheden installeres.<br><br>Batterielementet ses i bunden til højre i billedet.<br><br>Billedet viser kobling af en række sikkerhedsafbrydere til den af de to gennemgående DC bus-bars, der løber langs trailerens højre side. |  |

| | |
|---|---|
| Dette billede viser venstre side (ift. kørselsretningen) af trailerens inverter-rum, hvori inverter-enheden installeres.<br><br>Batterielementet ses i bunden til venstre i billedet.<br><br>Billedet viser kobling til den af de to gennemgående DC bus-bars der løber langs trailerens venstre side. |  |

| | |
|---|---|
| Dette billede viser inverter-enheden delvist installeret i trailerens inverter-rum.<br><br>Det kan ses af billedet, at kabler til levering af DC input til inverteren er henholdsvis røde og sorte og trukket til henholdsvis venstre og højre side for efterfølgende kobling til henholdsvis den ene og den anden gennemgående DC bus bar. |  |

| | |
|---|---|
| Dette billede viser tilkobling af de røde kabler fra inverteren til sikkerhedsafbryderne på den ene gennemgående DC bus-bar, som vist på tidligere billede. |  |

It is clear that the current from the DC generator, which is driven by the internal combustion engine, is not disconnected from the inverter's DC input, but is, on the contrary, directly connected via the two DC bus bars that run the length of the trailer on the left and right sides respectively.

The connection between the engine/DC generator, battery pack and inverter in the Strid products is implemented as is known from the prior art cited above, including US 791, which in Figure 6

(bottom right section), shows the same schematic connection between the engine/generator, battery pack and inverter: The power from the internal combustion engine/DC generator is therefore used, partly by the inverter to supply an AC output (alternating current and grid-like output) if the hybrid generator is under load, and partly to charge the batteries in cases where the load is less than the output from the DC generator.

At maximum load on the Strid products, all power generated by the internal combustion engine is used by the inverter to supply an AC output (alternating current and grid-like output) whilst additional power is drawn from the batteries. This means that, in this case, the internal combustion engine supplies power that is not used to charge the batteries, and that the grid-like output is partly supplied by the internal combustion engine.

When there is little or no load on the Strid products, the excess power generated by the internal combustion engine is used to charge the batteries. This means, therefore, that in this case too, the internal combustion engine supplies power, some of which is not used to charge the batteries, and that the grid-like output is at least partly supplied by the internal combustion engine. This is exactly as described in paragraph 29 of US 791, and as shown in Figures 1 and 2 of GB 928, which Hybridgenerator highlighted in the letter of 28 October 2021, with the amendment made to claim 1, as falling outside the scope of protection of claim 1 of the contested patent.

It is therefore clear that the Contested Products do not satisfy feature 1.6 of claim 1, which requires that the grid-like output be supplied solely from ‘the rechargeable energy storage unit’, i.e. the batteries. This is not the case at either maximum load or average load, cf. feature 1.8. Page 21 26373642.3 80. It is likewise clear that the Contested Products do not satisfy the condition that the output from ‘the primary energy source’, i.e. the internal combustion engine, is used solely to charge ‘the rechargeable energy storage unit’, i.e. the batteries, cf. feature 1.7.

Hybridgenerator has not provided evidence that the Disputed Products infringe the Disputed Patent.

Instead, Hybridgenerator has put forward a number of speculations, postulates and hypotheses which all share the common feature of assuming that the primary energy source of the Disputed Products generates alternating current (AC). This fundamental assumption is incorrect. The Disputed Products use different motors, but in all cases the current supplied by the generator in the Disputed Products is direct current (DC). In practice, this means that Hybridgenerator’s argument is based on a misconception, and therefore Hybridgenerator reaches erroneous conclusions.

The diesel engine in the Disputed Products is not used to “directly supply grid-like alternating current”. As stated, the diesel engine supplies direct current – not alternating current – via its generator (and any rectifier), and therefore it does not need to operate at 1,500 revolutions.

It is therefore clear that Hybridgenerator’s speculations do not substantiate or make it probable that the Disputed Products exhibit all the features of claim 1 of the Disputed Patent.

On the contrary, it is evident that when (i) the diesel engine in the Disputed Products generates direct current, (ii) the battery must be charged with direct current via the battery's positive and negative terminals, and (iii) the inverter draws direct current from the battery via the battery's positive and negative terminals, then it only makes sense – and will result in the simplest and most efficient product – if there is a direct electrical connection between the diesel engine's direct current generator and the inverter. In this way, the generator supplies power directly to the inverter when possible and appropriate, and the battery is charged when necessary and appropriate.

It has therefore not been established that the Strid products infringe the Strid patent. Conversely, it seems more likely than not that the Strid products do not infringe the Strid patent, as they do not fulfil essential features of the main claim of the Stridspatent, which Hybridgenerator deliberately narrowed down in connection with the filing of the patent application and which were, moreover, highlighted as central to distinguishing the scope of protection of the Stridspatent from the prior art.

**UPC _CFI_89/2025: Counterclaim for invalidity:**

**HGSystem ApS, Infotech Concept ApS and Rune Eilertsen have, in support of the claim for invalidity, argued, inter alia, as follows:**

The contested patent does not satisfy the requirements of Article 123(2) EPC, according to which a patent or patent application may not be amended in such a way as to introduce new content not directly and unambiguously apparent from the original application.

The granted patent claims thus specify a scope of protection for which there is no basis in the original application as filed, and the patent claims therefore specify an improper
scope of protection in relation to the application as originally filed, contrary to Article 123(2) EPC.

During the proceedings for the grant of the patent, the patent claims were amended. During the proceedings, it was thus specified that:

1) normal mode operation has normal mode power requirements,

2) peak power operation has peak power requirements, and

3) the first primary energy source is dimensioned for normal mode power requirements, and
thus much smaller than a dimensioning for peak power requirements.

In a letter dated 3 June 2024 (Annex Z), Hybridgenerator refers to the fact that pages 3, line 14 – 4, line 4, of the filed application (Annex F) are alleged to provide the basis for the aforementioned specifications.

However, pages 3, lines 14–25 of the originally filed description (Annex AA) describe problems with traditional generators, but do not relate to the claimed invention. It cannot therefore be deduced what this section is intended to provide a basis for.

From page 3, line 25, it is further described that the inventor has realised that the inverter unit must be dimensioned for peak load requirements, and that much can thus be achieved. However, the dimensioning of
inverter unit is, however, not specified by the claim, although it is referred to in the section in question as being an essential part of the claimed invention.

It is further described that this sizing of the inverter unit enables the motor to be sized for normal mode operation, and that a much smaller motor is therefore required.
However, it is not specified what the smaller motor is smaller than. The section in question thus describes exclusively a dimensioning of the inverter unit, but not unambiguously a
dimensioning of the motor referred to in the section in question. It merely states that the motor can be dimensioned for normal mode operation. There is no basis for the assertion that the motor's dimensioning is "much smaller than for the peak power requirements".

It is also clear from page 3, line 33, of the filed application (Annex AA) that the aforementioned description applies only if: "an engine is used as the primary energy source".

It is thus clear that claim 1, by merely mentioning an engine as a possibility in claim 1: "at least a first primary energy source, such as a combustion engine", constitutes, at the very least, an impermissible generalisation of the description from page 3, line 27 to page 4, line 4. 15. It is thus clear that the application as filed does not provide a clear and unambiguous basis for specifying that the first primary energy source is dimensioned much smaller than a dimensioning in accordance with peak power requirements (cf. amendment 3 above).

Nor is it clear where the application as filed is supposed to contain a basis for a
link between normal mode operation and normal mode power requirements (see amendment 1 above), and similarly between peak power operation and peak power requirements (see amendment 2 above). The application therefore does not contain a clear and unambiguous basis for these specifications in the granted claim.

The amendments therefore constitute an impermissible definition of the scope of protection in relation to the application as originally filed, contrary to Article 123(2) EPC.

*The contested patent does not describe the claimed invention sufficiently*

The contested patent does not meet the requirements of Article 83 EPC, according to which a patent must describe the invention in a manner that is sufficiently clear and complete to enable it to be carried out by a person skilled in the art.

In the course of the proceedings, inter alia upon filing of the PCT Direct Comments on 28 October 2021 (Annex F, in particular pages 3–4), and furthermore in the pleading of 22 October 2024 (Annex X, in particular section 3.4.2), in the case relating to this matter concerning the preservation of evidence (ACT_47484/2024 – UPC_CFI_492/2024), Hybridgenerator pointed out that a key detail in the issued claim 1 is as follows: “wherein the mobile hybrid generator is configured such that 1) the grid-like AC power output is provided only from the rechargeable energy storage unit via the inverter unit, and 2) the output from the primary energy source is only used to charge the rechargeable energy storage unit, both during normal mode operation, having normal mode power requirements, and during peak power operation, having peak power requirements,”.

Hybridgenerator further states that because ‘AC power output is provided only from the rechargeable energy storage unit via the inverter unit’, and because ‘the output from the primary energy source is only used to charge the rechargeable energy storage unit’, this precludes there being a connection between the primary energy source (for example, an internal combustion engine) and the inverter unit.

However, the patent in dispute contains no explanation as to how it is possible for the motor to charge the batteries without the inverter unit also receiving the electricity generated by the motor.

A battery has two terminals, positive and negative respectively. When power is to be supplied from the battery, a load is connected to these two terminals. This could be an inverter, as mentioned in the contested patent. The inverter unit is thus part of a direct current circuit with the battery. The battery voltage between the negative and positive terminals drives the current in the direct current circuit and supplies power to the inverter unit.

When the battery needs to be charged, for example using a generator driven by an internal combustion engine, this charging takes place via the same two terminals, namely the negative and positive terminals. The generator used to charge the battery must therefore be connected to the same terminals as those to which the inverter unit must be connected in order to utilise the battery’s stored energy. Consequently, by definition, there will also be an electrical connection between the engine-driven generator and the inverter unit. Ergo, a system that fulfils the condition in claim 1 cannot be achieved.

Since the description of the contested patent does not provide an explanation of how: “the rechargeable energy storage unit (battery), inverter unit and primary energy source (motor-driven generator) can be connected in a manner that fulfils the conditions of claim 1, the person skilled in the art is not provided with sufficient information to be able to carry out the claimed invention, let alone an explanation of a solution that credibly increases efficiency.

Even if the person skilled in the art were able to devise a hypothetical solution on their own, it is impossible to imagine that they could devise such a solution that would also provide increased efficiency.

On the contrary, it seems entirely likely that any solution meeting the conditions of claim 1 would reduce efficiency and unnecessarily complicate the system, rather than increasing efficiency.

The alleged invention according to claim 1 is therefore not described with sufficient clarity for a person skilled in the art to be able to carry it out on the basis of the description of the contested patent, and the contested patent thus does not comply with Article 83 EPC.

The contested patent must therefore be declared invalid pursuant to Article 65(2) of the UPC Agreement and Article 138(1)(b) EPC.

*The contested patent lacks novelty.*

The contested patent lacks novelty in relation to a number of patent applications published prior to the filing date of the priority application on 28 October 2020. The contested patent is therefore invalid under Articles 52(1) and 54(2) EPC.

Furthermore, the contested patent has been granted with a scope that encompasses Hybridgenerator's own products, which were sold and marketed, including being publicly mentioned and described, prior to the filing date of the priority application on 28 October 2020. The contested patent is therefore also invalid on this ground, as it does not satisfy the requirement of novelty.

GB 2434928 A1 ("GB 928") (Annex A) describes a generator ("a generator set") comprising an internal combustion engine, a direct current generator ("DC generator"), one or more battery cells and an inverter (Annex A, page 1, lines 23–24). 36.

GB 928 further describes an example in which the DC generator, driven by the internal combustion engine, does not supply power to the inverter, but supplies all power for charging the batteries, and where power to the inverter, and thus to the output, is supplied solely from the batteries (Annex A, page 5, lines 22–27).

Finally, GB 928 also describes that the maximum load ('surge rating') is dictated by the size and/or capacity of the batteries and the inverter, and that a higher maximum load can thereby be achieved than would be the case for a generator without a battery and inverter (Appendix A, page 6, lines 2–6).

It is thus clear that GB 928 refers to a hybrid generator in which the internal combustion engine is not capable of delivering the maximum load, and where the engine is therefore sized smaller than the requirements for the maximum load.

GB 928 is an example of a patent application published before the priority date of the contested patent, which describes the same elements as claim 1 of the contested patent. GB 928 exhibits all the features of claim 1 of the contested patent. Against this background, it is clear that GB 928 deprives Claim 1 of the Disputed Patent of novelty, and that the Disputed Patent is therefore invalid due to lack of novelty.

GB 928 was cited by the examiner at the EPO during the examination of the contested patent. The application was first cited in connection with the search report for the priority application (Annex C) and was subsequently also mentioned in the international search report (Annex D) and in the international preliminary examination report (Annex E). During the proceedings at the EPO, GB 928 is referred to as "D2".

In a letter dated 28 October 2021 (Annex F) that GB 928 does not deprive claim 1 of novelty, as GB 928 shows in Figures 1 and 2 that the inverter is connected to both the DC generator and the battery, and therefore, in Hybridgenerator's view, does not display features 1.6–1.8. However, this is incorrect, as GB 928 also describes, see Annex A, page 5, lines 22–27, that the system may alternatively be configured such that the inverter is powered exclusively by electricity from the batteries, and that the DC generator is used exclusively for charging the batteries. The examiner at the EPO did not comment further on GB 928 during the proceedings. It is therefore reasonable to conclude that the examiner mistakenly relied on Hybridgenerator's incorrect comment in the letter of 28 October 2021 (Annex F).

Nor is the contested patent novel in relation to Hybridgenerator's own published products, cf. Annex 11 and Annex 12.

Hybridgenerator's own products and their publications deprive claim 1 of the contested patent of novelty, and the contested patent is therefore invalid.

*The contested patent lacks inventive step.*

This case is unique in that the prior art in GB 928 and Hybridgenerator's own products not only resemble the solution in the contested patent, but are in fact identical to the solution in the contested patent. The prior art is even within the same technical field. Against this background, it is pointless to discuss whether the contested patent possesses an inventive step, as it is obvious that the contested patent is already invalid due to lack of novelty.

It is, however, argued – should the Court not agree with the observations regarding lack of novelty – that the contested patent cannot, at the very least, be upheld due to lack of inventive step, cf. Article 56 EPC. The relevant assessment in this regard is whether the technology described in the Patented Invention differs significantly from the technology known at the priority date of the Patented Invention. This assessment is based on whether the technology was obvious to a person skilled in the art.

All the prior art cited in this case – including Hybridgenerator's own earlier products – are hybrid generators which perform the same function as claim 1 of the contested patent.

It is argued that it is undoubtedly obvious to the person skilled in the art to take an identical hybrid generator as a starting point. The person skilled in the art would therefore not even need to seek inspiration from other fields. The contested patent lacks inventive step in relation to US 2014/0277791 A1 ("US 791") (Annex G).

US 791 describes a hybrid generator comprising a combustion engine ("fuel-powered engine") that drives a generator ("alternator"), one or more batteries that receive and store power from the generator, and an inverter to convert power from the batteries to supply alternating current to a load (see paragraph [0005]). US 791 further describes in paragraph [0029] that when the batteries are charged, the engine can be switched off, and the batteries can then supply the necessary power to the load for several hours. Finally, US 791 also describes in paragraph [0049] that the inverter may be rated to deliver 300–400% of the power output of the generator driven by the engine, and that this means the generator only needs to be rated for an average load – and not for the maximum load. It is therefore clear that the generator driven by the internal combustion engine is sized to be smaller than the requirements for the maximum load.

The description of the contested patent does not mention what advantages might be gained by disconnecting the inverter and the engine-driven generator, so that the generator driven by the engine cannot supply power to the inverter. Furthermore, as already mentioned in section D2, there is no description of how such a disconnection might be carried out, and the person skilled in the art cannot therefore deduce any advantages of such a disconnection.

On the contrary, the person skilled in the art would conclude that a disconnection between the motor-driven generator and the inverter would be both complicated, impractical and ineffective. 77. For this reason alone, the differences between US 791 and claim 1 give rise to the conclusion that claim 1 lacks inventive step, cf. the EPO's Guidelines G-VII.

According to the contested patent, there is no evidence that the identified difference between claim 1 and US 791 is associated with an unexpected technical advantage. Paragraph [0011] of the contested patent posits that there would be problems in connecting the motor and its generator to the output via the inverter. The further explanation in paragraph [0011] makes it clear, however, that this concerns an arrangement in which it is the motor and its generator that must respond to an increased load on the hybrid generator, and that the solution to the problem, as mentioned in paragraph [0012], is to size the inverter to handle the peak loads, exactly as US 791 also describes in paragraph [0049].

Since the current from the engine-driven generator in US 791 is passed through a rectifier and thus converted to direct current (as is also described in the contested patent, cf. Fig. 1 of the Contested Patent), the motor-driven generator in US 791 is thus decoupled from the inverter's output frequency, and the diesel engine in US 791 can therefore be operated at a fuel-efficient speed regardless of the inverter's and thus the hybrid generator's output frequency.

The advantage mentioned in paragraph [0022] of the Opposition Patent is therefore not associated with the identified difference between claim 1 of the Opposition Patent and US 791. 81. It is therefore clear that, based on the content of the Opposition Patent, no advantage associated with the identified difference between claim 1 and US 791 can be identified. Nor can it be logically inferred that the identified difference would be advantageous. On the contrary, a configuration in which power from the motor-driven generator cannot be utilised by the inverter without first being stored in the batteries would involve a complicated solution that can only lead to increased energy loss, and thus reduced efficiency, as the storage of power is inherently associated with a certain amount of energy loss.

Hybridgenerator has claimed that the identified difference between US 791 and claim 1 allows for the optimisation of fuel efficiency, because the engine is completely independent of the hybrid generator's load and can therefore be operated at its optimum. However, as mentioned above, this is also the case in US 791, and there is therefore no technical effect associated with the identified differences. Consequently, no technical effect can be inferred from the identified differences. Rather, this constitutes a disadvantageous modification of the closest prior art without a corresponding unexpected technical advantage, and such a disadvantageous modification cannot give rise to recognition of inventive step. This is also in line with NanoString v Harvard ACT_551180/2023 (UPC_CFI_252/2023), where it is noted that: "A feature that is selected in an arbitrary way out of several possibilities cannot generally contribute to inventive step

Furthermore, the contested patent lacks inventive step in relation to GB 2 493 631 A ("GB 631") (Annex N). Upon grant of the contested patent, the examiner at the EPO assessed that claim 1 of the contested patent was novel in relation to GB 631, referred to as "D1" during the proceedings, based on the defining part, feature 1.9, of claim 1 of the contested patent:

"the mobile hybrid generator system characterised in that the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements.

During the grant procedure, the examiner stated on several occasions that GB 631 disclosed all other features of claim 1. It is not apparent from the case history on what basis the examiner recognised the inventive step of the granted claim 1.

GB 631 states that: "the system 10 may be operated in several modes of operation", cf. paragraph [0011], and paragraph [0015] states that "the ESS is used to provide power during load spikes" (In GB 631, ESS is an abbreviation for "energy storage system" and thus refers to the battery, cf. paragraph [0010]). This leads the person skilled in the art to conclude that the motor does not need to be capable of supplying all the necessary power at peak load.

In Annex K1 (at 11:20–11:35), which deals with a hybrid generator, it is specifically mentioned that, in order to save weight, the motor is to be dimensioned so that it can only cover the nominal load.

US 791 (as described above) states in paragraph [0040] that costs can be saved in both production and use by employing a motor that is rated only for the average load rather than the maximum load.

It is thus clear that a person skilled in the art wishing to develop a similar product would take GB 631 as a starting point and would be motivated to combine the solution in GB 631 with either the advantage of reduced weight, as mentioned in Annex K1, and/or with the cost savings mentioned in US 791, to dimension the motor for the average load rather than the maximum load, and thus propose a solution falling within the scope of claim 1 of the contested patent. 91.

It is therefore clear that claim 1 of the contested patent likewise lacks inventive step, at the very least, on the basis of GB 631.

*A) Dependent claims*

Like the features of the other dependent claims, these features lack novelty or, at the very least, inventive step, and the dependent claims do not alter the fact that the set of claims as a whole does not meet the requirements of Articles 83 and 123(2) EPC.

Any amended independent claim based on one or more of the independent claims would therefore, like the current claim 1, be invalid.

*Subsidiary sets of claims*

Hybridgenerator has submitted four sets of subsidiary claims pursuant to R. 30 RoP. Rule 30.1(b) RoP requires that the request for amendment of the patent must contain: “an explanation as to why the amendments satisfy the requirements of Articles 84 and 123(2), (3) EPC and why the proposed amended claims are valid and, if applicable, why they are infringed;” This requirement has not been met, and therefore the request for amendment of the contested patent should be rejected.

In the first set of subsidiary claims, claim 1 has been amended by limiting the first primary energy source to a combustion engine. Hybridgenerator ApS does not explain how this amendment satisfies Article 84 EPC, and the request for amendment therefore does not meet the conditions of Rule 30.1(b) RoP.

Since the request for amendment of the patent according to the first auxiliary set of claims has been filed on the condition that the contested patent cannot be maintained as granted, the first auxiliary set of claims will only be relevant if the contested patent is found to be invalid. In such a situation, it therefore follows that if the auxiliary set of claims is patentable on the same grounds as the contested patent as granted, there is no justification for the auxiliary set of claims to be valid.

The request for amendment of the patent in accordance with the first set of subsidiary claims therefore also fails to satisfy the condition in Rule 30.1(b) RoP that it must be explained why the proposed amended claim is valid.

Nor is there any presumption of validity for the content of the first auxiliary set of claims if the contested patent as granted is found to be invalid, since all the cited prior art relates to an internal combustion engine. The patent claims under the first auxiliary set of claims therefore lack at least novelty and inventive step for the same reasons as those stated for the contested patent as granted. Furthermore, the amendments under the first auxiliary set of claims do not resolve the issues relating to Articles 83 and 123(2) EPC. For these reasons too, the patent claims according to the first auxiliary set of claims are invalid.

In the second auxiliary set of claims (Annex 87), claim 1 of the first auxiliary set of claims has been further amended by adding: “wherein the inverter unit is configured to match the peak power requirements”. Hybridgenerator does not explain how this amendment complies with Art. 84 EPC, and the request for amendment therefore does not meet the conditions of Rule 30.1(b) RoP. In this case, it is even more problematic, as the amendment is based on the description and therefore adds wording to the set of claims that has not been the subject of the proceedings. Furthermore, the added wording is also unclear and therefore does not comply with Art. 84 EPC.

The amendment according to the second auxiliary set of claims also lacks clarity, as the wording allows for Hybridgenerator’s interpretation. Furthermore, the addition is also unclear in the light of claim 3. Claim 3 specifies: “wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load and wherein the primary energy source is configured to match a normal mode requirement of the load.” Claim 3 appears, in general terms, to cover the same as the added wording in claim 1, and claim 3 therefore appears redundant with the added wording.

However, as the added wording in claim 1 is not the same as in claim 3, inter alia by omitting to specify that it is the AC power output that is matched to the “peak power requirement”, and that the “peak power requirement” is of the load, the actual scope of the added wording in claim 1 becomes unclear, and for this reason too it does not comply with Art. 84 EPC. The addition in the second set of subsidiary claims is also unclear in the light of claim 7, which states that a renewable AC power source can be integrated on the output side of the inverter unit, thereby contributing to the supply of power to the load. However, this appears to contradict the added wording in claim 1, where it is now (in Hybridgenerator ApS’s view) specified that peak power can be supplied solely from the battery.

Hybridgenerator explains that the added amended wording is based on page 3, lines 4–7 of the application. This part of the description corresponds to what is already part of the claim and makes no mention of a specific configuration of the inverter unit, nor that the inverter unit should be configured to match the peak power requirements. The section of the description referred to cannot therefore form the basis for the added wording.

Hybridgenerator has not explained in detail how the added feature contributes to the alleged further distinction from the prior art. How the second set of subsidiary claims could thereby contribute to upholding the contested patent, should the contested patent as granted be found invalid, is completely unclear and has therefore not been sufficiently explained. The request for amendment of the patent in accordance with the second auxiliary set of claims therefore also fails to satisfy the condition in Rule 30.1(b)

It is therefore difficult to see how the content of the second auxiliary set of claims would contribute to a valid set of claims if the contested patent as granted is found to be invalid. The patent claims under the second auxiliary set of claims therefore lack, at the very least, novelty and inventive step for the same reasons as stated for the contested patent as granted. Furthermore, the amendments under the second auxiliary set of claims do not resolve the issues relating to Articles 83 and 123(2) EPC, which is why the patent claims under the second auxiliary set of claims are also invalid on these grounds.

In the third auxiliary set of claims (Annex 88), claim 1 is specified by adding that the rechargeable energy storage unit is a lithium-titanate battery (also known as LTO): “wherein the rechargeable energy storage unit is a lithium-titanate battery unit”.

Hybridgenerator ApS does not explain how this amendment complies with Art. 84 EPC, and the request therefore does not meet the conditions of Rule 30.1(b) RoP. LTO batteries in hybrid generators are known, inter alia, from Annex K1 (at 20:20–20:30) and Annex J2, from which it appears that it was known that Hybridgenerator’s own products used LTO batteries prior to the priority date of the contested patent. Exhibit K1 (at 20:30–21:00) also describes why LTO batteries are particularly advantageous. Hybridgenerator ApS merely refers to the fact that the contested patent describes certain advantages of LTO batteries, but does not address at all the fact that it has already been demonstrated in the defendant’s counterclaim for invalidity that such a claim lacks novelty and/or inventive step. Furthermore, reference is made to US 2014/103727 A1 (attached as Annex AC), in which, inter alia, paragraph [0084] states that LTO batteries are particularly well suited for stabilising generator systems, and that the use of an LTO battery specifically cannot therefore give rise to inventive step for this reason either.

The amendment in accordance with the third auxiliary set of claims does not give rise to novelty or inventive step. Furthermore, the amendments in accordance with the third auxiliary set of claims do not resolve the issues relating to Articles 83 and 123(2) EPC, which is why, for these reasons as well, the patent claims in accordance with the third auxiliary set of claims are invalid.

In the third auxiliary set of claims, claim 1 is specified by adding: “wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load.” The request does not meet the conditions of Rule 30.1(b) RoP.

Claim 3 of the contested patent is redundant with feature 1.9 of claim 1 of the contested patent, as both GB 928 (Annex A), Annex K1, and Annex L disclose the added feature. Hybridgenerator ApS has not commented on these

circumstances, but merely asserts: “None of the cited publications describe the above technical features in combination with the known part of claim 1”. Furthermore, Hybridgenerator ApS claims that the batteries and inverter in GB 928 are not dimensioned to meet peak power requirements alone, and that neither Annex K1 nor Annex L describes the inverter as being dimensioned to match a load’s peak power requirement.

The request for amendment of the patent in accordance with the third set of subsidiary claims therefore does not satisfy the condition in Rule 30.1(b) RoP. For both GB 928 (Annex A), Hybridgenerator’s own products (Annex K1, Annex L, etc.) and US 791 (Annex G), output to the connected load is supplied solely by an inverter. Thus, by definition, the inverter is configured to supply high power (peak power requirement) when the load demands it, as the inverter is the sole device capable of supplying the necessary power. The amendment in accordance with the third set of subsidiary claims therefore does not give rise to novelty or inventive step.

It is understood from Hybridgenerator ApS’s response of 21 August 2025 that the third set of auxiliary claims is submitted solely to address the scenario in which the addition in the second set of auxiliary claims is found not to comply with Art. 123(2) EPC. It is therefore understood that Hybridgenerator ApS does not dispute that the third set of subsidiary claims does not address other objections against the other sets of subsidiary claims, and if the contested patent and the other sets of subsidiary claims are declared invalid on grounds other than the addition in the second set of subsidiary claims being found not to comply with Article 123(2), the third set of subsidiary claims will likewise be invalid for the same reason.

**In support of its principal claim for acquittal, Hybridgenerator has, inter alia, argued as follows:**

*Alleged unlawful extension of the claims of the contested patent*
The contested patent meets the criteria of Article 123(2) EPC, as the claims do not contain anything beyond the scope of the patent application as filed, and as there is a basis for all amendments made during the proceedings.

There is a basis in the application for the statement in claim 1 of the contested patent that “the first primary energy source” is dimensioned much smaller than the dimensioning required to handle “peak power requirements”.

Nor does it constitute an impermissible generalisation that the combustion engine is described as a possibility in claim 1. The patent application clearly links the terms “normal mode operation/normal mode power requirements” on the one hand and “peak power
operation/peak power requirements’ on the other. There is therefore a basis for normal power requirements to match peak power requirements.

*Alleged lack of sufficient description of the patented invention*

It is disputed that the contested patent does not meet the criterion in Article 83 EPC that it must describe the invention in a manner that is sufficiently clear and complete for it to be carried out by a person skilled in the art.

A person skilled in the art would, inter alia, be able to know that the system can be controlled such that the first primary energy source alone charges one or more of the battery modules, whilst the grid-like AC output is supplied solely from the remaining battery modules via the inverter. The prior art contains descriptions in which this is fulfilled.

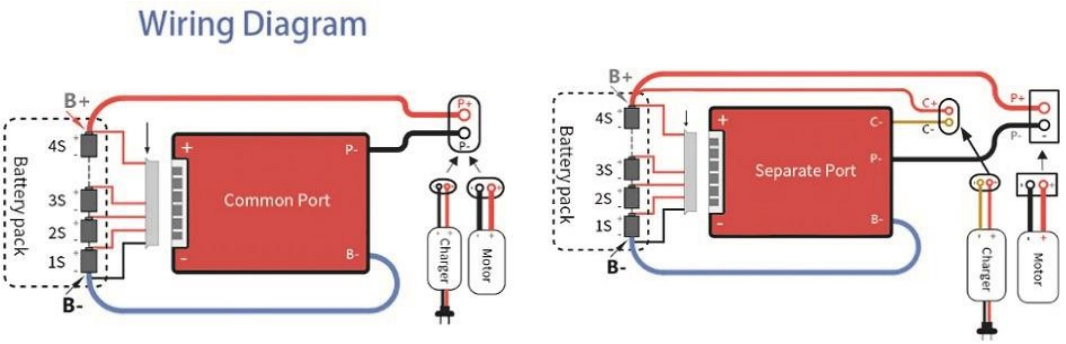
The prior art already contains descriptions explaining how the technical features are implemented, and thus the invention could have been carried out by a person skilled in the art on the filing date.

It is generally argued that a patent such as the contested patent must be read with a mind that is willing to understand, not a mind which – like the defendants – wishes to misunderstand the invention. Technical features 1.6–1.8 in claim 1 of the contested patent therefore do not imply that if just a single electron passes
through the primary energy unit and on to the inverter unit bypassing the battery, the invention in the contested patent will not be realised. It is not the case that conventional electrical systems (conventional electrical systems are not designed to control the transfer of individual particles), and it is therefore not the case that a person skilled in the art would interpret these features in that way. Nor is it the case that these features should be understood in the light of the technical problem solved by the contested patent, namely how to disconnect a primary power source from the load.

Electrical circuits and current distribution across circuits must be interpreted on the basis of macroscopic electrical variables and current, not on the basis of tracking individual electrons. The person skilled in the art of electrical engineering would instead interpret the requirements defined in features 1.6–1.8 of claim 1 as requiring
macroscopic electrical decoupling of the primary energy source from the inverter unit, such that the primary energy source is decoupled from the load, rather than an absolute prevention of individual electron transfer between these two elements in the system.

Reference is made in this connection to the points made in the preliminary opinion of the EPO dated 2 January 2026.

The defendants' description of a system in which both the generator and the inverter unit are connected to the same battery terminals appears to describe a battery management system (BMS) with a common port (common port BMS). However, there are two types of BMS, of which the common port BMS is one type. The other type is a separate-port (or split-port) BMS. These types are illustrated
below:



A separate-port BMS enables – unlike a common-port BMS described by the defendants – the separation of battery charging from battery discharging, as the BMS has separate ports for charging and discharging respectively.

A separate-port BMS architecture will prevent power generated by the primary energy source from bypassing the energy storage unit, thereby achieving the functional decoupling of the primary energy source from the inverter unit, as required by technical features 1.6–1.8 of claim 1. The BMS will control these charging and discharging operations independently, such that the generator charges the battery independently of the inverter, which draws power from the battery.

Battery Management System Hardware Concepts: An Overview, Sauer et al. – published on 30 March 2018 (Annex 91) provides an overview of BMS systems, including modularisation under section 3.1, which enables the division and thus control of groups of batteries.

The first three lines of the article state the following: *"For applications in need of higher power and/or with greater energy demand, the battery pack has to consist of several cells. ICs are offered for these kinds of systems that provide monitoring for several cells at once and also provide means for balancing, which is not needed in one-cell-systems*."

The article also contains a lengthy list of BMS systems that are available for purchase and are therefore generally accessible to a person skilled in the art.

In its preliminary opinion, the EPO's Opposition Division states that the general topology shown in Figures 2 and 2A of the contested patent "does not guarantee that the battery cannot be bypassed". In this regard, the EPO argues that the contested patent lacks a description of technical means (circuit topology, control logic, switching arrangements, and algorithms) to achieve the functional decoupling of the primary energy source and the inverter unit, as required by technical features 1.6–1.8 in granted claim 1.

The Opposition Division further states that the contested patent *"does not teach at least one way to avoid that unwanted power path. The proprietor also cited Figures 2/2A, but they actually show only high-level blocks, and not a specific bus architecture*."

The embodiments shown in Figures 2 and 2A of the contested patent are block diagrams illustrating the general principle. It must reasonably be assumed that the person skilled in the art possesses the general technical background knowledge relevant to the field, in this case basic electrical engineering knowledge and knowledge of battery management.

It cannot therefore be required that explanatory information be added to the contested patent which can be obtained from textbooks or is otherwise generally known.

Figures 2 and 2A, together with the description in paragraph [0047] of the contested patent, teach the person skilled in the art that the embodiment can be put into practice using a battery management system. Paragraph [0047] states explicitly:

*"Controllers are usually an integral part of the hybrid generator system disclosed herein, in Figs. 2 and 2A illustrated as a control unit but in practice it is a plurality of separate controllers, e.g. an engine control unit for starting and stopping the engine, a control unit for controlling the charging of the energy storage unit, a battery control unit in the form of a BMS (battery management system), a BMS extender module and an inverter control unit for controlling the inverter and thereby controlling and monitoring the output to the load."*

With reference to the above, the person skilled in the art will be familiar with the various types of battery management systems (BMS) and their applications. The person skilled in the art will understand the functional technical features 1.6–1.8 in claim 1 to mean that the primary energy source must be effectively disconnected from the inverter unit. The skilled person will, based on their general knowledge, understand that the embodiment can be implemented using a battery management system, where at least one way of implementing the invention will be to use a split-port BMS / separate-port BMS.

The description of a battery management system (BMS) in paragraph [0047], combined with the block diagrams in Figures 2 and 2A, which show separate control units for charging and the inverter, therefore provides a sufficiently detailed description of the invention. The person skilled in the art will thus choose to implement a suitable BMS (such as a separate-port BMS) to achieve the functional requirements in clauses 1.6–1.8 of claim 1.

Given the technically correct interpretation—which is to functionally decouple the primary energy source from the inverter unit—it is therefore clear that there is at least one implementation that a person skilled in the art would be able to implement, namely a separate-port (or split-port) BMS architecture as mentioned above.

On the above basis, it is maintained that the invention is described sufficiently for a person skilled in the art to carry out the invention.

*Novelty of the contested patent*
GB 2434928 A1 ("GB 928") (Annex A) was assessed by the EPO as being relevant only to claims 1 and 14/15.

GB 928 describes, in the detailed description of Figure 1, an alternative (page 5, lines 22–27), where the DC generator charges the batteries alone, and where the batteries supply energy to the inverter. The alternative method is described solely in this section. The section does not describe whether the alternative solution has an enclosure housing the motor, generator and batteries. It is thus whether the batteries are external to this housing. It contains no indication of

the sizing of the motor and the batteries. On the contrary, the teaching of the patent is that both elements must be capable of driving a heavy load if necessary.

The opposing party claims that the examiner at the EPO made an error during the examination and overlooked the section describing the alternative solution. However, this alternative solution does not possess all the technical features of feature 1 of the contested patent. There is no basis for the EPO examiner to have
made an error.

The claims of the contested patent are thus novel in relation to GB 928.

Reference is made to the assessment regarding novelty as set out in the EPO's preliminary opinion.

*Inventive step*
It is argued that the invention in the contested patent involves an inventive step.

Reference is made to the assessment regarding inventive step set out in the EPO's preliminary opinion.

The contested patent does not lack inventive step in relation to US 2014/0277791 A1 ("US 791") (Annex G).

Claim 1 of the contested patent differs from US 791 in that US 791 does not contain the feature:

*wherein the mobile hybrid generator is configured such that*
*1) the grid-like AC power output is provided only from the rechargeable energy storage unit via the inverter unit, and*
*2) the output from the primary energy source is only used to charge the rechargeable energy storage unit,*
*both during normal mode operation, having normal mode power requirements, and during peak power operation, having peak power requirements,*

*the mobile hybrid generator system* ***characterized in that*** *the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements.*

The opposing party claims that there is no technical effect associated with the aforementioned feature. This is incorrect.

Even if US 791 is found to constitute a realistic starting point in the prior art, a person skilled in the art would not be motivated to modify the prior art so that it corresponds to the technical solution that is the subject of claim 1 of the contested patent. The person skilled in the art would not combine US 791 with the alternative solution described in GB 928, as GB 928 does not contain a positive description of the alternative version that could motivate the person skilled in the art to modify US 791.

*Alleged lack of inventive step in relation to GB 631* (GB 2 493 631 A)

GB 631 was assessed by the EPO as being the closest prior art. The EPO acknowledged that claim 1 differs from the prior art in the distinguishing technical feature 1.9.

En fagperson vil ikke være motiveret til at kombinere GB 631 med Rune Eilertsens Bilag K1, fordi hele videooplægget ikke fremviser kravspecifikationer for hybridgeneratoren eller tegninger af hybridgeneratoren. Dermed er læringen fra oplægget ikke kompatible med GB 631, og enkelte sætninger i videooplægget taget ud af kontekst vil ikke være tilstrækkelig til at motivere en fagperson til at udøve opfindelsen i stridspatentet.

En fagperson, som kombinerer GB 631 med US 791, vil lave en hybridgenerator, hvor GB 631 systemet genbruger varmen fra generatoren til at øge effektiviteten. I den modificerede GB 631 vil motoren være dimensioneret større end til kun at opfylde normale driftsbehov, da motor, batterierne og inverteren sammen vil være dimensioneret til peak power operation. Dermed er stridspatentets krav ikke indlysende i forhold til den kendte teknik.

Det vil derfor involvere inventive steps (opfindelseshøjde) i henhold til Art. 56 EPC at nå frem til hybridgeneratoren, som er genstand for krav 1 i stridspatentet på baggrund af udgangspunkterne i de nævnte modhold.

**Hybridgenerator, in support of the subsidiary claims** for maintenance of the contested patent in amended form in the order of priority set out in Annexes 86–89, in the event that the contested patent cannot be maintained as granted, has, inter alia, argued as follows:

In the first set of subsidiary claims (Annex 86), claim 1 has been amended by limiting the 'first primary energy source' to a combustion engine. There is a direct basis in claim 1, as filed, where a combustion engine is explicitly mentioned as an example of a 'first primary energy source'. It is argued that the first set of alternative claims is patentable for the same reasons as the contested patent as granted. This also follows from the decision of the EPO Board of Appeal of 24 March 2015 in case G3/14.

In the second auxiliary set of claims (Annex 87), claim 1 has been further amended by limiting claim 1 with the addition of the following phrase: "wherein the inverter unit is configured to match the peak power requirements". The characterising part of the amended claim 1 then reads as follows: "the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements, and wherein the inverter unit is configured to match the peak power requirements."

There is no inherent ambiguity in this wording. A person skilled in the art will know that the hybrid generator must be constructed such that the inverter matches the peak power requirement.

With regard to claim 3, a person skilled in the art reading the claims with a mind to understand the invention will understand that the inverter must be adapted to a given load's peak power requirement, such that the inverter's peak power does not fall below the load's requirement.

With regard to claim 7, there are no issues of clarity. When the inverter is configured to match the peak power requirement, this does not mean that the inverter must always supply peak power requirements, but that the inverter is configured to supply peak power requirements.

The basis for the amendment is found on page 3, lines 4–7 of the patent application as filed, where it is described that the inverter unit is dimensioned for peak power operation. With the aforementioned technical
features, the modified claim 1 further distinguishes itself from the prior art by making it clear that, unlike the prior art, peak power can be supplied solely from the battery. Thus, the 2nd set of subsidiary claims in Annex 87 is patentable, cf. Art. 52 EPC.

In the third set of subsidiary claims (Annex 88), claim 1 is limited by the following technical content from claim 6 (as granted): “wherein the rechargeable energy storage unit is a lithium-titanate battery unit”.

The characterised technical part thus becomes: “the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements, and wherein the inverter unit is configured to match the peak power requirement, and wherein the rechargeable energy storage unit is a lithium-titanate battery unit.”

The contested patent describes that LTO is particularly advantageous because this type allows for rapid charging and discharging of the batteries, see [0026] lines 13–25. The rapid discharge allows the hybrid generator to better match peak power requirements, which enables inverter-based operation, cf. normal mode operation and peak power operation. The lesson from Figure 15 in Annex AC is that LTO batteries are disadvantageous if power is to be supplied for more than 40 minutes at a time.

It is stated in the summary of the contested patent, section [0012], lines 43–49, that the engine must run for a few hours a day, and for the remainder of the time the battery unit must supply power. If it is assumed that ‘a few hours’ means 4 hours, then the battery unit must supply power for 20 hours (1200 minutes), which is well over 40 minutes.

Thus, the lesson from Annex AC is that for short periods requiring peak power, an ultracapacitor should be chosen, whilst for longer periods (+40 minutes), one should choose, for example, Li-ion manganese oxide or Li-ion – Metal oxide.

EPO’s guidelines, G-VII, 10.1, are not relevant here, because there is precisely a positive effect in that LTO batteries can be used to isolate the motor from the load due to the LTO batteries’ ability to deliver a high current.

The defendants have cited an article dated 19 September 2024 (Exhibit AI). This article describes LTO batteries and their use in electric vehicles, but a hybrid generator is not mentioned at any point. The article primarily states that LTO batteries are advantageous compared to earlier lithium-ion batteries because LTO batteries can charge quickly.

However, the invention in the contested patent is aimed at minimising the motor, which operates optimally in normal mode and is ‘much smaller than for the peak power requirements’; thus,

the hybrid generator, which is the subject of the patent, will never utilise the LTO batteries' ability to charge quickly.

None of the sources cited by the defendants describe that LTO batteries can be used to shield the motor and thus the motor operation from the load. Therefore, a person skilled in the art would not be motivated to modify GB 928 (Annex A) or US 791 (Annex G) in such a way that the resulting hybrid generator falls within the scope of the third set of subsidiary claims.

In the fourth set of subsidiary claims (Annex 89), claim 1 is further restricted by incorporating technical content from claim 3. The claim numbering has been adjusted. The defining part of claim 1 is thus that: "the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements, and wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load."

None of the cited publications describe the above technical features in combination with the disclosed portion of claim 1. GB 928 describes, on page 6, lines 2–6, the embodiment shown in Figure 1, in which the motor supplies power to both the batteries and the inverter. Thus, the batteries and inverter in GB 928 are not dimensioned to meet peak power requirements alone.

The fourth subsidiary claim further differs from GB 928 (Annex A) in the following respect: *"wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load, and the rechargeable energy storage unit is a lithium-titanate battery* unit"

Neither Annex K1 nor Annex L describes the inverter as being dimensioned to match a peak power requirement of a load. The fourth subsidiary claim further differs from the products (Annex K1) and (Annex L) in the following respects:

> *"wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load,"*

It is noted that the products utilise a *boost mode*, in which the inverter and motor are in series for peak loads.

The fourth auxiliary claim further differs from US 791 (Annex G) in the following respect: *"wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load, and the rechargeable energy storage unit is a lithium-titanate battery* unit"

As previously explained, the last three lines of paragraph [0049] in the contested patent describe that the inverter is designed for average consumption and not for peak loads.

These further characterised technical features, in combination with the other technical features, achieve a prepared isolation of the motor from the load in relation to claim 1 as issued.

No combination of the two cited publications would therefore result in a hybrid generator with the following combination of distinctive technical features:

> "the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements, and wherein the inverter unit is configured such that the AC power output matches a peak power requirement of the load, and the rechargeable energy storage unit is a lithium-titanate battery unit."

It follows that the fourth set of subsidiary claims is patentable, cf. Art. 52 EPC.

**The Court's reasoning**

The Court's jurisdiction regarding infringement proceedings

Hybridgenerator is the proprietor of patent EP 4 238 202 B1. Hybridgenerator is therefore entitled to bring the case before the Court, cf. Article 47(1) of the UPC Agreement.

The Unified Patent Court has jurisdiction to hear the infringement action and has international jurisdiction.

The Unified Patent Court is a common court within the meaning of Article 71a(1) and Article 71a(2)(a) of the Brussels Ia Regulation, Regulation No 1215/2012. The Unified Patent Court therefore has jurisdiction if the courts of a Member State would, under the Regulation, have jurisdiction to hear a case pursuant to Article 32(1) of the UPC Agreement, cf. Article 71b(1) of the Brussels Ia Regulation. This is the case here.

Since the defendants are domiciled within a contracting Member State, this follows from Article 4(1) of the Regulation.

Furthermore, the jurisdiction of the Unified Patent Court, including its Copenhagen branch, must be deemed to be accepted, as none of the parties to the proceedings has lodged a preliminary objection within the time limit set out in Rule 19(1) of the Rules of Procedure, cf. Rule 19(7) of the Rules of Procedure.

The Court's jurisdiction regarding counterclaims for invalidity

The Unified Patent Court is also competent to hear the counterclaim for invalidity.

Pursuant to Article 32(1)(e) of the UPC Agreement, the Unified Patent Court has exclusive jurisdiction in proceedings concerning counterclaims for invalidity of (European) patents.

The Unified Patent Court, as a common court of the Member States, has international jurisdiction under Article 24(4), Article 71a(2)(a) and Article 71b(1) of the Brussels Ia Regulation, has international jurisdiction to hear the present counterclaim for invalidity

Relevant person skilled in the art
The parties refer extensively to the person skilled in the art in connection with the validity challenges. According to the defendants' proposal, to which Hybridgenerator has not objected, the person skilled in the art is to be assumed to be an electrical engineer. As the person skilled in the art is an objective legal construct necessary for the correct application of the law, the Court does not consider itself bound by the parties' proposal.
In order to examine the validity challenges under Articles 56 and 83 EPC in the present case, the Court will assume that the relevant person skilled in the art holds a university degree in electrical engineering with a specialisation in power and energy engineering.

Since the technical problem to be solved is the dimensioning of a primary energy source, the Court does not assume that the person skilled in the art possesses mechanical skills. Although the examples in the patent mention the use of an internal combustion engine in combination with a generator, claim 1 refers to a generic primary energy source. This emphasises that the invention is applicable regardless of whether an engine is present, and that the invention can thus be readily understood without insight into engine technology.

The contested patent

The actual filing date – claim of priority

The defendants (who are also counterclaimants) base their invalidity action on prior art and prior public use that took place before the priority date. The Court has no reason to rule on the actual filing date of the approved patent claims.

Technical background – problem solved
The patent relates to the field of mobile hybrid generator systems. The defining part of claim 1 addresses the shortcoming that devices according to the prior art have an oversized primary energy source (i.e. motor and generator), which increases costs and reduces mobility.
This is explained in paragraphs 0011–0012.

The *Background* section discusses a number of further shortcomings which, however, are not solved by the invention and/or do not affect all known hybrid generator systems. These shortcomings include: poor fuel economy (section 0003), internal combustion engines operating at an inefficient or harmful speed (section 0004), too few quiet periods when the engine is at rest (section 0005).

The *'Background'* section is therefore at least partially outdated.

Determination of the scope of protection

Pursuant to Article 69 of the UPC Agreement, read in conjunction with the Protocol on its interpretation, the patent claim is not merely the starting point, but the decisive basis for determining the scope of protection of a European patent. When interpreting a patent claim, it is not only the exact wording in a linguistic sense that is decisive. The description and drawings must always be taken into account as aids to the interpretation of the patent claim and not merely used to clarify any ambiguities in the patent claim. However, this does not mean that the patent claim serves merely as a guideline, and that its subject-matter also encompasses what, after examination of the description and drawings, appears to be the patent proprietor's intention regarding the scope of protection.

In applying these principles, appropriate protection for the patent proprietor must be combined with sufficient legal certainty for third parties. The patent claim must be interpreted from the perspective of a person skilled in the art (UPC_CoA_335/2023, decision of 26 February 2024, paragraph 2 and p. 26 et seq. – 10x Genomics v Nanostring; UPC_CoA_1/2024, decision of 13 May 2024, paragraph 26 – VusionGroup v Hanshow; UPC_CoA_182/2024, decision of 25 September 2024, paragraph 82 – Mammut v Ortovox).

Proposed solution

The features of the sole independent claim 1 will be referred to by the following numbering:

*1.1 A mobile hybrid generator system for providing grid-like AC power output to a load at off-grid locations,*

*1.2 the hybrid generator system comprising a housing accommodating:*

*1.3 - a rechargeable electrical energy storage unit, such as a battery, configured to provide a DC power output,*

*1.4 - at least a first primary energy source, such as a combustion engine, for charging the rechargeable energy storage unit, and*

*1.5 - an inverter unit configured to convert the DC power output from the rechargeable energy storage unit into the grid-like AC power output, wherein the mobile hybrid generator is configured such that*

*1.6 1) the grid-like AC power output is supplied solely from the rechargeable energy storage unit via the inverter unit, and*

*1.7 2) the output from the primary energy source is used only to charge the rechargeable energy storage unit, Page 6 26373642.3*

*1.8 both during normal mode operation, with normal mode power requirements, and during peak power operation, with peak power requirements,*

*1.9 the mobile hybrid generator system characterised in that the at least first primary energy source is dimensioned to the normal mode power requirements, i.e. much smaller than for the peak power requirements.*

It is clear from the EPO's file that the characterising features 1.1 to 1.8 correspond to the technical content of GB2493631 ("D1").

Technical teaching of the patent
Characteristic feature 1.9 is an instruction to dimension a "first primary energy source" (typically an internal combustion engine and a generator driven by it) in accordance with the power requirements in normal operation, it being understood that these requirements are "much smaller" than the peak power requirements. This instruction is relevant in the design phase, but not during operation. It reduces capital expenditure and improves the mobility of the hybrid generator system.

Features 1.1–1.5 are generic in the sense that they are found in many known hybrid generator systems. The additional features 1.6–1.8 define a class of hybrid generator systems in which there is never any direct energy flow from the "first primary energy source" to the load. Instead, all energy supplied by the hybrid generator system to the load has first been temporarily stored in the "rechargeable energy storage unit".

The technical teaching of claim 1 is thus to apply the dimensioning-related instruction in feature 1.9 to this particular class of hybrid generator systems.

Feature 1.1

The electrical characteristics of the "grid-like AC power output" are defined in section 0010.

Claim 1 covers at least a first embodiment in which the hybrid generator system supplies alternating current continuously for as long as it is in operation.

This is because the term "grid-like" has a connotation of being highly reliable and/or available almost always. This is supported by the overall purpose, which, according to section [0001], is that the present description relates to a mobile hybrid generator system for supplying
grid-like AC output to a consumer *in locations off the mains grid*. Furthermore,

there are several passages in the description that mention situations:

- where the load is supplied continuously

(paragraph 0015: “it is the status of the rechargeable energy storage unit, …, which determines whether charging from the primary energy source shall take place. … Hence, in the case of an engine as the primary energy source, the engine is running completely independent of the load requirements.”), or

- where the inverter is cooled by the simultaneously running “primary energy source”

(clause 0022: “the air intake to the engine is provided around the location of the inverter unit and the rechargeable energy storage unit, such that a flow of air is provided around the inverter unit and the rechargeable energy storage unit when the engine is running, which can be used as a cooling source for the inverter unit and the rechargeable energy storage unit”, or

- where the hybrid generator is in operation 24 hours a day

(paragraph 0039: “The 140 kVa hybrid generator exemplified herein can, for example, provide 24-hour normal operation and only require approximately 2 hours of engine operation per day if the battery is charged at peak power.”).

Furthermore, the central technical teaching of the patent – that limiting the size of the primary energy source
- – mean that the primary energy source is active for long periods in order to keep pace with the continuous supply of alternating current.

The significant disadvantage of having to deactivate the AC output during these periods would at the very least have warranted a comment or explanation in the patent.

However, as this is nowhere to be found, the court cannot rule out that the first embodiment is covered by claim 1.

A second embodiment, in which the hybrid generator system supplies alternating current with interruptions, cannot be excluded from the scope of protection of claim 1.

Feature 1.3

The term ‘rechargeable energy storage unit’ may denote a single monolithic unit, but it could just as easily refer to a modular structure.

In the description, a modularised LTO battery unit in paragraph 0049 and battery modules in paragraph 0050 are examples of modular structures.

The patent does not explicitly mention rechargeable energy storage devices that are not batteries, such as capacitors.

Feature 1.4

It is consistently apparent from the patent that the “primary energy source” supplies electrical energy. In embodiments where an internal combustion engine is used, the term

("primary energy source") therefore refers to the combination of this engine and a generator driven by it (paragraph 0042).

Features 1.6–1.8

Features 1.6 and 1.7 permit the "rechargeable energy storage unit" to be either connected to the inverter unit to supply an external load or connected to the primary energy source to charge the energy storage unit. The same features prohibit any connection from the primary energy source to the inverter unit.

According to feature 1.8, these conditions apply during both normal operation and peak load operation.

Section 0014 describes a preferred variant in which there is no connection between the "primary energy source" and the AC inverter:

> [0014] The presently disclosed hybrid generator system is preferably configured such that output from the primary energy source is only used to charge the rechargeable energy storage unit – in that case the output from the primary energy source cannot be used for the load. I.e. typically there is no direct connection between the primary energy source and the inverter unit; in that case they are only connected via the rechargeable energy storage unit.

Although paragraph 0014 deals solely with a preferred variant, it must nevertheless be noted that the patent does not describe any third operating mode beyond normal operation and peak load operation, e.g. a boost mode in which claims 1.6–1.7 would be temporarily disregarded. In contrast, paragraph 0022 highlights the advantages arising from the fact that there is no connection between the two units:

> [0022] A major advantage of decoupling the primary energy source from the load is that the primary energy source can be operated completely independently, e.g. in terms of AC power frequency.[..]

Taking all the features into account, in particular feature 1.1, whose term 'grid-like', as mentioned, has a connotation of being extremely reliable and/or available almost always, it is the Court's view that such a third state is not implicitly covered either, since a connection between the 'primary energy source' and the inverter unit is described as clearly undesirable throughout the patent (paragraphs 0011, 0014, 0022).

The Court will therefore interpret features 1.6–1.8 as a categorical prohibition on a connection between the "primary energy source" and the inverter unit, such that a hybrid generator system which temporarily sets aside features 1.6–1.7 is not covered by claim 1.

Feature 1.9

The examples in paragraphs 0011 and 0012 establish that "normal mode power requirements" and "peak power requirements"

must be expressed as power, possibly with an indication of how long the power must be maintained (section 0011: “140 kW for a few seconds”).

This appears to be in line with standard terminology within the technical range. In general terms, an energy source is also said to be ‘rated’ for a power requirement if it can deliver that power requirement without exceeding the manufacturer’s specifications (specified parameter limits) and/or without suffering damage, premature wear or risking damage to the surrounding environment.

The relative term *“much smaller”* is illustrated only in paragraph 0031 (90 kVA compared to 50 kVA). The numerical data in paragraph 0011 are not relevant, as they relate to a generator’s continuous power output compared to peak power.

In the absence of further guidance in the patent, the Court will consider the requirement that it must be “much smaller” to be satisfied, provided that the power requirement in normal operation shows a noticeable numerical difference compared to – and is less than – the peak load power requirement, and that the sizing is consistent with this. A hybrid generator system in which the power requirement in normal operation and the peak load power requirement are approximately equal therefore falls outside the scope of claim 1.

Requirement 1 defines an overall architecture for the hybrid generator system, where all AC output is supplied by the inverter. From this, it can be directly and unambiguously inferred that the inverter must be dimensioned according to ‘peak power requirements’.

Main request – Claim as approved

Validity

Amendments beyond the filed application

The defendants argue that the amendments to claim 1 contravene Article 123(2) of the EPC.

The defendants thus argue that feature 1.9 was described in the filed application in conjunction with the teaching that the inverter must be sized according to the peak power requirement. The omission of the latter constitutes an unacceptable intermediate generalisation.

In the Court’s view, this dimensioning of the inverter is already implicit in feature 1.9 when that feature is read in the proper context.

The defendant further argues that feature 1.9 is described only in the context of a motor and not in the context of primary energy sources in general. This is said to be a further unacceptable (intermediate) generalisation.

In the Court’s view, the relevant teaching is neither based on nor linked to the specific characteristics of a motor. The generalisation is therefore legitimate.

The defendant further argues, with regard to feature 1.8, that the application as filed does not describe the relationship between operation in normal mode and power requirements in normal mode, nor the relationship between operation at peak power and peak power requirements.

The Court notes that the term 'power requirements' appears several times in the application as filed. It is clear that a set of power requirements applies to each mode. The amendment merely introduces a designation for each of these.

The conclusion is therefore that the defendants have not convincingly demonstrated that these amendments are contrary to Article 123(2) of the EPC.

Sufficiency of the description

Legal basis

The conclusions in the Court of Appeal's decision in *Amgen v Sanofi/Regeneron* (UPC_CoA_528/2024, UPC_CoA_529/2024, decision of 25 November 2025) establish the following test for sufficiency:

> *5. Sufficiency must be examined on the basis of the patent as a whole, that is to say on the basis of the claims, description and drawings, from the perspective of the person skilled in the art with his common general knowledge at the filing or priority date.*
>
> *6. The test to be applied is whether the skilled person is able to reproduce the claimed subject matter on the basis of the patent without any inventive effort and without undue burden. An invention is sufficiently disclosed if the patent specification shows the skilled person at least one way – and in the case of functional features: one technical concept – of performing the claimed invention.*
>
> *8. A reasonable amount of trial and error does not prevent the invention from being enabled.*

The Court interprets the term 'at least one way' to mean that the description of a single method of carrying out the invention is sufficient only if it enables the invention to be carried out within the entire scope of the claims. More precisely, the description must enable a person skilled in the art to carry out the invention without undue burden within the entire scope of protection.

The present case

The defendants argue that the invention is insufficiently described on account of features 1.6–1.8. The defendants' argument is that the same two terminals on a battery are used for both charging and discharging, so that the first primary energy source, during a period of simultaneous charging and discharging, will inevitably be connected to the inverter via the said terminals.

The Court finds the defendants' argument well-founded as regards the first embodiment. The 'rechargeable energy source' is a battery or a modular battery, and the same battery terminals are used for both charging and discharging.

Hybridgenerator has not provided evidence that this feature is not found in a commonly known type of battery or any battery mentioned in the patent. The Court notes that a capacitor has the feature that the same two plate terminals are used for both charging and discharging the capacitor.

Figure A is a simplified electrical diagram of the main components of the hybrid generator system, where the dotted circles represent the battery terminals.

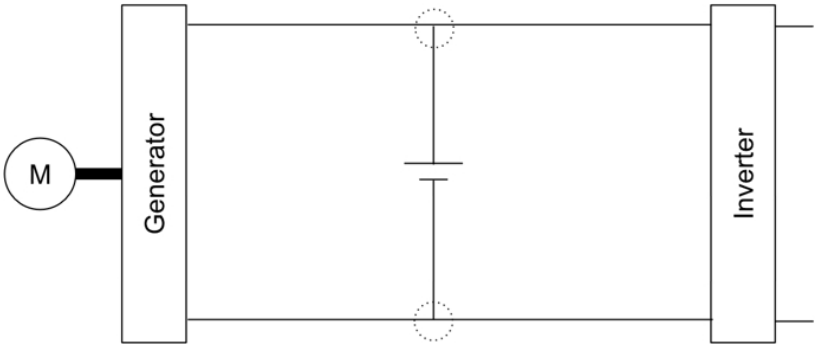



Figure A

The Court finds that it is within the competence of a person skilled in the art to provide switches which can be operated to establish a connection between the battery terminals and the generator, and, independently thereof, a connection between the battery terminals and the inverter.

However, a hybrid generator system according to the first embodiment cannot supply alternating current continuously without recharging the battery from time to time, and both of these connections will exist simultaneously during a recharging period.

As shown in Figure A, during the recharging period, the generator ("primary energy source") is connected to the battery, which in turn is connected to the inverter. This establishes a direct connection from the generator to the inverter, which is contrary to feature 1.6.

This deficiency cannot be remedied on the basis of the description, the drawings or the dependent claims. In particular, the patent states in paragraph 0014 that:

*"there is no direct connection between the primary energy source and the inverter unit, in that case they are only connected through the rechargeable energy storage unit"*

Although this statement immediately suggests that feature 1.6 is nevertheless fulfilled, the Court cannot reconcile this statement with the fact that the same battery terminals are used for both charging and discharging.

Nor is the inherent impossibility of fulfilling feature 1.6 in the first embodiment refuted by Figures 1, 1A, 2 and 2A, which merely depict the energy storage unit (the battery) with an incoming and an outgoing arrow.

In paragraph 0013, these figures are introduced as schematic overviews rather than actual electrical diagrams. This suggests that the filled-in arrows represent energy flows rather than electrical currents.

Therefore, none of Figures 1, 1A, 2 and 2A can refute the fact that when the DC generator is electrically connected to the energy storage unit, and the energy storage unit is electrically connected to the inverter unit, there is also a direct electrical connection from the DC generator to the inverter unit.

The hybrid generator's defence against the attack regarding insufficiency in the description is not convincing.

Firstly, Figure 4 shows a modular structure in which the battery has multiple battery cells and the inverter has multiple parallel sub-inverters.

Hybridgenerator argues that, in a hybrid generator system with such a modular structure, it is within the capabilities of a person skilled in the art to design a rotating connection scheme whereby each battery cell either (a) receives charging current from the first primary energy source, (b) supplies load current to the inverter, or (c) is disconnected.

Hybridgenerator appears to argue that the scope of protection is limited to a modular configuration with rotating switching, which maintains a separation between the first primary energy source and the inverter, as each battery cell is never subjected to simultaneous charging and discharging.

The Court finds that a suitable rotary coupling sequence can be developed by combining elements of common general knowledge as at the priority date, and that this lies within the capabilities of the relevant person skilled in the art. However, the Court finds that the description is insufficient, as the patent nowhere mentions that any form of switching sequence must be used to perform steps 1.6–1.8.

The patent outlines even less – even at a general level – the characteristics of a rotary coupling mechanism that would achieve this. Due to the need to gather, filter and collate a large amount of prior art in the absence of technical guidance from the patent, the skilled person is required to generate a new technical insight, which constitutes an unreasonable burden.

Secondly, Hybridgenerator refers to the alleged description in GB2493631A, paragraphs 0014–0015, of a "second mode" in which features 1.6–1.8 are present:

> [0014] In another embodiment of the invention, a second power mode 92 includes shutting the engine and the generator off. The second power mode 92 is implemented when the load requirements can be met solely by the ESS 30, and running the generator set would require the engine to be run inefficiently at any speed…
> [0015] Consequently, under very low load conditions, when engine efficiency is poor, for example at idle speed, the system 10 can shut the engine down entirely and provide output power exclusively from the ESS 30. When the ESS 30 reaches a predetermined discharge level, the system automatically restarts the engine 21 and operates the engine 2 at an efficient load point by powering the load and charging the ESS 30 simultaneously.

Hybridgenerator appears to regard this not primarily as a guide to how the invention is to be carried out, but as evidence that the implementation of features 1.6–1.8 lies within the capabilities of a person skilled in the art.

The Court notes that GB2493631A teaches the use of the 'second mode' whilst the load is low, such that features 1.6–1.7 are at least not fulfilled 'during peak power operation'.

The Court interprets features 1.6–1.8 as a categorical prohibition on a connection between the primary energy source and the inverter unit, but GB2493631A clearly does not meet this requirement because the second mode is followed by power supply to the load and charging of ESS 30 simultaneously, cf. paragraph 0015.

Thirdly, Hybridgenerator refers to GB2434928A, page 5, lines 22–27.

In the Court's view, it is obvious to the person skilled in the art that GB2434928A relates to a hybrid generator system with an electrical topology corresponding to Figure A, as mentioned above.

The person skilled in the art will therefore conclude from the cited paragraph that the inverter in the alternative embodiment does not supply energy to the load as long as: "DC generator 120 … routes all of the voltage to the batteries 130 to charge them."

Due to the discontinuous supply of output power, the person skilled in the art will realise that the alternative embodiment in GB2434928A is not useful for carrying out the first embodiment in claim 1.

This conclusion is in no way altered by Figures 1 and 2 of GB2434928A, which may give the erroneous impression that the battery 130 has a single input and a single output.

However, like Figures 1, 1A, 2 and 2A in the patent, Figures 1–2 in GB2434928A are not electrical diagrams but block diagrams (page 2, lines 16–17), in which the arrows may be understood as energy flows – not electrical currents – and should therefore not be interpreted as indicating actual battery input and output connections.

For these reasons, and because the person skilled in the art is unable to carry out the first embodiment without undue burden, the Court finds that the patent does not enable the invention according to claim 1 to be carried out within the entire scope of the claims.

The patent is therefore invalid as it does not comply with Article

83 of the EPC. Novelty in relation to GB2434928A
The Court finds that GB2434928A discloses all the features of the second embodiment.

The Court finds that Hybridgenerator's observations that the defendants unjustifiably combine descriptions belonging to different embodiments – primarily an 'alternative embodiment' (page 5, line 22) and 'some

embodiments', page 6, line 2) – have been convincingly refuted by the defendants' technical arguments.

For the reasons set out above, the set of features 1.6–1.8 is insufficiently described for the first embodiment, in which simultaneous charging and discharging of a battery takes place.

The same insufficient description has not been demonstrated for the second embodiment, in which the hybrid generator system supplies output power intermittently, e.g. by allowing the inverter to rest during recharging periods.

However, the second embodiment lacks novelty in relation to the "alternative embodiment" described on page 5, lines 22–27 of GB2434928A. The "alternative embodiment" comprises feature 1.6 ("by the batteries 130 only") and feature 1.7 ("routes all of the voltage to the batteries to charge them").

The Court further finds that feature 1.9 is described on page 6, lines 2–6:

"However, in some embodiments of the present invention, the surge rating is dictated by the size and/or capabilities of the batteries 130 and the inverter 125. As such, a relatively higher surge rating may be achieved by a generator (such as the generator 115) that includes an inverter 125 and one or more batteries 130, than by a generator that does not include batteries and an inverter".

A person skilled in the art will read this passage with the understanding that, in the hybrid generator of GB2434928A, all output power is supplied through the inverter, and the inverter is in turn supplied by the DC generator (the motor) and the batteries.

If "peak power requirements" in claim 1 is equated with "surge rating" in GB2434928A, the teaching that: "the surge rating is dictated by the … batteries 130 and the inverter 125", implies directly and unambiguously that the motor 115 need not meet "peak power requirements". In other words, the motor 115 is instead "dimensioned to the normal mode power requirements".

The patent is therefore also invalid on the grounds that the second embodiment under claim 1 lacks novelty.

Inventive step in relation to GB2493631A

Under Article 56 of the EPC, an invention is considered to possess an inventive step if it is not obvious to a person skilled in the art from the prior art.

According to the case law of the Court of Appeal, the assessment of inventive step must be carried out as follows (see UPC_CoA_464/2024, decision of 25 November 2025, paragraphs 7 et seq., point 131 et seq. – Meril v Edwards; UPC_CoA_528/2024, decision of 25 November 2025, paragraphs 10 et seq., paragraph 126
et seq. – Amgen v Sanofi; see also UPC_CoA_335/2024, order of 26 February 2024, pp. 34 et seq. – Nanostring v 10x Genomics):

First, it must be established what the invention relates to, i.e. the objective task (the objective technical problem) must be determined. This must be assessed from the perspective of a person skilled in the art, drawing on their general technical knowledge at the time of filing or the priority date of the patent (relevant date). To this end, it must be established what contribution the invention makes to the prior art, and this must not be done by considering the individual features of the claim, but by comparing the claim as a whole in the context of the description and drawings, taking into account the inventive concept underlying the invention (the technical teaching), which must be based on the technical effect(s) which the person skilled in the art, on the basis of the application, understands to be achieved by the claimed invention.

To avoid a retrospective assessment, the objective problem should not contain references to the claimed solution.

The claimed solution is obvious if, at the relevant time, the person skilled in the art, starting from a realistic point of departure in the state of the art within the relevant technical field and with the aim of solving the objective problem, would have arrived at the claimed solution and not merely could have arrived at it.

The relevant technical field is the specific field relevant to the objective problem to be solved, as well as any field in which the same or a similar problem arises and which a person skilled in the specific technical field may be expected to be familiar with.

A starting point is realistic if its teachings would have been of interest to a person skilled in the art who, at the relevant time, wished to solve the objective problem. This may, for example, be the case if the relevant prior art already discloses several features similar to those of the claimed invention and/or addresses the same or a similar fundamental problem as that of the claimed invention. There may be more than one realistic starting point, and the claimed invention must be inventive from each of these starting points.

The skilled person possesses no inventive ability and no imagination and needs a trigger or motivation which, starting from a realistic starting point, leads him to take the next step towards the claimed invention. As a rule, a claimed solution must be regarded as non-inventive/obvious if the person skilled in the art would take the next step on the basis of the occasion or as a matter of routine and arrive at the claimed invention.

For inventive step to be present, it is not necessary to demonstrate an improvement of the claimed technical teaching in relation to the state of the art. Inventive step may also be present if the patent claims disclose a non-obvious alternative to the solutions known in the art.

*(1) Objective problem*

The contested patent explains in paragraph 0011 that: “the engine in a traditional generator is over-dimensioned because the engine must also be sized for peak power requirements, even though the specifications for normal mode operation are much lower than peak power requirements”.

In relation to the present invention, the objective problem can thus be formulated as:

*optimisation of the sizing of the primary energy source in a hybrid generator system*.

*(2) Realistic starting point*

GB2493631A was used as the main prior art reference ("D1") in the EPO grant procedure.

The Court finds that this document would be of interest to a person skilled in the art who, on the priority date, wished to solve the objective problem.

GB2493631A describes a hybrid electric generator set comprising a motor, a generator, an energy storage system (ESS), as well as a rectifier and an inverter.

The information in GB2493631A includes control logic – for example, the motor can switch off when the load is low and the ESS takes over – but it does not contain numerical examples of the sizing of the motor, generator or inverters, such as rated output power, rotational speed, generator power or inverter capacity. In particular, there is no guidance on how large the generator should be in relation to the expected load.

Accordingly, the EPO and Hybridgenerator agree that only feature 1.9 distinguishes claim 1 from GB2493631A.

*(3) Obviousness*

In the Court's view, claim 1 does not involve an inventive step because a person skilled in the art, starting from GB2493631A and wishing to solve the objective problem, would have arrived at the claimed solution.

The person skilled in the art can thus arrive at the claimed solution on the basis of the hybrid electric generator set according to GB2493631A without any modification of the latter. All that is required is to fill in the missing dimensional data.

Given the relatively low complexity within the present technical field and the vague relative term "much smaller", the person skilled in the art seeking to solve the objective problem is sufficiently encouraged to implement feature 1.9 of paragraph 0015 of GB2493631A *themselves*:

"Using the present system 10, the engine can be maintained in the optimal RPM range because *the ESS is used to provide power during load spikes*, and the engine can be shut off at times of low power requirements, thereby the system maintains a greater proportion of time with the engine in the optimal RPM range, raising the overall efficiency of the system 10."

If "peak power operation" in claim 1 is equated with "load spikes" in GB2493631A, the quoted paragraph informs the person skilled in the art that the ESS will support the engine during such periods, and thus that

the engine need not be sized for “peak power requirements”, but can be selected to be significantly smaller.

It would therefore be natural for the skilled person to use feature 1.9 in the hybrid electric generator set according to GB2493631A.

*(4) Combination with US20140277791A1*

An alternative reason for using feature 1 is found in paragraph 0049 of US20140277791A1:

“Using an inverter that can surge to 300%-400% of generator rated load in order to start large inductive loads provides non-obvious advantages. For example, the generator need only be sized for the average load, not the peak load, thereby saving considerable expense in initial purchase cost, and considerable expense in reduced operating costs. Additionally, the inverter need only be sized to meet the average, not peak load, saving considerable capital investment costs”.

Hybridgenerator argues that, due to the final sentence, the quoted text leaves the person skilled in the art with an unclear technical teaching, which is not a sufficient reason to implement feature 1.9.

The Court interprets the quoted text on the basis that *“surge”* refers to a condition in which an electrical component withstands a high load for a limited period, as opposed to a load in “steady-state”.

The patent further specifies that a generator can supply 112 kW in steady-state and approximately 140 kW for a few seconds (paragraph 0011). US20140277791A1 also presents the inverter’s peak load value in the first quoted sentence and the same inverter’s steady-state value in the third quoted sentence.

The Court interprets “is sized” in US20140277791A1 in the same way as “is dimensioned” in claim 1.

Therefore, there are at least two non-inventive paths from GB2493631A to an embodiment falling within claim 1.

Claim 1 therefore lacks inventive step in relation to GB2493631A.

Prior public use of the Hybrid Generator and inventive step in relation to US20140277791 As the Court is of the opinion that the patent is invalid for the reasons set out above, the Court sees no reason to conduct a detailed examination of the further challenges to patentability.

Dependent claims
The defendant has contested – and Hybridgenerator has defended – the dependent claims individually.

In claim 2, the first alternative is described in GB2434928A. Claim 2 therefore lacks novelty in relation to GB2434928A.

Claim 3 has the same scope as claim 1.

In claim 4, the additional technical feature is described in GB2434928A. Claim 4 therefore lacks novelty in relation to GB2434928A.

Claim 5 lacks inventive step in the light of common technical knowledge.

In claim 6, the first alternative is described in GB2434928A, and the second alternative is described by Hybridgenerator's prior public use. Claim 6 therefore lacks novelty in relation to GB2434928A.

Claim 7 lacks inventive step in relation to GB2434928A, as the use of renewable energy is common knowledge, and the surplus energy from the renewable AC source is utilised in the manner described in GB2434928A, page 5, second paragraph, and GB2493631A, paragraph 0010.

The additional technical feature in claim 8 does not justify inventive step now that claim 1 has been found invalid.

Claim 9 lacks inventive step in the light of common technical knowledge.

The additional technical features set out in claim 10 are described in GB2434928A, page 4, lines 7–8. Claim 10 therefore lacks novelty in relation to GB2434928A.

The additional technical features set out in claim 11 are described in GB2434928A. Claim 11 therefore lacks novelty.

The additional technical feature set out in claim 12 does not justify inventive step.

The additional technical feature set out in claim 13 is known from each of the three cited patent documents.

The further technical features set out in claim 14 are described in GB2434928A, page 4, lines 4–5. Claim 14 therefore lacks novelty in relation to GB2434928A.

In claim 15, the second alternative is described in GB2434928A, page 4, lines 13–18. This is sufficient to conclude that claim 15 lacks novelty in relation to GB2434928A.

The patent cannot therefore be maintained in the wording of any of the dependent

claims. Narrowed claims

Hybridgenerator has filed four subsidiary claims for the maintenance of the patent.

Subsidiary claim 1

Validity

The wording of auxiliary claim 1, which specifies a “first primary energy source” as an internal combustion engine, is intended to avoid the defendant’s challenge under Article 123(2) EPC (with which the Court does not agree, see above).

However, the wording does not improve Hybridgenerator’s position, either with regard to novelty, inventive step or sufficient description, see above.

The patent cannot therefore be upheld in the wording of auxiliary claim 1. Auxiliary claim 2

Validity

The wording under the auxiliary claim is likewise intended to avoid the defendant’s challenge under Article 123(2) of the EPC (with which the Court does not agree, see above).

However, the wording does not improve Hybridgenerator’s position, either as regards novelty, inventive step or sufficient description.

The patent cannot therefore be upheld on the basis of the wording of the auxiliary claim 2.

Auxiliary claim 3

Validity

The use of LTO batteries in a hybrid generator system of the relevant type is common knowledge. It is also known from Hybridgenerator’s marketing prior to the priority date; see the archived website dated 9 August 2020 (Annex J2).

The further limitation under auxiliary claim 3 cannot therefore restore the inventive step.

The patent cannot therefore be maintained in the wording of auxiliary claim 3. Auxiliary claim

4

Validity

Despite the additional technical features set out under this claim (the order is reversed compared to claim 3), the scope of protection is identical to that of auxiliary claim 3.

The patent cannot therefore be upheld in the wording of auxiliary claim 4 either. Infringement

The Court finds, as stated above, that the patent is invalid.

The Court notes, however, that even a hypothetical infringement is precluded by the fact that the alleged infringing products comprise DC busbars which create a direct connection between the DC generator and the inverter, thereby precluding features 1.6–1.8.

This is not altered by the fact that, in some of the alleged infringing products, there are multiple cables connecting the DC generator to the batteries and/or multiple cables connecting the batteries to the inverters.

As confirmed by the witness statement of [redacted] during the main hearing, all such cables are arranged in parallel with one another for the purpose of reducing the total resistance rather than enabling differentiated switching. It was also confirmed during the testimony that most batteries are not part of a rotating switching sequence of the type described above.

Even if one were to assume that claim 1 is valid, it would therefore not be infringed by the defendants' products.

Costs
Pursuant to Article 69(2) of the UPC Agreement and Rule 118(5) of the Rules of Procedure, a decision on costs must be made.

On 16 August 2024, Hybridgenerator ApS submitted a request to the UPC for the immediate preservation of evidence and inspection of premises without prior notice (UPC_CFI_492/2024).

Hybridgenerator ApS's request for the immediate preservation of evidence and inspection of property without prior notice was granted.

On 28 August 2024, Hybridgenerator ApS filed an application with the UPC for a provisional injunction and seizure without prior notice (UPC_CFI_501/2024). On 26 January 2026, Hybridgenerator ApS announced that it was withdrawing its application for a preliminary injunction and seizure.

In both cases, the Court decided to reserve its decision on costs in the proceedings in question until a decision had been made in the main proceedings.

Following the main hearing, the parties have each submitted a statement regarding the Court's determination of legal costs.

The Court will subsequently rule on the costs in each of these cases.

HGSystem ApS, Infotech Concept ApS and Rune Eilertsen must be regarded as having won both the infringement case (UPC _CFI_560/2024) and the counterclaim for invalidity (UPC _CFI_89/2025).

Hybridgenerator must therefore pay full legal costs to HGSystem ApS, Infotech Concept ApS and Rune Eilertsen in both cases.

The value of the claim in both cases is stated to be less than EUR 500,000. Consequently, the reimbursement cap must be determined on the basis of a total value of the claim of less than EUR 1,000,000. The maximum amount of legal costs eligible for reimbursement is therefore set at a total of EUR 112,000 for the infringement claim and the counterclaim for invalidity.

**The Court's decision**

HGSystem ApS, Infotech Concept ApS and Rune Eilertsen are acquitted of claims 1, 2 and 3 brought by Hybridgenerator.

Patent EP 4 238 202 B1 is declared invalid.

Hybridgenerator ApS's alternative claims for the maintenance of patent EP 4 238 202 B1 in any of the proposed amended forms, see Annexes 86, 87, 88 and 89, are dismissed.

Hybridgenerator ApS is ordered to pay the costs of HGSystem ApS, Infotech Concept ApS and Rune Eilertsen in both the infringement proceedings (UPC _CFI_560/2024) and the counterclaim proceedings for invalidity (UPC
_CFI_89/2025).

The value of the claim in UPC _CFI_560/2024 is set at less than EUR 500,000. The

value of the claim in UPC _CFI_89/2025 is set at less than EUR 500,000.

The maximum amount of recoverable legal costs is set at a total of EUR
112,000 for the infringement claim and the counterclaim for invalidity.

Copenhagen, 29 May 2026

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|---|---|
| Presiding Judge Agergaard | Peter Juul Agergaard<br>Digitally signed by Peter Juul Agergaard<br>Date: 28 May 2026 09:30:41 +02'00' |
| Legally qualified judge Dr Schilling | Stefan Schilling<br>Digitally signed by Stefan Schilling<br>DN: cn=Stefan Schilling, c=DE, email=stefan.schilling@unifiedpatentcourt.org<br>Date: 28 May 2026 15:17:34 +02:00 |
| Legally qualified judge Johansson | Stefan Erik Johansson<br>Digitally signed by Stefan Erik Johansson<br>Date: 28 May 2026 10:43:38 +02'00' |
| Technically qualified referee Dr Hansson | Digitally signed<br>Hansson Anders [redacted]<br>28 May 2026 09:49:12 +0200<br>Unified Patent Court<br>Einheitliches Patentgericht<br>Juridiction unifiée du brevet |

**INFORMATION ON APPEALS**

Any party whose claims have been rejected in whole or in part may, within two months of the decision being served, bring the case before the Court of Appeal (Article 73(1) of the UPC Agreement, Section 220.1(a),
224.1(a) of the Rules of Procedure.

**INFORMATION ON ENFORCEMENT**

A certified copy of the enforceable decision shall be issued by the Vice-Chancellor at the request of the enforcing party, Rule 69 of the Rules of Procedure.