

Sun Electric Pte Ltd v Sunseap Group Pte Ltd and others and another suit
[2019] SGHCR 11

Case Number : Suit No 1229 of 2016 (Summons Nos 2901 of 2019 and 2922 of 2019) and Suit No 190 of 2018 (Summons Nos 2902 of 2019 and 2921 of 2019)
Decision Date : 27 August 2019
Tribunal/Court : High Court
Coram : Justin Yeo AR
Counsel Name(s) : Mr Chan Wenqiang and Mr Alvin Tan (Ravindran Associates LLP) for the Plaintiff; Mr Nicholas Lauw and Ms Leow Jiamin (Rajah & Tann Singapore LLP) for the Defendants.
Parties : Sun Electric Pte Ltd — Sunseap Group Pte Ltd — Sunseap Energy Pte Ltd — Sunseap Leasing Pte Ltd

Civil Procedure – Interrogatories

Civil Procedure – Pleadings – Further and Better Particulars

Patents and Inventions – Infringement

27 August 2019

Judgment reserved.

Justin Yeo AR:

1 This judgment concerns four applications for further and better particulars and the withdrawal of interrogatories, brought in two related patent infringement suits, *ie* Suit No 1229 of 2016 (“Suit 1229”) and Suit No 190 of 2018 (“Suit 190”). In essence, the alleged patent infringers claim that the patent proprietor had failed to sufficiently particularise certain aspects of its infringement claims; the patent proprietor has denied this and further contended that, in any event, any further and better particulars can only be provided after the alleged infringers have responded to certain interrogatories. This has led to a procedural impasse, resulting in the four applications being taken out.

2 I heard the four applications together on 19 August 2019 and now render my decision.

Background

3 Sun Electric Pte Ltd (“the Plaintiff”) is the registered proprietor of two Singapore patents (collectively, “the Patents”), namely:

(a) Singapore Patent Application No 10201405341Y (“the 341 Patent”), in respect of a power grid system and method of determining power consumption at one or more building connections in the power grid system.

(b) Singapore Patent Application No 10201406883U (“the 883 Patent”), in respect of a power grid system and method of consolidating power injection and consumption in a power grid system.

4 Sunseap Group Pte Ltd (“the 1st Defendant”), Sunseap Energy Pte Ltd (“the 2nd Defendant”) and Sunseap Leasing Pte Ltd (“the 3rd Defendant”) (collectively, “the Defendants”) offer electricity

products via off-site power purchase agreements ("PPA").

5 The Plaintiff brought Suit 1229 and Suit 190 against the Defendants for alleged infringement of system and process claims in the 341 Patent and the 883 Patent, respectively. The common subject matter in both suits relates to the PPA between Apple Inc ("Apple") and the Defendants, pursuant to which the Defendants would generate electricity from various solar-powered generation facilities and supply the electricity to Apple.

6 In Suit 190, the Defendants applied for further and better particulars of, *inter alia*, "What each Defendant allegedly relies on that constitutes a 'consolidation unit'". This was the subject matter of my earlier decision in *Sun Electric Pte Ltd v Sunseap Group Pte Ltd and others* [2019] SGHCR 4 ("*Sun Electric*"). The Plaintiff objected to these requests on the basis that they required the Plaintiff to prematurely construe the term "consolidation unit", and effectively sought evidence rather than material facts. In response, the Defendants contended that the requests were simply for the Plaintiff to provide at least one instance of each type of infringement alleged, as required by O 87A r 2(2) of the Rules of Court (Cap 322, R 5, Rev Ed 2014). In addition, Defendants' counsel argued that the Plaintiff ought to further particularise the allegations concerning reliance on a "consolidation unit", because the term had no obvious meaning in the English language and the Defendants were otherwise unable to identify which of their acts or operations were allegedly infringing in nature. For the reasons elaborated upon in *Sun Electric* at [17]–[25], I ordered that the Plaintiff provide the further and better particulars referred to at the outset of this paragraph.

7 The Defendants subsequently sought, by way of a letter, further and better particulars in Suit 1229 that mirrored the particulars ordered in *Sun Electric*. The Plaintiff provided further particulars in Suit 1229, and filed further particulars in Suit 190 pursuant to the order in *Sun Electric*. The Plaintiff essentially particularised the Defendants' alleged reliance on a "consolidation unit" in the following terms:

The Defendants collectively rely on one or more devices configured to process power metering data. Said device(s) may be relied on either alone or in combination with each other.

8 For certain other particulars, the Plaintiff repeated the above but with an additional sentence, as follows:

The Defendants collectively rely on one or more devices configured to process power metering data. Said device(s) may be relied on either alone or in combination with each other. *Said device(s) can include but are not limited to the device(s) stated in the answers [above].* (emphasis added)

9 In an exchange of letters, the Defendants objected to the sufficiency of the particulars provided, and the Plaintiff indicated a willingness to provide further particulars after the Defendants provide sufficient answers to certain interrogatories that were served without order of court ("the Interrogatories"). The Interrogatories are set out in an annex to this judgment ("the Annex", which includes blackline edits to reflect the orders made at [34(a)(i)] below).

The Applications

10 Dissatisfied with these developments, the Defendants filed the four applications that are the subject of the present judgment:

(a) Summons No 2902 of 2019 ("SUM 2902") in Suit 190, seeking a striking out of references

to “consolidation unit” in the Plaintiff’s pleadings, or alternatively, for further and better particulars to be provided on pain of an unless order.

(b) Summons No 2901 of 2019 (“SUM 2901”) in Suit 1229, seeking further and better particulars of references to “consolidation unit” in the Plaintiff’s pleadings, or alternatively, for the striking out of these references.

(c) Summons No 2921 of 2019 (“SUM 2921”) in Suit 190 and Summons No 2922 of 2019 (“SUM 2922”) in Suit 1229, seeking the withdrawal of the Interrogatories and an order that the Plaintiff shall not serve further interrogatories without the leave of court.

Parties’ arguments

Parties’ arguments in SUM 2901 and SUM 2902

11 In relation to SUM 2901 and SUM 2902, counsel for the Defendants, Mr Nicholas Lauw (“Mr Lauw”), contended that the particulars provided thus far left the Defendants none the wiser as to what they were using that allegedly constituted reliance on a “consolidation unit”. Given that the Plaintiff had failed to give at least one instance of each type of infringement alleged as required by O 87A r 2(2) of the Rules of Court, the references to “consolidation unit” in the Plaintiff’s pleadings ought to be struck out. In addition, Mr Lauw argued that the Plaintiff’s attempt to defer the provision of further and better particulars until after the Interrogatories were answered sought to “put the cart before the horse”. He emphasised that the Plaintiff ought not to be allowed to interrogate without first furnishing the requisite particulars (citing *Wright Norman and anor v Oversea-Chinese Banking Corp Ltd and anor* [1992] 2 SLR(R) 452 at [16]–[17], where the Court of Appeal agreed with the High Court that interrogatories could only be raised on specific particulars of negligence).

12 Counsel for the Plaintiff, Mr Chan Wenqiang (“Mr Chan”), raised two main arguments:

(a) First, the Defendants ought to be able to identify the aspects of their operations which constitute reliance on a “consolidation unit”, if they obtain the assistance of a person skilled in the art. In this regard, Mr Chan pointed out that there was no evidence that the Defendants had consulted with experts on this issue.

(b) Second, even if further and better particulars were warranted, the provision of such particulars should be deferred pending the Defendants’ response to the Interrogatories (citing *Prima Bulkship Pte Ltd (in creditors’ voluntary liquidation) and another v Lim Say Wan and another* [2015] SGHCR 10 (“*Prima Bulkship*”).

Parties’ arguments in SUM 2921 and SUM 2922

13 In relation to SUM 2921 and SUM 2922, there was no dispute over the general principles governing interrogatories as set out in *Prudential Assurance Co Singapore Pte Ltd v Tan Shou Yi Peter* [2018] SGHCR 4 (“*Prudential Assurance*”). The dispute focused on whether the Interrogatories were relevant and necessary in the present case.

14 Mr Chan submitted that the Interrogatories were relevant and necessary, given that they were specifically targeted towards parts of the relevant patent specifications (citing *Rockwell International Corporation and another v Serck Industries Limited* [1988] FSR 187 at 205, which states that a plaintiff “may administer interrogatories framed on parts of the specification and ask the defendant whether he used the processes described therein and forming part of his invention, taking them step

by step”). He emphasised that the Plaintiff had identified how each interrogatory correlated to a specified feature of the “consolidation unit”, [\[note: 1\]](#) and that the answers given would provide useful confirmation as to whether the Defendants had performed these functions by “manual” or “automated” means, in “hardware” or “software” format.

15 Mr Lauw argued that the Interrogatories ought to be withdrawn, for three reasons:

(a) First, the Plaintiff was using the Interrogatories to blatantly fish for particulars to support its alleged claim, in the hope that it would stumble upon something enabling it to plead what the “consolidation unit” is. It would not be fair for the Plaintiff to make its allegations first, and hope to subsequently substantiate its allegations through discovery or interrogatories (citing *Thomas & Betts (S E Asia) Pte Ltd v Ou Tin Joan and anor* [1998] SGHC 57 (“*Thomas & Betts*”) at [22]–[24]). Specifically in relation to patent actions, Mr Lauw emphasised that it is “not the practice... to allow interrogatories to travel outside the particulars, and to embrace questions generally of a roving and fishing character” (citing *Aktiengesellschaft Für Autogene Aluminium Schweissung v London Aluminium Company, Limited* [1919] 2 Ch 67 at 75).

(b) Second, the Plaintiff was attempting to get the Defendants to answer the particulars that the Plaintiff had itself been ordered to provide in *Sun Electric*. The Plaintiff was in effect requiring the Defendants to define the Plaintiff’s case, and this ought not to be permitted.

(c) Third, the Interrogatories were, in any event, irrelevant and unnecessary. In relation to the interrogatories in Suit 1229, interrogatories 1 and 2 pertained to an unasserted claim, while interrogatory 3 did not relate to material facts. [\[note: 2\]](#) In relation to the interrogatories in Suit 190, interrogatories 1 and 2 pertained to the Defendants’ denials of the Plaintiff’s pleaded case, rather than the Plaintiff’s pleaded case itself. In addition, interrogatory 1(b) in Suit 190 was irrelevant because the data in question was obtained from third parties rather than the Defendants. Interrogatories 2(a) and 3(a) were unnecessary because answers and documents have already been provided in Suit 1229 and the suits will be consolidated in due course. Interrogatory 3(b) was also unnecessary because the Defendants had previously responded to a similar request in the context of further and better particulars in Suit 190.

Decision

16 The four applications call for a determination of two broad issues:

(a) whether the particulars provided by the Plaintiff were sufficient; and

(b) if not, whether the Plaintiff’s provision of further and better particulars should be deferred pending the Defendants’ responses to the Interrogatories.

Whether the particulars provided were sufficient

17 The general principles regarding the provision of particulars in a patent infringement claim are well established. In gist, a plaintiff does not generally have to construe the terms and claims of his patent at an early stage of infringement proceedings, but is obliged to inform the defendant of sufficient particulars to enable the defendant to know the case to be met (see *Sun Electric* at [17]–[21], and *AstraZeneca AB (SE) v Sanofi-Aventis Singapore Pte Ltd* [2013] SGHCR 7 (“*AstraZeneca*”) at [17]–[48], [58] and [61]). It is insufficient for a plaintiff to simply state that the defendant has infringed the claims of his patent; instead, the plaintiff ought to “condescend to describe the manner in which the acts which he alleges to be infringement were carried out” (see *AstraZeneca* at [21]).

The precise level and nature of detail that must be pleaded depends, of course, on the circumstances of each case.

18 In relation to the present case, I have already determined in *Sun Electric* that the Plaintiff ought to provide further and better particulars in Suit 190, in relation to what the Plaintiff says the Defendants rely on that constitutes a "consolidation unit". From this decision there has been no appeal. The particulars sought in Suit 1229 by way of SUM 2901 are similar to those ordered in *Sun Electric*. In this regard, the Plaintiff has already provided particulars in Suit 1229 without an order of court to this effect, thus implicitly acknowledging that such particulars ought to be provided in the light of *Sun Electric*.

19 The question before me is whether the particulars provided thus far are sufficient. In my view, they are not. The particulars are furnished in the form of open-ended formulations that add little, if any, clarity to the understanding of the alleged "consolidation unit". Indeed, the responses appear to introduce further ambiguity because the "device(s)" referred to in one set of particulars (see [7] above) may potentially be different from the "device(s)" referred to in another set of particulars (see [8] above). Overall, the particulars do not sufficiently particularise the manner in which the Defendants allegedly rely on a "consolidation unit".

20 I disagree with Mr Chan's contention that with the help of experts, the Defendants would be in a position to identify how they (*ie* the Defendants) may have relied on a "consolidation unit". Quite clearly, the particulars are intended to facilitate an understanding of the *Plaintiff's* claim; the *Defendants' interpretation* of the Plaintiff's claim is not of direct relevance. Even if the Defendants were to engage experts to determine what aspects of their acts and operations may possibly constitute reliance on a "consolidation unit", this would not be conclusive of what the Plaintiff's claim really is. As observed in *Sun Electric* (at [23]), albeit in a slightly different context, the Defendants' experts may well be labouring under the impression that a "consolidation unit" comprises components A, B and C, while the Plaintiff may be proceeding with components X, Y and Z in mind. As such, there does not appear to be any useful purpose in requiring the Defendants or their experts to second-guess the ambit of the Plaintiff's claim.

21 I therefore find that the particulars provided by the Plaintiff thus far are insufficient, and that further and better particulars are necessary.

Whether particulars should be deferred pending the responses to the Interrogatories

22 I turn now to consider whether the Plaintiff's provision of further and better particulars should be deferred pending the Defendants' responses to the Interrogatories.

Legal principles

23 It is trite that a plaintiff should have adequate knowledge of his case before commencing a suit, and must plead his claim with sufficient particularity. His pleading should inform the defendant of the nature of the case to be met and enable the defendant to properly prepare for trial. A plaintiff should not usually be allowed to put forward vague and sweeping claims in the hope of particularising and substantiating his allegations through discovery or interrogatories (see, *eg*, *Thomas & Betts* at [23]).

24 However, a court may allow a plaintiff to seek discovery or interrogatories before particularising his claims in certain circumstances (see, *eg*, *Prima Bulkship* at [34]–[47], where the court considered numerous English and Australian case authorities on this point). In particular, a plaintiff may seek discovery or interrogatories before particularising his claim where:

- (a) pending discovery or interrogatories, the plaintiff has no knowledge of the particulars sought or has given the best particulars available to him;
- (b) the material facts in question are entirely within the knowledge of the defendant; and
- (c) despite the plaintiff's lack of knowledge of the particulars pending discovery or interrogatories, there is nonetheless a "substantial foundation" for his claim.

25 In relation to interrogatories, the touchstone is whether they are "necessary" for disposing fairly of a matter or for saving costs (see O 26 r 1(1) of the Rules of Court). A summary of the instances where interrogatories may more readily be allowed or refused is found in *Prudential Assurance* at [13] and [14], of which the following are of particular relevance in the present case:

- (a) Interrogatories are more readily allowed where they have a direct bearing on the issues in dispute, delineate the precise matters in contention, can be answered without difficulty and can potentially dispose of entire lines of questioning (see *Prudential Assurance* at [13(b)] and [13(d)]).
- (b) Interrogatories are more readily refused if they are oppressive in nature (*ie* they exceed the legitimate requirements of the circumstances at hand, or impose a burden on the interrogated party that is disproportionate to the benefit to be gained by the interrogating party), or amount to an attempt to fish for information in the hope of stumbling upon something that will support the interrogating party's case (see *Prudential Assurance* at [14(a)] and [14(b)]).

Application to the present case

26 In the present case, the requirements set out at [24(a)] and [24(c)] above are met. In relation to the former, there is affidavit evidence that the Plaintiff has provided the best particulars available to it, and that it is unable to provide any additional particulars pending the provision of sufficient answers to the Interrogatories. [\[note: 3\]](#) In relation to the latter, there is a "substantial foundation" for the Plaintiff's claim: to elaborate, the Plaintiff has affirmed on affidavit that it would be "commercially unrealistic" and "extremely laborious" for the Defendants to have manually acquired, recorded and processed the electrical metering data in their possession without the aid of some automated or semi-automated process as well as hardware and/or software modules configured for such purposes. [\[note: 4\]](#) For instance, the Defendants would otherwise have had to perform the "highly impractical" tasks of sending employees or agents to various rooftop solar systems at more than 150 distinct locations to take manual meter readings, [\[note: 5\]](#) and to manually calculate or consolidate the electrical energy consumed by Apple and the electrical energy generated from the facilities at those locations. [\[note: 6\]](#)

27 However, a complication arises in relation to the requirement that "the material facts in question are entirely within the knowledge of the defendant" (see [24(b)] above). On the one hand, the Plaintiff has stated on affidavit that further information relating to the Defendants' reliance on a "consolidation unit" would be solely within the Defendants' knowledge. [\[note: 7\]](#) This is not altogether unexpected or surprising, given that such information relates to the processes and systems used by the Defendants in relation to the electrical metering data. On the other hand, while such information may well be entirely within the Defendants' knowledge, the Defendants themselves do not know what aspects of their operations are alleged to amount to reliance on a "consolidation unit"; indeed, it is precisely in relation to this issue that further and better particulars were ordered in *Sun Electric*. As such, the Defendants contended that unless the Plaintiff first particularises its reference to a

"consolidation unit", the Defendants are "in no position" to answer the Interrogatories because the Defendants would otherwise be forced to "describe every computer, device, computer program or 'any other means' used by the Defendants". [\[note: 8\]](#)

28 The complication just mentioned is perhaps unavoidable in certain patent disputes, particularly because the construction of patent claims is a matter to be left for determination at trial. This means that even though a defendant's processes are entirely within his knowledge, he may not be in a position to provide the requisite information in the absence of sufficient particulars of the claim against him. At the same time, the plaintiff may well be unable to further particularise his claim, precisely because he does not have sufficient knowledge of the defendant's processes.

29 A simple illustration may be useful. Party X (the patent proprietor) claims that Party Y (the alleged infringer) has infringed a claim in Party X's patent. Party Y seeks further and better particulars of the asserted patent claim. Party X contends that he is unable to provide further particulars pending interrogatories, because he is otherwise unaware of the details relating to Party Y's processes (which are entirely within Party Y's own knowledge). Party Y argues that while he does have knowledge of his own processes, he is unaware of the ambit of the claim that Party X has brought against him, and therefore is unable to answer interrogatories relating to the claim. This results in an apparent impasse somewhat akin to the proverbial "chicken and egg" dilemma: with both parties operating under informational deficiencies, neither party unilaterally has all the information required to move the matter forward in a manner that will ensure the fair and effective resolution of the dispute.

30 A practical approach for overcoming this apparent impasse is for the plaintiff to serve interrogatories that are narrowly and precisely framed, co-relating to specific aspects and features of the asserted claim in question. The interrogatories should neither require the defendant to perform a construction of the plaintiff's claim, nor be of a broad, roving and fishing character going beyond the legitimate requirements of the circumstances at hand. With the information obtained, the plaintiff would then be in a position to further particularise his claim as set against the actual processes used by the defendant (which hitherto were solely in the defendant's knowledge), thus enabling the defendant to understand more completely the case to be met and to better prepare for trial. This approach, properly applied, enables navigation of the impasse while achieving a balance that takes into consideration the various principles touched upon in [14], [15(a)] and [23]–[25] above; and in so doing, facilitates the fair disposal of the matter and the saving of time and costs.

31 The approach I have just outlined is directly applicable to the present case. Here, because the Plaintiff has already served the Interrogatories, the court is in a position to make a holistic assessment of whether it would be appropriate to order that further and better particulars be deferred pending the responses to the Interrogatories.

32 I turn now to assess the Interrogatories themselves. The parts of the Interrogatories seeking information on whether various tasks are performed by "manual" or "automated" means, whether certain parameters are captured in a "Unit" (which is defined to include "system / apparatus / device / module / computer program / any other means"), and whether any such "Unit" exists in a "hardware" or "software" format, are relevant and necessary for moving the matter forward. However, some of the interrogatories have open-ended aspects (*ie* requests for the "manner or mode by which [a certain process is done]", to "give a description of the said Unit(s), such as its technical attributes...", or to "state exactly how and where..."), while others are not directly related to the features of a "consolidation unit" (*ie* requests to "state where the said Unit(s) is located / situated / stored"). These aspects ought to be circumscribed or withdrawn, as marked in the blackline version in the Annex. In their modified form, the Interrogatories would pass muster based on the guidelines in

[30] above.

33 Finally, I recognise that interrogatories 2(a), 3(a) and 3(b) in Suit 190 were not requested for the purpose of enabling the Plaintiff to provide the further and better particulars sought. [\[note: 9\]](#) Instead, they were intended to give the Plaintiff notice of the Defendants' position in relation to certain material facts. [\[note: 10\]](#) Having considered the arguments on both sides, I allow these interrogatories to stand, for the following reasons:

(a) First, the Defendants have not justified why the impending consolidation of the two suits renders answers to interrogatories 2(a) and 3(a) in Suit 190 unnecessary. At present, both suits remain separate suits; furthermore, even if they are consolidated in due course, the answers furnished or documents disclosed in one suit may not automatically apply to specific questions raised in the other. If anything, the fact that the Defendants have taken the position that answers and documents have previously been provided in Suit 1229 suggests that the Defendants can furnish answers to interrogatories 2(a) and 3(a) in Suit 190 without much difficulty.

(b) Second, in relation to interrogatory 3(b) in Suit 190, while the Defendants have objected on the basis that they had previously responded to a similar request in the context of further and better particulars in Suit 190, this appears to be based on a misunderstanding of interrogatory 3(b).

Conclusion

34 In view of the foregoing, my orders are as follows:

(a) In relation to SUM 2921 and SUM 2922:

(i) I decline to order the withdrawal of the Interrogatories, save that:

(A) interrogatories 1(a), 1(c), 1(d)(i), 2(c)(i) and 3(c)(i) in Suit 1229 and interrogatories 1(a), 1(d), 1(e)(i), 2(b), 2(c)(i), 2(d) and 2(e)(i) in Suit 190 are to be amended by removing the open-ended aspects as identified in [32] above; and

(B) interrogatories 1(d)(iii), 2(c)(iii), 3(c)(iii) in Suit 1229 and interrogatories 1(e)(iii) and 2(e)(iii) in Suit 190 are to be withdrawn.

The necessary amendments are set out in blackline edits in the Annex.

(ii) The prayer seeking that the Plaintiff shall not serve any further interrogatories without the leave of court is dismissed.

(b) In relation to SUM 2901 and SUM 2902:

(i) The Plaintiff is to file the further and better particulars sought, within a time to be specified after receipt of the Defendants' answers to the Interrogatories.

(ii) The prayers seeking an unless order and the striking out of pleadings are dismissed.

35 I will hear parties on the timelines for the Defendants' furnishing of answers to the Interrogatories and the Plaintiff's subsequent provision of further and better particulars, as well as on

costs.

Annex

1 The interrogatories served in Suit 1229, and which are the subject matter of SUM 2922, are set out below with blackline edits made as ordered in [34(a)(i)] of the judgment:

1. Referring to paragraph 33 of the Affidavit of Phuan Ling Fong filed on 2 September 2016 in HC/OS 733/2016 ("**Phuan's Affidavit**") which alleged that the 3rd Defendant "*obtains $M_{2export}$ from its own meter readings*", please state:

a. ~~whether the manner or mode by which the 3rd Defendant obtains the $M_{2export}$ values from its meter readings, including whether the information from said meter readings are obtained~~ via manual or electronic means;

b. if the answer to Interrogatory 1(a) is through electronic means, whether the 3rd Defendant has access to "real time" meter readings of $M_{2export}$;

c. regardless of whether the answer to Interrogatory 1(a) is via manual or electronic means, whether the $M_{2export}$ values of the Solar-powered Generation Facilities as referred to at paragraph 3(d) of the Particulars of Infringement (Amendment No. 2) dated 9 May 2018 ("**POI**") obtained by the 3rd Defendant are input or recorded, and if so, to state ~~exactly how and where the $M_{2export}$ values are input or recorded (i.e. to specify whether the values are~~ input or recorded into a system / apparatus / device / module / computer program / any other means (collectively referred to as a "**Unit**")"; and

d. If the answer to Interrogatory 1(c) is yes, for the avoidance of doubt, please:

i. ~~state give a description of the said Unit(s), such as its technical attributes and whether it~~ the Unit exists in hardware or software format;

ii. state whether the input or recordal of the $M_{2export}$ values into said Unit(s) is done via a manual or automated process;

~~iii. state where the said Unit(s) is located / situated / stored.~~

2. Referring to paragraph 32(a) of Phuan's Affidavit which alleged that the 3rd Defendant "*invoice[s] its customer, the building, for the amount of solar energy consumed by the building (which is $M_{2export}$ minus $M_{1export}$)*", please state:

a. whether the calculation of the " $M_{2export}$ minus $M_{1export}$ " for the Solar-powered Generation Facilities as referred to at paragraph 3(d) of the POI is done via a manual or automated process;

b. whether the 3rd Defendant's invoices are generated using a Unit(s); and

c. if the answer to Interrogatory 2(b) is yes, please:

i. ~~state give a description of the said Unit(s), such as its technical attributes and~~

whether ~~it~~ the Unit exists in hardware or software format;

ii. state whether the calculation of " $M_{2export}$ minus $M_{1export}$ " for the Solar-powered Generation Facilities as referred to at paragraph 3(d) of the POI is performed by or with the assistance of the said Unit(s); and

~~iii. state where the said Unit(s) is located / situated / stored.~~

3. Referring to the documents disclosed at S/N 66 of the 2nd Defendant's Supplemental List of Documents dated 26 October 2018 ("**SLOD**") and S/N 5 and 6 of the 2nd Defendant's Supplemental List of Documents dated 18 April 2019 ("**2nd SLOD**") (collectively the "**Debit Notes**"), please state:

a. whether the calculation of the amount payable by Apple South Asia Pte Ltd ("**Apple**") to the 2nd Defendant as set out in the Debit Notes is done via a manual or automated process;

b. whether the Debit Notes are generated using a Unit(s); and

c. if the answer to Interrogatory 3(b) is yes, please:

i. ~~state give a description of the said Unit(s), such as its technical attributes and whether it~~ the Unit exists in hardware or software format;

ii. state whether the calculation of the amount payable by Apple to the 2nd Defendant as set out in the Debit Notes is performed by or with the assistance of the said Unit(s); and

~~iii. state where the said Unit(s) is located / situated / stored.~~

2 The interrogatories served in Suit 190, and which are the subject matter of SUM 2921, are set out below with blackline edits made as ordered in [34(a)(i)] of the judgment:

1. Referring to paragraph 8(c) of the Defence and Counterclaim (Amendment No. 2) dated 13 February 2019 ("**D&CC**"), where it is alleged "*Claim 1 of the Patent discloses, inter alia, "a first meter configured for metering power imported from the power grid to the load". None of the Defendants own or operate any such meter. The 2nd Defendant is informed by a third party provider (i.e., Energy Market Company) of the amount of electricity imported from the power grid to the load in so far as it is the retailer of electricity to the said building. This information does not consist of meter readings. Instead, what the 2nd Defendant receives is information that have already been processed by the Energy Market Company*", please state:

a. ~~whether the manner or mode by which the 2nd Defendant is "informed by a third party provider (i.e., Energy Market Company)" of the "amount of electricity imported from the power grid to the load" ("**Consumption Data**")~~, including whether said information is obtained via manual or electronic means;

b. whether the Consumption Data is derived from meter readings;

c. whether the Consumption Data is provided on the basis of a given period of time, i.e. on a monthly, quarterly, biannually, or yearly basis;

d. whether the Consumption Data received by the Defendants is input or recorded, and if so, to state ~~exactly how and where the Consumption Data is input or recorded (i.e. to specify~~ whether the information is input or recorded into a system / apparatus / device / module / computer program / any other means (collectively referred to as a "Unit"); and

e. If the answer to Interrogatory 1(d) is yes, for the avoidance of doubt, please:

i. ~~state give a description of the said Unit(s), such as its technical attributes and whether it~~ the Unit exists in hardware or software format;

ii. state whether the input or recordal of Apple's Consumption Data into said Unit(s) is done via a manual or automated process;

~~iii. state where the said Unit(s) is located / situated / stored.~~

2. Referring to the following paragraphs in the D&CC where it is alleged:

"[7(f)] Under the terms of the PPA, the 2nd Defendant contracted with Apple to produce (through the 3rd Defendant) a fixed amount of GWh of electricity from PV Generation Facilities situation [sic] at pre-determined locations, and export the same into the national grid in Singapore ("National Grid"). ...

[7(g)] Under the PPA, the electricity generated by the 3rd Defendant is not transmitted to Apple. The 2nd Defendant is not involved in the generation of electricity. For the purposes of the PPA, the 2nd Defendant purchases a fixed amount of GWh of electricity from NEMS, a wholesale market with a spot market for energy, and resells this electricity to Apple at agreed tariff rates. None of the Defendants retail or supply electricity to Apple from PV Generation Facilities. Instead, to the best of the Defendants' knowledge, Apple draws (i.e., imports) its entire electricity supply from the National Grid.

[7(j)] Save that it is admitted that the 3rd Defendant owns and manages some PV Generation Facilities, and each of these PV Generation Facilities has an electrical meter which meters the electrical energy generated, paragraph 3(f) of the POI is denied. ...",

please state:

a. whether the "fixed amount of GWh of electricity [produced by the 2nd and/or 3rd Defendant] from PV Generation Facilities situation [sic] at pre-determined locations, and export[ed] ... into the [National Grid]" is related to the amount of electricity retailed by the 2nd Defendant to Apple, and if so, state the relationship;

b. ~~whether the manner or mode by which~~ the Defendants determine the amount of electricity generated from the "PV Generation Facilities situation [sic] at pre-determined locations" in order to ensure that they are producing a "fixed amount of GWh of electricity" as required under the terms of the PPA via manual or electronic means;

c. whether the Defendants receive / obtain information on the amount of generated

electricity by the PV Generation Facilities ("**Generation Data**") based on the "*electrical meter [at the PV Generation Facilities] which meters the electrical energy generated*" and if so, please state:

- i. ~~the manner or mode by which the Defendants receive / obtain such information, including whether said information is obtained via manual or electronic means;~~
 - ii. if the answer to Interrogatory 2(c)(i) is through electronic means, whether the Defendants have access to "real time" readings from the "*electrical meter [at the PV Generation Facilities] which meters the electrical energy generated*".
 - iii. whether the Generation Data received / obtained by the Defendants is on the basis of a given period of time, i.e. on a monthly, quarterly, biannually, or yearly basis.
- d. If the answer to Interrogatory 2(c) is yes, please state whether the Generation Data is input or recorded, and if so, to state ~~exactly how and where the Generation Data is input or recorded (i.e. to specify whether the said information is input or recorded in a Unit(s));~~ and
- e. If the answer to Interrogatory 2(d) is yes, please:
- i. ~~state give a description of the said Unit(s), such as its technical attributes and whether it the Unit exists in hardware or software format;~~
 - ii. state whether the input or recordal of the Generation Data into said Unit(s) is done via a manual or automated process;
 - iii. ~~state where the said Unit(s) is located / situated / stored.~~

3. Referring to the following paragraphs in the D&CC where it is alleged:

"[7(l)] ... Depending on its contractual obligations to its customers, the 3rd Defendant then transfers a requisite number of RECs to its customers' account in the APX Portal. ...

[7(m)] Save that it is denied that SERIS "certifies that metered electricity generated from PV Generation Facilities over a period of time, such as on a monthly, quarterly, biannually, or yearly basis, is from a renewable source", paragraph 3(i) of the POI is admitted.

[7(n)] Save that it is admitted that "[e]ach TIGR is serialized and is equivalent to 1MWh of electricity as generated by a specific PV Generation Facility", paragraph 3(j) of the POI is denied.

[7(o)] Paragraph 3(k) of the POI is denied. The 3rd Defendant does not issue RECs to Apple based on the amount of electricity consumed by each of its facilities",

please state:

- a. the specific bases in the 3rd Defendant's contractual obligations upon which it determines the requisite number of RECs that need to be transferred to its customers, e.g. the 3rd Defendant guarantees a minimum number of RECs to be issued to its customers; and
- b. whether the RECs transferred by the 3rd Defendant are in respect of a given period of

time, whether on a monthly, quarterly, biannually or yearly basis (e.g. the 3rd Defendant transfers RECs as derived from the electricity generated from PV Generation Facilities during a 1-month, 3-month, 6-month, or 1-year period).

[\[note: 1\]](#) 13th Affidavit of Dr Matthew Peloso (12 July 2019), at paragraph 34.

[\[note: 2\]](#) 18th Affidavit of Dr Matthew Peloso (12 June 2019), at paragraph 32.

[\[note: 3\]](#) 13th Affidavit of Dr Matthew Peloso (12 July 2019), at paragraphs 13 and 28.

[\[note: 4\]](#) 13th Affidavit of Dr Matthew Peloso (12 July 2019), at paragraphs 20 and 31.

[\[note: 5\]](#) 13th Affidavit of Dr Matthew Peloso (12 July 2019), at paragraph 20(a).

[\[note: 6\]](#) 13th Affidavit of Dr Matthew Peloso (12 July 2019), at paragraph 20(b).

[\[note: 7\]](#) 13th Affidavit of Dr Matthew Peloso (12 July 2019), at paragraph 34.

[\[note: 8\]](#) 18th Affidavit of Phuan Ling Fong (12 June 2019) at paragraph 28.

[\[note: 9\]](#) 13th Affidavit of Dr Matthew Peloso (12 July 2019), at paragraphs 13 and 28.

[\[note: 10\]](#) 13th Affidavit of Dr Matthew Peloso (12 July 2019), at paragraph 34.